UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 09/26/2017 | 9774916 | 6121.007US | 9077 |

11336 7590 09/06/2017

Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

# 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):

Chi-Ming Kuo, Taipei, TAIWAN;
Through Tek Technology (ShenZhen) Co., Ltd., Shenzhen, CHINA;
Yu-Li Kao, Taipei, TAIWAN;
ThroughTek Co., Ltd., Taipei, TAIWAN;
Bai-Jian Xiao, Taipei, TAIWAN;
Cheng-Wei Li, Taipei, TAIWAN;

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 applicable fee(s), to: Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
**or Fax** (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)

11336 7590 06/27/2017
Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

| |
|---|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

TITLE OF INVENTION: INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | SMALL | $480 | $0 | $0 | $480 | 09/27/2017 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| ABEDIN, NORMIN | 2449 | 709-223000 |

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 03-02 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 Min-Lee Teng
2 Litron Patent & Trademark
3 Office

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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

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

ThroughTek Technology (ShenZhen) Co., Ltd. Shenzhen, China
ThroughTek Co., Ltd. Taipei, Taiwan

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

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in 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 to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be 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 _____ Date Aug. 15, 2017
Typed or printed name TENG, MIN-LEE Registration No. 65623



PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 14591008 |
| **Filing Date:** | 07-Jan-2015 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Filer:** | Min-Lee Teng |
| **Attorney Docket Number:** | 6121.007US |

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 | 480 | 480 |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Extension-of-Time:** | | | | |
| **Miscellaneous:** | | | | |
| | | | **Total in USD ($)** | **480** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 30089482 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
| **Filer:** | Min-Lee Teng |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 6121.007US |
| **Receipt Date:** | 15-AUG-2017 |
| **Filing Date:** | 07-JAN-2015 |
| **Time Stamp:** | 22:03:19 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | CARD |
| Payment was successfully received in RAM | $480 |
| RAM confirmation Number | 081617INTEFSW22042000 |
| 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) | 6121_007US_Issue_Fee_Transmittal.pdf | 5651663<br>9a963fa11c8245ceac261831e024410c245a0afc | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 30606<br>d289fa84fc1ee896c5cd8ad6079014f4ed0c0c42 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 5682269 | | |

**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

11336 7590 06/27/2017

Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

| EXAMINER |
|---|
| ABEDIN, NORMIN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2449 | |

DATE MAILED: 06/27/2017

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

TITLE OF INVENTION: INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | SMALL | $480 | $0 | $0 | $480 | 09/27/2017 |

**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: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

## PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail** **Mail Stop ISSUE FEE**
**Commissioner for Patents**
**P.O. Box 1450**
**Alexandria, Virginia 22313-1450**
**or Fax (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)

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7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

| |
|---|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

TITLE OF INVENTION: INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | SMALL | $480 | $0 | $0 | $480 | 09/27/2017 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| ABEDIN, NORMIN | 2449 | 709-223000 |

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 03-02 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 has been filed for recordation as set forth in 37 CFR 3.11. 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. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in 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 to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be 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 _____ Date _____

Typed or printed name _____ Registration No. _____



PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

11336 7590 06/27/2017

Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |
| **ART UNIT** | **PAPER NUMBER** |
| 2449 | |

DATE MAILED: 06/27/2017

**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.

## 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 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, 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. 14/591,008 | Applicant(s) KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | AIA (First Inventor to File) 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 *06/12/2017*.
   ☐ 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 *1-15 and 18*. 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 _____
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 _____.

| /NORMIN ABEDIN/<br>Examiner, Art Unit 2449 | |
|---|---|

1. The present application is being examined under the pre-AIA first to invent provisions.

***Status of Claims:***

1. Claims 16, 17, 19, 20 are canceled.

2. Claims 1-15, 18 are allowed.

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview and email with Min-Lee Teng on 06/12/2017.

The application has been amended as follows:

**Amendments to the Claims:**

1. (Currently amended) An electronic device for concentrating information ~~concentrating center~~, comprising:

at least one first interface for receiving information from at least one information source;

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet;

a third interface for connecting to a television for viewing said information; and

a unique identification (UID) embedded in the electronic device for concentrating information ~~concentrating center~~, wherein the electronic device for concentrating information ~~concentrating center~~ contacts at least one linking server through the Internet to register said embedded unique identification (UID) into the at least one linking server for identifying network addressing information of the electronic device for concentrating information ~~concentrating center~~ so as to enable the remote client device to

establish a P2P connection with the electronic device for concentrating information ~~concentrating center~~ for viewing said information received by the electronic device for concentrating information ~~concentrating center~~;

wherein the remote client device contacts the at least one linking server through the Internet according to said unique identification (UID) of the electronic device for concentrating information ~~concentrating center~~ for establishing a P2P connection between the remote client device and the electronic device for concentrating information ~~concentrating center~~ via the Internet, wherein at least one portion of the information received by the electronic device for concentrating information ~~concentrating center~~ is delivered to the remote client device on the P2P connection, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

2. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the electronic device for concentrating information ~~concentrating center~~ is a set top box.

3. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the remote client device is a portable electronic device.

4. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the remote client device is a mobile phone.

5. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

6. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the second interface couples to the Internet through an external routing device or an internal routing device.

7. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the information source is a satellite feed comprising TV programs.

8. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the information source is a cable feed comprising TV programs.

9. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 7, wherein the remote client device sends commands to the electronic device for concentrating information ~~concentrating center~~ to switch the TV channel of the TV programs.

10. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 8, wherein the remote client device sends commands to the electronic device for concentrating information ~~concentrating center~~ to switch the TV channel of the TV programs.

11. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed.

12. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 6, wherein the routing device is an IP router.

13 (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 6, wherein the electronic device for concentrating information ~~concentrating center~~ is connected to an appliance through the routing device and the remote client device controls the appliance through the electronic device for concentrating information ~~concentrating center~~.

14. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device.

15. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 1, wherein the information is formatted by the electronic device for concentrating information ~~concentrating center~~ in a way suitable for viewing by the remote client device.

16. (Cancelled)

17. (Cancelled) ~~The information concentrating center according to claim 1, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for~~

~~associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.~~

18. (Currently amended) The electronic device for concentrating information ~~concentrating center~~ according to claim 5, wherein the at least one linking server transmits hole-punching messages to the electronic device for concentrating information ~~concentrating center~~ and the remote client device to establish the P2P connection.

19. (Cancelled) ~~An appliance, comprising:~~

~~an interface coupling to an information concentrating center recited as in claim 1, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection, wherein said command is transmitted to the interface for controlling the appliance.~~

20. (Cancelled)

**REASONS FOR ALLAOWACE**

The following is the examiner's statement of reason for allowance:

Independent claim 1 teaches an electronic device for concentrating information, comprising: at least one first interface for receiving information from at least one information source; a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet; a third interface for connecting to a television for viewing said information; and a unique identification (UID) embedded in the electronic device for concentrating information, wherein the electronic device for concentrating information contacts at least one linking server through the Internet to register said embedded unique identification (UID) into the at least one linking server for identifying network addressing information of the electronic device for concentrating information so as to enable the remote client device to establish a P2P connection with the electronic device for concentrating information for viewing said information received by the electronic device for concentrating information; wherein the remote client device contacts the at least one linking server through the Internet according to said unique identification (UID) of the electronic device for concentrating information for establishing a P2P connection between the remote client device and the electronic device for concentrating information via the Internet, wherein at least one portion of the information received by the electronic device for concentrating information is delivered to the remote client device on the P2P connection, wherein the

remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

The Prior art does not teach the cited limitation.

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 submission should be clearly labeled "Comments on Statement of reasons for Allowance".

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NORMIN ABEDIN whose telephone number is (571)270-5970. The examiner can normally be reached on Mon to Friday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)272-7304. 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.

/NORMIN ABEDIN/
Examiner, Art Unit 2449

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 0 | (("THROUGH") near3 ("TEK") near3 ("TECHNOLOGY") near3 ("(SHENZHEN)") near3 ("CO") near3 ("LTD")).AANM. | USPAT | OR | OFF | 2017/06/20 19:40 |
| L2 | 0 | (("THROUGHTEK") near3 ("CO") near3 ("LTD")).AANM. | USPAT | OR | OFF | 2017/06/20 19:40 |
| L3 | 10 | (("KUO") near3 ("Chi-Ming")).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2017/06/20 19:40 |
| L4 | 10 | (("KAO") near3 ("Yu-Li")).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2017/06/20 19:40 |
| L5 | 1 | (("XIAO") near3 ("Bai-Jian")).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2017/06/20 19:40 |
| L6 | 19 | (("LI") near3 ("Cheng-Wei")).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2017/06/20 19:40 |
| L7 | 20 | (("LI") near3 ("Cheng-Wei")).INV. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2017/06/20 19:41 |
| L8 | 1 | (("XIAO") near3 ("Bai-Jian")).INV. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2017/06/20 19:41 |
| L9 | 17 | (("KAO") near3 ("Yu-Li")).INV. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2017/06/20 19:41 |
| L10 | 35 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and home | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:41 |
| L12 | 35 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:43 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | (manufactur$4 near5 identif$4) and home | | | | |
| L13 | 20 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (p2p or peer$2peer or point$2point) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:43 |
| L14 | 25 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (p2p or peer$2peer or point$2point) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:43 |
| L16 | 533 | register$4 same device same (UID or (unique near1 identifier)) same (network near1 address$4 or (IP near1 address)) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:51 |
| L17 | 16 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source and smart | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:51 |
| L20 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:53 |
| L22 | 17 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:54 |
| L23 | 25 | @ad<="201111110" and (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:55 |
| L25 | 8 | IPTV and (control$4 near5 (set$top) near5 (smart near2 phone)) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:08 |
| L27 | 15 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2017/06/20 20:09 |
| L29 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:10 |
| L33 | 42 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:23 |
| S1 | 1 | "13293506" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 16:07 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S2 | 2 | ((CHI-MING) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:08 |
| S3 | 3 | ((YU-LI) near2 (KAO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:09 |
| S4 | 1 | ((CHIEN-CHIH) near2 (YANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:09 |
| S5 | 2 | ((SHENG-FU) near2 (CHANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:10 |
| S6 | 8 | ("20040186908" \| "20050047379" \| "20090100309" \| "6373851").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 16:12 |
| S7 | 865597 | surveillance near1 camera or anti$theft or smoke or fire | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:29 |
| S8 | 1393846 | ((surveillance near1 camera) or anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:30 |
| S9 | 1040469 | @ad<="20110127" and ((surveillance near1 camera) or anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:31 |
| S10 | 1001838 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:31 |
| S11 | 0 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft and smoke and fire and appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S12 | 153 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/10 17:32 |

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|---|---|---|---|---|---|---|
| | | | IBM_TDB | | | |
| S13 | 0 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S14 | 26 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:33 |
| S15 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:33 |
| S16 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:34 |
| S17 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) and remote | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:34 |
| S18 | 4 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) and remote and administra$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:35 |
| S19 | 1385 | @ad<="20110127" and (surveillance and anti$theft) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S20 | 60 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S21 | 21 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2013/10/10 17:36 |

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|---|---|---|---|---|---|---|
| | | | JPO; DERWENT; IBM_TDB | | | |
| S22 | 21 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:38 |
| S23 | 351 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:20 |
| S24 | 299 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:20 |
| S25 | 200 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:21 |
| S26 | 0 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security and home and "ADT" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:21 |
| S27 | 924 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:22 |
| S28 | 322 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:22 |
| S29 | 189 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:23 |
| S30 | 45 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server | US-PGPUB; USPAT; | OR | ON | 2013/10/10 18:23 |

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|---|---|---|---|---|---|---|
| | | and prox$4 and (monitor$4 or control$4) and security and home and alarm and fire | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S31 | 18 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and alarm | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:25 |
| S32 | 0 | 2012/0203917 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:38 |
| S33 | 2 | "20120203917" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:38 |
| S34 | 0 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm and fire and linking near3 server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:48 |
| S35 | 272276 | @ad<="20110127" and (remote near3 device) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S36 | 1444 | @ad<="20110127" and (remote near3 device) and (administration near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S37 | 15 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and (linking near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S38 | 3 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and (linking near3 server) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:56 |

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|---|---|---|---|---|---|---|
| S39 | 243 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and register and proxy | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:00 |
| S40 | 124 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and register and proxy and (security near3 system) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:01 |
| S41 | 2 | "20090119364" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:07 |
| S42 | 1898 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S43 | 510 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S44 | 122 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) and (server near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S45 | 37 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) and (server near1 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S46 | 3 | "20090100309" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:01 |
| S47 | 17501 | (hole near1 punching) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/11 13:07 |

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| | | | DERWENT; IBM_TDB | | | |
| S48 | 13259 | @ad<="20110127" and (hole near1 punching) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:08 |
| S49 | 1272 | @ad<="20110127" and (hole near1 punching) and (remote or client or terminal or user) near5 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:09 |
| S50 | 748 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:11 |
| S51 | 692 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) and (control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:11 |
| S52 | 442 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:12 |
| S53 | 14 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:12 |
| S54 | 2 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and (home near3 security near3 system) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:05 |
| S55 | 458 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic or appliance) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:07 |
| S56 | 0 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/11 14:11 |

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| | | (smoke and fire) same(control$4 or monitor) | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S57 | 1428 | @ad<="20110127" and (remote near3 device) same register$4 same server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:11 |
| S58 | 758 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:12 |
| S59 | 136 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:13 |
| S60 | 41 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and install | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:13 |
| S61 | 24 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and (install near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:14 |
| S62 | 20 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and (download near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:11 |
| S63 | 8 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server) and (download near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:16 |
| S64 | 30 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:20 |
| S65 | 1206 | @ad<="20110127" and control$4 | US-PGPUB; | OR | ON | 2013/10/11 |

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| | | with (smoke$fire or CCTV or alrm or air$cooler) | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 15:25 |
| S66 | 272 | @ad<="20110127" and control$4 with (smoke$fire or CCTV or alrm or air$cooler) and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:25 |
| S67 | 0 | @ad<="20110127" and (control$4 with air$cooler) and server and cell | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:26 |
| S68 | 593 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:27 |
| S69 | 25 | @ad<="20110127" and (control$4 with (security near3 alarm)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:28 |
| S70 | 247 | @ad<="20110127" and (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S71 | 308 | (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S72 | 0 | remore near3 (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S73 | 94 | (remote near3 control$4) with (home near3 appliance) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/11 16:39 |

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| | | | IBM_TDB | | | |
| S74 | 94 | (remote near3 control$4) with (home near3 network) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:50 |
| S75 | 703 | (remote near3 control$4) with (home near3 network) and server and (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:50 |
| S76 | 22 | (remote near3 control$4) with (home near3 network) and server and (cell or mobile or laptop) and 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:51 |
| S77 | 128136 | (register$4 near2 (device or server)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:32 |
| S78 | 1370 | ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:33 |
| S79 | 1143 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:34 |
| S80 | 0 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and derectory | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:35 |
| S81 | 177 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and directory | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:35 |
| S82 | 1058 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2013/10/11 18:37 |

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| | | (home nera3 network) | JPO; DERWENT; IBM_TDB | | | |
| S83 | 147 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:37 |
| S84 | 31 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home near3 network) and appliance | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:38 |
| S85 | 54299 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:53 |
| S86 | 1 | 2009/0154474 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 14:52 |
| S87 | 53 | ((Home near2 monitor$4) near system) with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 14:56 |
| S88 | 40 | @ad<="20110127" and ((Home near2 monitor$4) near system) with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 15:19 |
| S89 | 520 | (search$4 with (remote near2 device) with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 02:03 |
| S90 | 50 | (search$4 with (remote near2 device) with server) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 02:03 |
| S91 | 14 | (search$4 with (remote near2 device) with server) and (device with | US-PGPUB; USPAT; | OR | ON | 2013/10/14 03:14 |

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| | | unavailable) | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S92 | 45 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (server near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:31 |
| S93 | 4 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (server near3 list) and (device near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:32 |
| S94 | 28 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (device near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:36 |
| S95 | 7 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (device near3 list) and back$up | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:39 |
| S96 | 14 | @ad<="20110127" and (control$4 with (electronic near2 device)) same server same (cell or mobile or laptop) and (device near3 list) and back$up | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:42 |
| S97 | 1 | ((Home near2 monitor$4) near system) with server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:24 |
| S98 | 0 | ((Home near2 monitor$4) near system) with server and (hole near3 punch$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S99 | 85891 | (hole near3 punch$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |

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| S100 | 103 | (hole near3 punch$4) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S101 | 25 | (hole near3 punch$4) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:27 |
| S102 | 1 | (hole near3 punch$4) and (home near3 network)with server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:27 |
| S103 | 0 | (hole near3 punch$4) and (home near3 network)with server and control$4 and resgister | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:45 |
| S104 | 7 | (hole near3 punch$4) and (home near3 network)with server and control$4 and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:45 |
| S105 | 7 | (hole near3 punch$4) and (home near3 network)with server and (control$4 with device)and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:48 |
| S106 | 0 | ((hole near3 punch$4) with fail) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S107 | 107 | ((hole near3 punch$4) with fail) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S108 | 0 | ((hole near3 punch$4) with fail) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/16 15:41 |

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| | | | DERWENT; IBM_TDB | | | |
| S109 | 2 | ((hole near3 punch$4) with fail) and device and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:42 |
| S110 | 0 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 deviec) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:24 |
| S111 | 13629 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 device) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:24 |
| S112 | 50 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 device) same (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:25 |
| S113 | 8 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server with address with register) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:30 |
| S114 | 99 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:32 |
| S115 | 34 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:32 |
| S116 | 99 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:36 |
| S117 | 24 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/16 18:37 |

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| | | near3 address) and (register with server) | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S118 | 2751 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:43 |
| S119 | 268 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance) with register) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:44 |
| S120 | 424 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same (server near3 address) same(register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:45 |
| S121 | 13 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same ((provod$4 oe send$4) near3(server near3 address)) same(register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:46 |
| S122 | 2 | "20060053216" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/26 23:50 |
| S123 | 1 | "13274955" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/26 23:59 |
| S124 | 13 | (pluralit$4 near3 server) and (home near3 server) with direct with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:04 |
| S125 | 305 | (pluralit$4 near3 server) and provider with direct with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:08 |
| S126 | 0 | (pluralit$4 near3 server) and provider | US-PGPUB; | OR | ON | 2013/10/27 |

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| | | with (direct near3 connecrtion)with device | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 00:09 |
| S127 | 57 | (pluralit$4 near3 server) and provider with (direct near3 connection)with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:09 |
| S128 | 13 | device near1 management near1 software near1 systems | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:33 |
| S129 | 5437 | (device near1 management near1 systems) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S130 | 843 | (device near1 management near1 systems) and (service near2 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S131 | 137734 | (device near1 management near1 systems) and (service near2 provider) amd set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S132 | 50 | (device near1 management near1 systems) and (service near2 provider) and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S133 | 27 | (device near1 management near1 systems) and (service near2 provider) and set$top and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S134 | 26 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/27 00:35 |

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| | | | IBM_TDB | | | |
| S135 | 4 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:36 |
| S136 | 98 | (device near1 management near1 systems) and (service near2 provider) and register and server and (direct near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:41 |
| S137 | 23 | (device near1 management near1 systems) and (service near2 provider) and register and server and (direct near3 connect$4) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:42 |
| S138 | 1983 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:33 |
| S139 | 419 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:33 |
| S140 | 143 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:34 |
| S141 | 2 | ((service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:35 |
| S142 | 11 | ((service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:37 |
| S143 | 66 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2013/10/27 01:41 |

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| | | | JPO; DERWENT; IBM_TDB | | | |
| S144 | 40 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and set$top and direct | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:41 |
| S145 | 3 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/226.ccls. and set$top and direct | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:42 |
| S146 | 13 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:43 |
| S147 | 4 | ("20060053216" \| "20040103166" \| "20060053216").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 03:06 |
| S148 | 1 | "13039720" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:34 |
| S149 | 2 | "20120226799" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:38 |
| S150 | 2 | "20110022642" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:43 |
| S151 | 2 | 2011/0208695 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:53 |
| S152 | 3 | "20110208695" | US-PGPUB; USPAT; | OR | ON | 2013/10/27 15:53 |

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| | | | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S153 | 22669 | 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:18 |
| S154 | 1199 | S153 AND ( (G06F15/173 OR G06F15/16 OR H04L41/50 OR H04L41/00 OR H04L41/04).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:18 |
| S155 | 1252 | S153 AND ( (G06F15/173 OR G06F15/16 OR H04L41/50 OR H04L41/00 OR H04L41/04 OR H04L61/2539 OR H04L61/2076 OR H04L61/256).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:19 |
| S156 | 3 | ((Chi-Ming) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/04/23 20:20 |
| S157 | 480 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. andp2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:32 |
| S158 | 17 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:32 |
| S159 | 126 | ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:42 |
| S160 | 91 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:43 |
| S161 | 51 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and provider | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2014/04/24 17:45 |

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| | | | JPO; DERWENT; IBM_TDB | | | |
| S162 | 3 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and provider near3 address | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:57 |
| S163 | 438 | @ad<="20110127" and client same request same (address near3 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:00 |
| S164 | 1 | @ad<="20110127" and client same request same (address near3 provider) same admin | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:00 |
| S165 | 1392 | @ad<="20110127" and (client or user) same request same (address near3 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:02 |
| S166 | 13 | @ad<="20110127" and (client or user) same request same (address near3 provider) same admin | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:03 |
| S167 | 21 | ("20040186908" \| "20100274859" \| "8180891" \| "6373851" \| "20110302324" \| "20120158161" \| "20050047379" \| "20090100309" \| "20030105854").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:15 |
| S168 | 1 | ("20040186908" \| "20100274859" \| "8180891" \| "6373851" \| "20110302324" \| "20120158161" \| "20050047379" \| "20090100309" \| "20030105854").PN. and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:20 |
| S169 | 15 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and (ad$hoc near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:30 |
| S170 | 11189 | @ad<="20110127" and address near3 provider | US-PGPUB; USPAT; | OR | ON | 2014/04/24 18:33 |

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| | | | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S171 | 6420 | @ad<="20110127" and address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S172 | 397 | @ad<="20110127" and request near5 address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S173 | 24 | @ad<="20110127" and client near3 request near5 address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S174 | 5 | (client near3 request near3 (server near3 address)) same (device near5 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:59 |
| S175 | 2481 | point$to$point and (service near3 provider) and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:34 |
| S176 | 133 | point$to$point and (service near3 provider) near6 account and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:34 |
| S177 | 94 | @ad<="20110127" and point$to$point and (service near3 provider) near6 account and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:35 |
| S178 | 10626 | @ad<="20110127" and point$to$point and (service near3 provider) and (control$4 or monitor$4 or manag$4) near4 (device$1 or home) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:41 |

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| S179 | 10626 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (device$1 or home)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:41 |
| S180 | 75 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:42 |
| S181 | 29 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:05 |
| S182 | 36 | 2002/0009078 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:11 |
| S183 | 6 | "20020009078" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:11 |
| S184 | 2 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:17 |
| S185 | 19825 | ad$hoc near3 network | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:19 |
| S186 | 6321 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:19 |
| S187 | 232482 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device @ad<="20110127" and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2014/04/24 20:20 |

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| | | | DERWENT; IBM_TDB | | | |
| S188 | 1066 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:21 |
| S189 | 207 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:21 |
| S190 | 204 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S191 | 100 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S192 | 85 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 and client | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S193 | 2418 | hole$punch$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:22 |
| S194 | 7 | hole$punch$4 and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:23 |
| S195 | 4 | hole$punch$4 and point$to$point and peer$to$peer | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:23 |
| S196 | 51 | hole$punch$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; | OR | ON | 2014/04/25 14:26 |

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| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S197 | 41 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S198 | 23 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and (direct near3 connection) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S199 | 9 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and (direct near3 connection) and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S200 | 24 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:28 |
| S201 | 11 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S202 | 137 | @ad<"20111110" and hole$punch$4 and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S203 | 4 | @ad<"20111110" and hole$punch$4 and camera and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S204 | 5 | @ad<"20111110" and hole$punch$4 and camera and (p2p or point$to$point) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:04 |
| S205 | 21 | @ad<"20111110" and hole$punch$4 | US-PGPUB; | OR | ON | 2014/05/30 |

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| | | and camera and (p2p or point$to$point or peer$to$peer) | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 18:04 |
| S206 | 1 | @ad<"20111110" and hole$punch$4 and camera and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:05 |
| S207 | 24064 | 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:34 |
| S208 | 6 | hole$punch$4 and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:35 |
| S209 | 3 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 and client and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:35 |
| S210 | 0 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4) and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:37 |
| S211 | 3 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 18:38 |
| S212 | 5 | ((CHI-MING) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S213 | 4 | ((YU-LI) near2 (KAO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S214 | 1 | ((CHIEN-CHIH) near2 (YANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S215 | 2 | ((SHENG-FU) near2 (CHANG)).INV. | US-PGPUB; USPAT; | OR | ON | 2014/10/27 19:06 |

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| | | | USOCR | | | |
| S216 | 4 | @ad<"20111110" and hole$punch$4 and camera and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 19:07 |
| S217 | 14 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 19:07 |
| S218 | 3 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2015/03/09 12:40 |
| S219 | 0 | "14951008" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:09 |
| S220 | 3 | "13950282" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:09 |
| S221 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:11 |
| S222 | 1 | "13776197" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:27 |
| S223 | 72444 | (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:52 |
| S224 | 144 | (set$top near1 box) and (TV near1 program) and p2p | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:52 |
| S225 | 202 | (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:53 |
| S226 | 123 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:53 |
| S227 | 113 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:57 |
| S228 | 76 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:57 |
| S229 | 71 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:58 |
| S230 | 47 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:04 |

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| | | (peer near1 peer))and remote and mobile and (phone or cell) and register | | | | |
| S231 | 14 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register and hole | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:06 |
| S232 | 0 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register and (hole near1 punch) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:08 |
| S233 | 16 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:10 |
| S234 | 16 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 channel) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:11 |
| S235 | 0 | @ad<="20111110" and (set$top near1 box) and (control$4 near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:17 |
| S236 | 0 | @ad<="20111110" and (set$top near1 box) and (switch$4 near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:17 |
| S237 | 0 | @ad<="20111110" and (set$top near1 box) and (switch$4 near3(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:18 |
| S238 | 63 | @ad<="20111110" and (set$top near1 box) and (switch$4 near3(TV near1 channel)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:18 |
| S239 | 43 | @ad<="20111110" and (set$top near1 box) and (control$4 or switch$4) near1(TV near1 channel) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:22 |
| S240 | 14 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same remote | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:23 |
| S241 | 0 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:24 |
| S242 | 0 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same cell | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:24 |
| S243 | 123 | @ad<="20111110" and (mobile near1 phone) same request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:36 |
| S244 | 4 | @ad<="20111110" and (mobile near1 phone) near3 request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:36 |
| S245 | 737 | @ad<="20111110" and (mobile near1 phone) near3 (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:39 |
| S246 | 26 | @ad<="20111110" and ((mobile | US-PGPUB; | OR | OFF | 2015/07/27 |

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| | | near1 phone) near3 (set$top near1 box)) and (TV near1 program) | USPAT | | | 06:39 |
| S247 | 1 | @ad<="20111110" and ((mobile near1 phone) near3 (set$top near1 box)) and control$4 near1 (TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:40 |
| S248 | 372 | @ad<="20111110" and (control$4 near3 (TV near1 program)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
| S249 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 program)) with (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
| S250 | 3 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
| S251 | 1 | @ad<="20111110" and (switch$4 near3 (TV near1 program)) same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:53 |
| S252 | 0 | @ad<="20111110" and (switch$4 near3 (TV near1 program)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| S253 | 0 | @ad<="20111110" and (switch$4 near3 (TV near1 channel)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| S254 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 channel)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| S255 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:56 |
| S256 | 33 | @ad<="20111110" and (smart near1 phone) same request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:56 |
| S257 | 2 | @ad<="20111110" and (smart near1 phone) same request same (set$top near1 box) and TV near1 program | US-PGPUB; USPAT | OR | OFF | 2015/07/27 07:02 |
| S258 | 6 | ((Chi-Ming) near2 (Kuo)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S259 | 5 | ((Yu-Li) near2 (Kao)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S260 | 1 | ((Bai-Jian) near2 (Xiao)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S261 | 17 | ((Cheng-Wei) near2 (Li)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S262 | 7 | ("20050097612" \| "20050157217" \| "20060064723" \| "20050108751" \| "20070038516" \| "6359661" \| "20050097595" \| "20080141293" \| "20020013950" \| "20060179452" \| "5663756" \| "20020116500" \| "20070240182" \| "7127733" \| "20080136664" \| "5410326" \| "20040104806" \| "6426705").PN. and (set$top) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:02 |
| S263 | 1 | ("8320901").pn. | US-PGPUB; | OR | OFF | 2016/02/17 |

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| | | | USPAT | | | 19:15 |
| S264 | 0 | "14951008" | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:31 |
| S265 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:31 |
| S266 | 1 | (set$top near3 box) same P2p same (remote near1 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:34 |
| S267 | 1 | (set$top near3 box) same P2p same (remote near1 device) and point | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:35 |
| S268 | 1 | (set$top near3 box) same P2p same (remote near1 device) and router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:35 |
| S269 | 0 | (set$top near3 box) same P2p same (remote near1 device) same router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:36 |
| S270 | 0 | (set$top near3 box) same p2p same (remote near1 device) same router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:36 |
| S271 | 20 | (set$top near3 box) same p2p same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:36 |
| S272 | 6 | (set$top near3 box) with UID | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:39 |
| S273 | 0 | (set$top near3 box) with reguster with provider | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:41 |
| S274 | 27 | (set$top near3 box) with register with provider | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:41 |
| S275 | 17288 | IPTV | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S276 | 9165 | IPTV and set$top | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S277 | 1941 | IPTV and set$top and register | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S278 | 382 | IPTV and set$top and register and (unique near1 identifier) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S279 | 352 | IPTV and set$top and register and (unique near1 identifier) and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S280 | 62 | IPTV and set$top and register and (unique near1 identifier) and provider and (p2p or "point$to$point") | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:51 |
| S281 | 0 | IPTV and set$top and register and (unique near1 identifier) and provider and "point$to$point" | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:51 |
| S282 | 148 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near3 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:53 |
| S283 | 27 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near1 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:53 |
| S284 | 130 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:53 |
| S285 | 47 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:54 |
| S286 | 47 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart or mobile or remote) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:54 |

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| S287 | 43 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and smart | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:55 |
| S288 | 36 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:55 |
| S290 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:14 |
| S291 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:17 |
| S292 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:18 |
| S293 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:18 |
| S294 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:19 |
| S295 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:19 |
| S296 | 0 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satallite | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:19 |
| S297 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:20 |
| S298 | 27 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:20 |
| S299 | 27 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:20 |

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| | | and program and satellite and subscriber and source | | | | |
| S300 | 1 | "14591008" and portion | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:08 |
| S301 | 15 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source and smart | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:09 |
| S302 | 2 | "20120159546" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:23 |
| S303 | 2 | "20090298535" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:24 |
| S304 | 2 | "20090298535" and identifier and set$top and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:24 |
| S305 | 2 | "20090298535" and identifier and set$top and provider and point | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:25 |
| S306 | 0 | "20090298535" and identifier and set$top and provider and p2p | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:26 |
| S307 | 0 | "20110209177" and identifier and set$top and provider and p2p | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:27 |
| S308 | 0 | "20110209177" and identifier and set$top and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:27 |
| S309 | 2 | "20090298535" and identifier and set$top and provider and point and program | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:28 |
| S310 | 0 | "20120086563" and identifier and set$top and provider and point and program | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:30 |
| S311 | 0 | "20120086563" and identifier and set$top and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:30 |
| S312 | 2 | "20120086563" and identifier and set$top | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:32 |
| S313 | 1481 | control$4 with (set$top) with (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:33 |
| S314 | 90 | control$4 near5 (set$top) near5 (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:33 |
| S315 | 8 | IPTV and (control$4 near5 (set$top) near5 (smart near2 phone)) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:33 |
| S316 | 71 | (control$4 near5 (set$top) near5 (smart near2 phone)) and (provider or subscriber) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:37 |
| S317 | 5 | @ad<="20111110" and (control$4 near5 (set$top) near5 (smart near2 phone)) and (provider or subscriber) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:37 |
| S318 | 2 | "20120086563" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:43 |
| S319 | 2 | "20120086563" and identifier | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:43 |
| S320 | 2 | "20120086563" and identifier and set$top | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:44 |
| S321 | 2 | "20120086563" and identifier and STB | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:45 |

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|---|---|---|---|---|---|---|
| S322 | 2 | "20120086563" and identifier and STB and smart | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:46 |
| S323 | 2 | "20120086563" and identifier and STB and smart and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:46 |
| S324 | 0 | "20120086563" and identifier and STB and smart and (point near2 point) and register | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:47 |
| S325 | 2 | "20120086563" and identifier and STB and smart and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:47 |
| S326 | 28259 | (hole near3 punch$4) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 23:58 |
| S327 | 13 | (hole near3 punch$4) and IPTV | US-PGPUB; USPAT | OR | OFF | 2016/02/21 23:58 |
| S328 | 0 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source and punch$4 | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:00 |
| S329 | 1 | "20120117590" | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:07 |
| S330 | 908 | (hole near2 punch$4) and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:31 |
| S331 | 0 | (hole near2 punch$4) and (point near2 point) and (remote near3 revice) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:31 |
| S332 | 95 | (hole near2 punch$4) and (point near2 point) and (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:31 |
| S333 | 25 | (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:32 |
| S334 | 25 | @ad<="201111110" and (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:32 |
| S335 | 13 | @ad<="20111110" and (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:32 |
| S336 | 1 | "20110307930" | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:57 |
| S337 | 7 | "12148444" | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:48 |
| S338 | 17 | (point near2 point) same (set$top or STB) same (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:50 |
| S339 | 1 | (direct near3 connection) same (set$top or STB) same (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:53 |
| S340 | 48 | (direct near3 connection) same (set$top or STB) same (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:57 |
| S341 | 47 | @ad<="20111110" and (direct near3 connection) same (set$top or STB) same (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:58 |

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| S342 | 12 | @ad<="20111110" and (point near2 point) same (set$top or STB) same (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 02:02 |
| S343 | 2 | "20140198788" | US-PGPUB; USPAT | OR | OFF | 2016/09/23 05:40 |
| S344 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2016/09/23 05:42 |
| S345 | 1 | "14751696" | US-PGPUB; USPAT | OR | OFF | 2016/09/23 14:37 |
| S346 | 1 | "20130014033" | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:43 |
| S347 | 19 | different with virtual near2 (environment or universe) with (alias or name) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:54 |
| S348 | 21 | (different with virtual near2 (environment or universe)) same ((different or plural$3 or various) with (alias or name)) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:55 |
| S349 | 21872 | (select$3 or decid$3 or determin$6) with(alias or name) with (commication or command or instruction or message) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:56 |
| S350 | 72 | (different with virtual near2 (environment or universe)) and (select$3 or decid$3 or determin$6) with(alias or name) with (commication or command or instruction or message) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:56 |
| S351 | 4 | (different with virtual near2 (environment or universe)) same (select$3 or decid$3 or determin$6) with(alias or name) with (commication or command or instruction or message) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:56 |
| S352 | 13 | ((select$3 or decid$3 or determin$6) with (alias or name) with (commication orcommand or instruction or message)) same virtual near2 (environment or universe) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:57 |
| S353 | 2936 | (alias or screen$1name or name or avatar) with virtual near2 (environment or reality or universe) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:58 |
| S354 | 158 | ((alias or screen$1name or name or avatar) with virtual near2 (environment or reality or universe)) same2 ((match$3 or associat$3 or look$1up) with (alias or screen$1name or name or avatar) with (communication or message)) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:58 |
| S355 | 123 | ((alias or screen$1name or name or avatar) with virtual near2 (environment or reality or universe)) same2 ((match$3 or associat$3 or look$1up) with (alias or screen$1name or name or avatar)with (communication or message)) and ((different or multiple or plural$3 or vari$3)with virtual near2 (environment or reality or universe)) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 16:59 |

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| S356 | 53 | ((alias or screen$1name or name or avatar) with virtual near2 (environment or reality or universe)) same2 ((match$3 or associat$3 or look$1up) with (alias or screen$1name or name or avatar)with (communication or message)) same2 ((different or multiple or plural$3 or vari$3)with virtual near2 (environment or reality or universe)) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 17:00 |
| S357 | 32 | ((alias or screen$1name or name or identity)with (associat$3 or correlat$3 or map$4)with virtual near2 (environment or reality or universe)) same2 ((different or multiple or plurall$3) with (alias or screen$1name or name or identity)) | US-PGPUB; USPAT | OR | OFF | 2016/09/23 17:01 |
| S358 | 3 | (US-20120101970-$ or US-20130014033-$).did. or (US-9100435-$).did. | US-PGPUB; USPAT | OR | OFF | 2016/09/23 17:02 |
| S359 | 14 | ((alias or screen$1name or name or identity)with (associat$3 or correlat$3 or map$4)with virtual near2 (environment or reality or universe)) same2 ((different or multiple or plurall$3) with (alias or screen$1name or name or identity)) and @ad<="20090402" | US-PGPUB; USPAT | OR | OFF | 2016/09/23 17:03 |
| S360 | 15 | register$4 same device same (UID or (unique near1 identifier)) same (network near1 address$4 or (IP near1 address)) same install | US-PGPUB; USPAT | OR | OFF | 2016/09/25 01:20 |
| S361 | 1 | "20140310741" | US-PGPUB; USPAT | OR | OFF | 2016/09/25 01:30 |
| S362 | 1 | "20030018733" | US-PGPUB; USPAT | OR | OFF | 2016/09/25 01:46 |
| S363 | 215 | (register$4 same device same ((IP near1 address) or (network near1 address)) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:48 |
| S364 | 89 | (register$4 same device same ((IP near1 address) or (network near1 address)) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (home near4 network) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:48 |
| S365 | 25 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (home near4 network) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:49 |
| S366 | 0 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (home near4 network) and STB | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:53 |
| S367 | 23 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:54 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (home near4 network) and (direct or p2p) | | | | |
| S368 | 2 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (home near4 network) and (p2p) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:54 |
| S369 | 0 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and ((p2p or peer$2peer or point$2point) near4 connection) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:56 |
| S370 | 20 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and (p2p or peer$2peer or point$2point) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:56 |
| S371 | 56 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:58 |
| S372 | 31 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and home | US-PGPUB; USPAT | OR | OFF | 2016/09/25 02:58 |
| S373 | 1 | "20120242526" | US-PGPUB; USPAT | OR | OFF | 2016/09/25 05:34 |

**EAST Search History (Interference)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L11 | 35 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (manufactur$4 near5 identif$4) and home | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:42 |
| L15 | 25 | (register$4 same device same (assign$4 near3 ((IP near1 address) or (network near1 address))) same (identif$4 or GUID)) and (p2p or peer$2peer or point$2point) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:43 |
| L18 | 16 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source and smart | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:51 |
| L19 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:53 |
| L21 | 17 | @ad<="20111110" and (set$top near1 box) | US- | OR | OFF | 2017/06/20 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | and control$4 near1(TV near1 program) | PGPUB; USPAT | | | 19:54 |
| L24 | 25 | @ad<="201111110" and (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2017/06/20 19:55 |
| L26 | 8 | IPTV and (control$4 near5 (set$top) near5 (smart near2 phone)) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:08 |
| L28 | 15 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT | OR | ON | 2017/06/20 20:09 |
| L30 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:10 |
| L31 | 3 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:10 |
| L32 | 3 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:10 |
| L34 | 42 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2017/06/20 20:23 |

**6/20/2017 8:25:58 PM**
**C:\Users\nabedin\Documents\EAST\Workspaces\14591008.wsp**

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

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

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 07/27/2015 | 02/21/2016 | 09/23/2016 | 05/01/2017 | 06/20/2017 | | | | |
| 1 | 1 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 2 | 2 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 3 | 3 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 4 | 4 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 5 | 5 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 7 | 6 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 11 | 7 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 13 | 8 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 12 | 9 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 14 | 10 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 15 | 11 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 8 | 12 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 9 | 13 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 10 | 14 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| 16 | 15 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| | 16 | ✓ | - | - | - | - | | | | |
| | 17 | ✓ | ✓ | ✓ | ✓ | - | | | | |
| 6 | 18 | ✓ | ✓ | ✓ | ✓ | = | | | | |
| | 19 | ✓ | ✓ | ✓ | ✓ | - | | | | |
| | 20 | ✓ | - | - | - | - | | | | |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | Examiner | Art Unit |
| | NORMIN ABEDIN | 2449 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| H04L12/2818 | 2/21/2016 | NA |
| H04L12/6418 | 2/14/2016 | NA |
| H04L61/1535 | 2/21/2016 | NA |
| H04L65/00 | 2/21/2016 | NA |
| H04N21/4788 | 2/21/2016 | NA |
| H04N21/6168 | 2/21/2016 | NA |
| H04N21/6175 | 2/21/2016 | NA |
| H04N21/6193 | 2/21/2016 | NA |

| CPC COMBINATION SETS - SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 709 | 220-226 | 7/27/2015 | NA |
| 709 | 220-226 | 2/21/2016 | NA |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 7/27/2015 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 2/21/2016 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 9/23/2016 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 5/1/2017 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 6/20/2017 | NA |

| /NORMIN ABEDIN/<br>Examiner.Art Unit 2449 | |
|---|---|

| INTERFERENCE SEARCH | | | |
|---|---|---|---|
| **US Class/ CPC Symbol** | **US Subclass / CPC Group** | **Date** | **Examiner** |
| | Pub search and UnPub search | 6/20/2017 | NA |

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| /NORMIN ABEDIN/<br>Examiner.Art Unit 2449 | |

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

| CPC | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Symbol** | | | | | | | **Type** | **Version** |
| H04N | | 21 | / | 4788 | | | F | 2013-01-01 |
| H04N | | 21 | / | 6175 | | | I | 2013-01-01 |
| H04N | | 21 | / | 6168 | | | I | 2013-01-01 |
| H04N | | 21 | / | 6193 | | | I | 2013-01-01 |
| H04L | | 61 | / | 1535 | | | I | 2013-01-01 |
| H04L | | 12 | / | 2818 | | | I | 2013-01-01 |
| H04L | | 65 | / | 00 | | | I | 2013-01-01 |
| H04L | | 12 | / | 6418 | | | I | 2013-01-01 |
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| CPC Combination Sets | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Symbol** | | | | | | | **Type** | **Set** | **Ranking** | **Version** |
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| | | Total Claims Allowed: | |
|---|---|---|---|
| (Assistant Examiner) | (Date) | 16 | |
| /NORMIN ABEDIN/<br>Examiner.Art Unit 2449 | 06/20/2017 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 1 | 1 |

U.S. Patent and Trademark Office — Part of Paper No. 20170620

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

| US ORIGINAL CLASSIFICATION | | INTERNATIONAL CLASSIFICATION | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CLASS | SUBCLASS | CLAIMED | | | | | NON-CLAIMED | | | | | |
| 709 | 223 | G | 0 | 6 | F | 15 / 173 (2006.01.01) | | | | | | |
| CROSS REFERENCE(S) | | | | | | | | | | | | |
| CLASS | SUBCLASS (ONE SUBCLASS PER BLOCK) | | | | | | | | | | | |
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| (Assistant Examiner) | (Date) | Total Claims Allowed: 16 | |
|---|---|---|---|
| /NORMIN ABEDIN/<br>Examiner.Art Unit 2449 | 06/20/2017 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 1 | 1 |

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

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

| Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | 17 | | | | | | | | | | | | |
| 2 | 2 | 6 | 18 | | | | | | | | | | | | |
| 3 | 3 | | 19 | | | | | | | | | | | | |
| 4 | 4 | | 20 | | | | | | | | | | | | |
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| 13 | 8 | | | | | | | | | | | | | | |
| 12 | 9 | | | | | | | | | | | | | | |
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| 16 | 15 | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | |

| (Assistant Examiner) | (Date) | **Total Claims Allowed:** 16 | |
|---|---|---|---|
| /NORMIN ABEDIN/<br>Examiner.Art Unit 2449 | 06/20/2017 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 1 | 1 |

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www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

11336 7590 05/05/2017

Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2449 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 05/05/2017 | ELECTRONIC |

**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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

miketeng@litron-intl.com
janiceshih@litron-intl.com
pattyyu@litron-intl.com

| Office Action Summary | Application No. 14/591,008 | Applicant(s) KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | AIA (First Inventor to File) 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 *12/28/2016*.

☐ 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) *1-15 and 17-19* 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) *1-15 and 17-19* 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 *01/07/2015* 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: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

1. The present application is being examined under the pre-AIA first to invent provisions.

***Status of Claims:***

1. Claims 1-15, 17-19 are pending in this Office Action.

2. Claims 1 are amended.

3. Claims 16, 20 are canceled.

4. Claims 1-15, 17-19 are rejected.

***Response to arguments***

Applicant's arguments filed in the amendment filed 12/28/2016 have been fully considered but are moot in view grounds of rejection. The reasons set forth below.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 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(a) 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.

**Claims 1-4, 6-15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Nath et al., "hereinafter Nath" (US Patent Publication: 20080310425) and further in view of Gurun et al., "hereinafter Gurun" (US Patent Publication: 20100185771).**

As per claim 1, Klein discloses an information concentrating center, comprising:

at least one interface for receiving information from at least one information source **(Klein, Para.9, multimedia content (e.g., digital television content) sent to an STB over a multimedia content distribution network);** and

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet **(Klein, Para.10, The digital television service includes receiving a plurality of commands from a hand-held communication device over an Internet protocol (IP) network.);**

a third interface for connecting to a television for viewing said information **(Klein, Para.26, display 124 may be any National Television System Committee (NTSC) and/or Phase Alternating Line (PAL) compliant display device.);**

enable the remote client device to establish a connection with the information concentrating center **(Klein, Para.49, remotely controlling one or more remote STBs using a hand-held communication device such as a smart phone)** for viewing said information received by the information concentrating center **(Klein, Para.27, the clients 120 are operable to receive packet-based multimedia streams from access network 130 and process the streams for presentation on displays 124.);**

at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection **(Klein, Para.46, data corresponding to the digital television content may be sent over network 177 and communication channel 175 to communication device 173. The data may originate from content delivery resources 107 or from STB(s) 121.),**

the remote client device to establish a p2p connection with the information concentrating center via the internet **(Klein, Para.26, Remote control device 126 communicates wirelessly with STB 121 using an infrared (IR) or RF signal),**

However Klein does not discloses a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center contacts at least one linking server through the internet to register said embedded unique identification into the at least one linking server for identifying network addressing information of the information concentrating center and wherein the remote client device connects to the at least one linking server through the internet according to said unique identification (UID) of the information concentrating center for establishing a p2p connection with the information concentrating center via the internet.

Nath discloses a unique identification (UID) embedded in the information concentrating center **(Nath, Para.62, the device identity is exemplified by a number stored in the device hardware, such as, for example, IMEI, MAC address, serial number or SKU that uniquely identifies the device hardware)**, wherein the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center **(Nath, Para.62, any of the network elements with which a wireless device registers or which is responsible for assigning network addresses, can be adapted to communicate the mapping of device identity to network address for a wireless device to an external system, such as a device management server., [however the reference Nath does not discloses linking server. The Examiner relied on the McGuire for the linking server]).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Nath by implementing a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center in order to allows the communication of the mapping of (or "binding" between) the identity of a wireless device and the network address assigned to the wireless device, by

using one or more of the various network elements that detect the presence of wireless devices, authorize wireless devices, and assign network addresses to wireless devices **(Nath, Para.62).**

However Klein in view of Nath does not disclose the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a p2p connection according to the network addressing information provided by the at least one linking server.

Gurun discloses the remote client device contacts to the at least one linking server with the unique identification (UID) therein so as to establishing a p2p connection according to the network addressing information provided by the at least one linking server **(Gurun, Para.16, both client A 102 and client B 110 first provide detailed information about their IP addresses to the communication server 116. The communication server 116 then relays the address of client A 102 to client B 110 and vice versa. The communication server 116 can also select and inform either of the two endpoints as the initiator of the direct connection).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein, Nath and in view of Gurun by implementing the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a p2p connection according to the network addressing information provided by the at least one linking server in order to keep transparent for switching of the communication mode between the clients during their communication session without causing any inconvenience and/or disruption of the communication **(Gurun, Abs).**

As per claim 2, the modified Klein discloses the information concentrating center according to claim 1, wherein the information concentrating center is a set top box **(Klein, Para.9, an STB over a multimedia content distribution network).**

As per claim 3, the modified Klein discloses the information concentrating center according to claim 1, wherein the remote client device is a portable electronic device **(Klein, Para.18, hand-held**

**communications device such as a smart phone to manage delivery of digital television content to one or more STBs).**

As per claim 4, the modified Klein discloses the information concentrating center according to claim 1, wherein the remote client device is a mobile phone **(Klein, Para.18, hand-held communications device such as a smart phone to manage delivery of digital television content to one or more STBs).**

As per claim 6, the modified Klein discloses the information concentrating center according to claim 1, wherein the second interface couples to the Internet through an external routing device or an internal routing device **(Klein, Para.24, plurality of network switching and routing devices referred to simply as switches 113 through 117).**

As per claim 7, the modified Klein discloses the information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs **(Klein, Para.13 Television programs, video on demand (VOD) movies, digital television content, music programming, and a variety of other types of multimedia content.).**

As per claim 8, the modified Klein discloses the information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs **(Klein, Para.14, traditional coaxial-based "cable" networks, whether analog or digital).**

As per claim 9, the modified Klein discloses the information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Klien, Para.35, When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121**

**indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155.).**

As per claim 10, the modified Klein discloses the information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Klien, Para.35, When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155.).**

As per claim 11, the modified Klein discloses the information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed **(Klien, Para.13, coaxial-based networks, satellite-based networks).**

As per claim 12, the modified Klein discloses the information concentrating center according to claim 6, wherein the routing device is an IP router **(Klien, Para.26, a router, Para.39, client-facing switch 113 routes multimedia content encapsulated into IP packets over access network 130, ).**

As per claim 14, the modified Klein discloses the information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device **(Klien, Para.52, and one or more web-enabled backend servers running software that allows a communications network (e.g., cellular or WiFi network) to tie into a video delivery network via a web portal or applet running on the smart phone).**

As per claim 15, the modified Klein discloses the information concentrating center according to claim 1, wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device **(Klien, Para.56, The communication device may have a touch screen display that supports a touch interface that includes a plurality of configurable, virtual buttons for controlling which digital television content is provided to the STB or STBs that are controlled).**

As per claim 18, the modified Klein discloses the information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection **(Gurun, Para.17, the two endpoints 102 and 110 collaborate with each other to establish a direct connection between them via TCP hole-punching.).**

**Claims 13, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Nath et al., "hereinafter Nath" (US Patent Publication: 20080310425), in view of Gurun et al., "hereinafter Gurun" (US Patent Publication: 20100185771) and further in view of Perez et al., "hereinafter Perez" (US Patent Publication: 20120242526).**

As per claim 13, the modified Klein discloses the information concentrating center according to claim 6,

However Klein in view of Nath and McGuire do not discloses the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

Perez discloses the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center **(Perez, Fig.6, Para.28, STB or DVR 114 may act as an intermediary device in a similar manner to that described above, receiving command requests from smart phone 102 and relaying these to remote control 600 via two-way communication link 602. Programming in remote control 600 may perform as previously described to translate the received requests into command transmissions 106 in a format recognizable by an appliance to be controlled, for example TV 108).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Perez by implementing the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center in order to incorporated into some other item of equipment, for example a smart phone charging base, a portable keyboard or game controller device, a table lamp, etc **(Perez,Para.29).**

As per claim 19, Klein in view of Nath and McGuire discloses an interface coupling to an information concentrating center recited as in claim 1, wherein a p2p connection is established between the information concentrating center and the remote client device.

However Klein in view of Nath and McGuire do not discloses the remote control device sends a command to the information concentrating center wherein said command is transmitted to the interface for controlling the appliance.

Perez discloses the remote control device sends a command to the information concentrating center via the connection wherein said command is transmitted to the interface for controlling the appliance **(Perez, Fig.6, Para.28, STB or DVR 114 may act as an intermediary device in a similar manner to that described above, receiving command requests from smart phone 102 and relaying these to remote control 600 via two-way communication link 602. Programming in remote control 600 may perform as previously described to translate the received requests into command transmissions 106 in a format recognizable by an appliance to be controlled, for example TV 108).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Perez by implementing the remote control device sends a command to the information concentrating center via the connection wherein said command is transmitted to the interface for controlling the appliance in order to incorporated into some other item of equipment, for example a smart phone charging base, a portable keyboard or game controller device, a table lamp, etc **(Perez,Para.29).**

**Claims 5, 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Nath et al., "hereinafter Nath" (US Patent Publication: 20080310425), in view of Gurun et al., "hereinafter Gurun" (US Patent Publication: 20100185771) and further in view of Rouse et al., "hereinafter Rouse" (US Patent Publication: 20110307930).**

As per claim 5, the modified Klein discloses the information concentrating center according to claim 1.

However modified Klein dose not disclose the remote client device is not registered in the at least one linking server while the P2P connection is being established**.**

Rouse discloses the remote client device is not registered in the at least one linking server while the connection is being established **(Rouse, Para.34, a user may desire resuming viewing of the movie over a laptop computer connected to a hotel's Wi-Fi service. This laptop may not have been previously registered).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Rouse by implementing the remote client device is not registered in the at least one linking server while the connection is being established in order to allowing a viewer to watch a first portion of a VOD program, and then view the remainder portion at a later time at a different location and using a different service provider **(Rouse, Para.4).**

As per claim 17, the modified Klein discloses the information concentrating center according to claim 1.

However modified Klein dose not disclose the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

Rouse discloses the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection **(Rouse, Para.47, the user has not previously registered the device from which resumption is requested. This may encompass the situation where the user is using a laptop or other computer (which does not have a fixed IP address, mobile identifier, or originating mobile number) at a remote location (e.g., a hotel room). This could reflect the user desiring to resume watching a movie while on a business trip, and connectivity is obtained through a Wi-Fi connection though the Internet to the cable service provider. In this case, the user may be prompted to provide identification information such as their name, account number, and/or address information.).**

The motivation is as like as claim 5.

**The applicant Argue:**

**Argument 1:**

Applicant argues that the reference Klein fails to teach or suggest “at least one interface for receiving information from at least one information source; a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet; a third interface for connecting

to a television for viewing said information" as recited in claim 1.

**In response,** Examiner would like to point out that the reference Klein does teach in Para.9, " *multimedia content (e.g., digital television content) sent to an* ***STB*** **(information concentrating center)** *over a multimedia content distribution network* **(information source)**" and Para.10, "*The digital television service includes receiving a plurality of commands from a hand-held communication device* **(remote device)** *over an Internet protocol (IP) network*" and Para.26, "*display 124 may be any National Television System Committee (NTSC) and/or Phase Alternating Line (PAL) compliant display device (***television for viewing said information)***".

The set-top box receives the content from the multimedia content distribution network. The hand-held communication device or remote device (mobile phone, pad) send the command to the set-top box in order to view the information on the display device (television).

However the reference Klein does not discloses the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center. The reference Nath teaches the registration process with unique identification for identifying network addressing information in the Para.62.

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Nath by implementing a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center in order to allows the communication of the mapping of (or "binding" between) the identity of a wireless device and the network address assigned to the wireless device, by using one or more of the various network elements that detect the presence of wireless devices, authorize wireless devices, and assign network addresses to wireless devices **(Nath, Para.62).**

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NORMIN ABEDIN whose telephone number is (571)270-5970. The examiner can normally be reached on Mon to Friday 7:30-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)272-7304. 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.

/NORMIN ABEDIN/
Examiner, Art Unit 2449

| Notice of References Cited | Application/Control No. 14/591,008 | Applicant(s)/Patent Under Reexamination KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | 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-2010/0185771 A1 | 07-2010 | Gurun; Selim | G06F15/173 | 709/227 |
| | B | US- | | | | |
| | C | US- | | | | |
| | D | US- | | | | |
| | E | US- | | | | |
| | F | US- | | | | |
| | G | US- | | | | |
| | H | US- | | | | |
| | I | US- | | | | |
| | J | US- | | | | |
| | K | US- | | | | |
| | L | US- | | | | |
| | M | US- | | | | |

**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | CPC Classification |
|---|---|---|---|---|---|---|
| | N | | | | | |
| | O | | | | | |
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**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.

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | Examiner | Art Unit |
| | NORMIN ABEDIN | 2449 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| H04L12/2818 | 2/21/2016 | NA |
| H04L12/6418 | 2/14/2016 | NA |
| H04L61/1535 | 2/21/2016 | NA |
| H04L65/00 | 2/21/2016 | NA |
| H04N21/4788 | 2/21/2016 | NA |
| H04N21/6168 | 2/21/2016 | NA |
| H04N21/6175 | 2/21/2016 | NA |
| H04N21/6193 | 2/21/2016 | NA |

| CPC COMBINATION SETS - SEARCHED | | |
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| Symbol | Date | Examiner |
| | | |

| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 709 | 220-226 | 7/27/2015 | NA |
| 709 | 220-226 | 2/21/2016 | NA |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 7/27/2015 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 2/21/2016 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 9/23/2016 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 5/1/2017 | NA |

| INTERFERENCE SEARCH | | | |
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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 |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

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

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 07/27/2015 | 02/21/2016 | 09/23/2016 | 05/01/2017 | | | | | |
| | 1 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 2 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 3 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 4 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 5 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 6 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 7 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 8 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 9 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 10 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 11 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 12 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 13 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 14 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 15 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 16 | ✓ | - | - | - | | | | | |
| | 17 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 18 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 19 | ✓ | ✓ | ✓ | ✓ | | | | | |
| | 20 | ✓ | - | - | - | | | | | |

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>14/591,008 | Filing Date<br>01/07/2015 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☐ LARGE ☒ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | RATE ($) | FEE ($) |
|---|---|---|---|---|
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ 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

| AMENDMENT | 12/28/2016 | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * 18 | Minus | ** 20 | = 0 | X $40 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 1 | Minus | ***3 | = 0 | X $210 = | 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 |

| AMENDMENT | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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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MYRTLE LEIGH

This collection of information is required by 37 CFR 1.16. 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 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. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, 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.*

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

| | | | | | |
|---|---|---|---|---|---|
| Appl. No. | : | 14/591,008 | Confirmation No. | : | 9077 |
| First Named Applicant | : | Chi-Ming Kuo | Filed | : | 01/07/2015 |
| Examiner | : | ABEDIN, NORMIN | TC/A.U. | : | 2449 |
| Docket No. | : | 6121.007US | Customer No. | : | 11336 |

Title: **INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES**

**AMENDMENT**

Sir:

In response to the Office action of Sept. 30, 2016, please amend the above-identified application as follows.

**Amendments to the claims** are reflected in the listing of claims beginning on page 2 of this paper.

**Remarks** are reflected in the remarks section beginning on page 5 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) An information concentrating center, comprising:

at least one first interface for receiving information from at least one information source;

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet;

a third interface for connecting to a television for viewing said information; and

a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center contacts at least one linking server through the Internet to register ~~registers~~ said embedded unique identification (UID) ~~in~~ into the at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center for viewing said information received by the information concentrating center;

wherein the remote client device ~~sends a request to~~ contacts the at least one linking server through the Internet according to ~~with~~ said unique identification (UID) of the information concentrating center ~~therein so as to~~ for establishing a P2P connection between the remote client device and the information concentrating center via the Internet ~~according to the network addressing information provided by the at least one linking server~~, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

2. (Original) The information concentrating center according to claim 1, wherein the information concentrating center is a set top box.

3. (Original) The information concentrating center according to claim 1, wherein the remote client device is a portable electronic device.

4. (Original) The information concentrating center according to claim 1, wherein the remote client device is a mobile phone.

5. (Previously presented) The information concentrating center according to claim 1, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

6. (Previously presented) The information concentrating center according to claim 1, wherein the second interface couples to the Internet through an external routing device or an internal routing device.

7. (Original) The information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs.

8. (Original) The information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs.

9. (Original) The information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

10. (Original) The information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

11. (Original) The information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed.

12. (Original) The information concentrating center according to claim 6, wherein the routing device is an IP router.

13 (Original) The information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

14. (Original) The information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device.

15. (Previously presented) The information concentrating center according to claim 1, wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device.

16. (Cancelled)

17. (Previously presented) The information concentrating center according to claim 1, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

18. (Original) The information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

19. (Previously presented) An appliance, comprising:

an interface coupling to an information concentrating center recited as in claim 1, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection, wherein said command is transmitted to the interface for controlling the appliance.

20. (Cancelled)

## REMARKS/ARGUMENTS

**Clam1 is rejected under 112:**

**RESPONSE:**

**Claim 1 is amended and listed here reference**:

1. An information concentrating center, comprising:

at least one first interface for receiving information from at least one information source;

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet;

**a third interface for connecting to a television for viewing said information**; and

a unique identification (UID) embedded in the information concentrating center, wherein **the information concentrating center contacts at least one linking server through the Internet to register said embedded unique identification (UID) into the at least one linking server** for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center **for viewing said information received by the information concentrating center**;

wherein **the remote client device contacts the at least one linking server through the Internet according to said unique identification (UID) of the information concentrating center for establishing a P2P connection between the remote client device and the information concentrating center via the Internet**, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

**The amendment of the claim 1 can be found supportive in FIG. 19 and the following paragraphs of the specification of instant application**:

**[0069]** As described in U.S. patent application No. 13/293,506 and U.S. patent application No. 13/950,281, a home device such as the **information concentrating center can register its UID (Unique Identification) into a linking server, and a remote client device can then communicate with the linking server to establish a P2P connection from the remote client**

**device to the information concentrating center**. **As long as the remote client device has the information of the UID of the information concentrating center device, the remote client device can contact the linking server to make a P2P connection to the information concentrating center**.

**[0070] FIG. 19 illustrates** a linking server 1750 connected to the Internet 1704 for establishing the P2P connection 1708 between the information concentrating center such as a set top box 1730 and the remote client device 1706. **The set top box 1730 has a UID module 1760 which can communicate with the linking server 1750 directly or through an administration server to obtain the address of the linking server first so that the linking server can be contacted by the set top box 1730 for registering a Unique Identification (UID) of the set top box 1730 in the linking server 1750**. Afterwards, **the remote client device 1706, such as a mobile phone, PAD, notebook or other electronic device, can communicate with the linking server directly or through the administration server to obtain the address of the linking server 1750 first so that the linking server 1750 can be contacted by the remote client device 1706 for establishing the P2P connection 1708 between the set top box 1730 and the remote client device 1706.** The P2P connection 1708 can be set up quickly in this way without complex procedures. In addition, the bandwidth for carrying P2P connections is scalable due to the fact that each home user can establish a P2P connection to his/her own set top box separately without having bandwidth issues associated with video on demand (VoD) technology.

[0073] In one embodiment, **the information concentrating center has a first unique identification (UID) that is registered in at least one linking server**, wherein **the remote client device contacts the at least one linking server for establishing the P2P connection according to the first unique identification (UID) of the information concentrating center**.

**As a result, the amended claim 1 is supported by the Specification and Drawings of instant application and clear to a skilled person in the art; therefore, the 112 rejection on claim 1 is hereby overcome.**

**Claims 1-20 are rejected under 35 U.S.C. 103(a)** as being unpatentable by "**Klein**" in view of "**Nath**" and further in view of "**McGuire**"

**Response**:

**Claim 1 is amended to have the limitation**: "a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center contacts at least one linking server through the Internet to register said embedded unique identification (UID) into the at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center for viewing said information received by the information concentrating center" **which is not disclosed by the cited references, Klein or Joseph or in any combination of them for the following reasons:**

**(A) The wireless device disclosed in the cited reference Nath is a MOBILE PHONE** or alike that is connected to a BASE STATION using WIRELESS BROADCAST TECHNOLOGY, and thus to a skilled person in the art, **the wireless device/MOBILE PHONE of the cited reference Nath CANNOT be the information concentrating center, such as a set top box**, due to the fact that **the wireless device/MOBILE PHONE DOES NOT include**: **at least one first interface for receiving information from at least one information source**; and **a third interface for connecting to a television for viewing said information**. That is, a skilled person in the art **WOULD NOT think of** the **wireless device/MOBILE PHONE** as **an information concentrating center such as a set top box in the first place**.

**(B) The management sever of the cited reference Nath is NOT a linking server of the claim 1**, and furthermore **there is no linkage between the management sever of the cited reference Nath and the linking server of the cited reference McGuire at all**. A skilled person in the art WOULD NOT take the management sever of the cited reference Nath as a linking server of the claim 1, because the cited reference **Nath DOES NOT disclose that the management server is used as a linking server** for enabling **a remote client device** to establish a P2P connection with the **"wireless device"** of the cited reference **Nath** for viewing said

information received by the "**wireless device**," let alone that the **wireless device/MOBILE PHONE** is NOT **an information concentrating center such as a set top box as described in the above paragraph (A).**

**Based on the above reasons mentioned in paragraphs (A) and (B)**, **the wireless device disclosed in the cited reference Nath is NOT applicable to combine with the cited reference Klein to derive the limitations of the claim 1** in which "a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center contacts at least one linking server through the Internet to register said embedded unique identification (UID) into the at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center for viewing said information received by the information concentrating center."

**Furthermore, the cited reference McGuire does not disclose or teach the limitation of claim 1**: "a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center contacts at least one linking server through the Internet to register said embedded unique identification (UID) into the at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center for viewing said information received by the information concentrating center."

**A claim MUST be considered AS A WHOLE to determine the OBVIOUSNESS of the claim according to 35 U.S.C. 103(a)**. **Based on the above reasoning, Klein or Nath or McGuire or in any combination of them do not disclose or teach the claim 1 of instant application AS A WHOLE.**

**Claim 19 is listed here for reference**:

The claim 19 has the limitation: "**an interface coupling to an information concentrating center recited as in claim 1** and **the remote client device sends a command to the information concentrating center via the P2P connection controls the appliance**," which is

not disclosed by the cited reference **Klein** or **Joseph or in combination of them** due to the fact that none of the cited reference discloses an appliance comprising an interface that can receive a command through the information concentrating center **recited as in claim 1** for controlling the appliance.

**CONCLUSION**

The claim 1 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 1 is novel and patentable.

Claims 2-15 and 17-18 are dependent on claim 1 and should be allowed if claim 1 is allowed.

The claim 19 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 19 is novel and patentable.

Claims 16 and 20 are cancelled.

Applicants respectfully request your reconsideration and that timely Notice of Allowance be issued in this case.

Respectfully Submitted,

Date: Dec. 20, 2016

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# Electronic Acknowledgement Receipt

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|---|---|
| **EFS ID:** | 27911911 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
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| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
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| 1 | Amendment/Req. Reconsideration-After Non-Final Reject | 6121_007US_AMENDMENT.pdf | 154310<br>0fccd23494d6ea901a5cc09294342294bba802dd | no | 10 |

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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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| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |

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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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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janiceshih@litron-intl.com
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| Office Action Summary | Application No. 14/591,008 | Applicant(s) KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | AIA (First Inventor to File) 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 *08/23/2016*.

☐ 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) *1-15 and 17-19* 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) *1-15 and 17-19* 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 *01/07/2015* 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: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

***Status of Claims:***

1. Claims 1-15, 17-19 are pending in this Office Action.

2. Claims 1 are amended.

3. Claims 16, 20 are canceled.

4. Claims 1-15, 17-19 are rejected.

***Response to arguments***

Applicant's arguments filed in the amendment filed 11/10/2015 have been fully considered but are moot in view grounds of rejection. The reasons set forth below.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the **written description requirement**. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner did not find the support the claim limitation "**wherein the remote client device sends a request to the at least one linking server with the unique identification (UID)** therein so as to establishing a p2p connection according to the network addressing information provided by the at

least one linking server" in the specification. The applicant stated in the remarks in Page 5 that the claimed limitation is described in Paragraph [70] and Fig19. However the Examiner did not find the support of the claim limitation "**wherein the remote client device sends a request to the at least one linking server with the unique identification (UID)"** in the above Fig and paragraph. And therefore it is not specified in the claim how "establishing a p2p connection according to the network addressing information provided by the at least one linking server" is implemented.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 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(a) 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.

**Claims 1-4, 6-15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Nath et al., "hereinafter Nath" (US Patent Publication: 20080310425) and further in view of McGuire et al., "hereinafter McGuire" (US Patent Publication: 20130111043).**

As per claim 1, Klein discloses an information concentrating center, comprising:

at least one interface for receiving information from at least one information source **(Klein, Para.9, multimedia content (e.g., digital television content) sent to an STB over a multimedia content distribution network);** and

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet **(Klein, Para.10, The digital television service includes receiving a plurality of commands from a hand-held communication device over an Internet protocol (IP) network.);**

enable the remote client device to establish a connection with the information concentrating center **(Klein, Para.49, remotely controlling one or more remote STBs using a hand-held communication device such as a smart phone);**

at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection **(Klein, Para.46, data corresponding to the digital television content may be sent over network 177 and communication channel 175 to communication device 173. The data may originate from content delivery resources 107 or from STB(s) 121.).**

However Klein does not discloses a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center and wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a connection according to the network addressing information provided by the at least one linking server and enable the remote client device to establish a p2p connection with the information concentrating center.

Nath discloses a unique identification (UID) embedded in the information concentrating center **(Nath, Para.62, the device identity is exemplified by a number stored in the device hardware, such as, for example, IMEI, MAC address, serial number or SKU that uniquely identifies the device hardware)**, wherein the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center **(Nath, Para.62, any of the network elements with which a wireless device registers or which is responsible for assigning network addresses, can be adapted to communicate the mapping of device identity to network address for a wireless device to an external system, such as a device**

**management server., [however the reference Nath does not discloses linking server. The Examiner relied on the McGuire for the linking server]).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Nath by implementing a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification in at least one linking server for identifying network addressing information of the information concentrating center in order to allows the communication of the mapping of (or "binding" between) the identity of a wireless device and the network address assigned to the wireless device, by using one or more of the various network elements that detect the presence of wireless devices, authorize wireless devices, and assign network addresses to wireless devices **(Nath, Para.62).**

However Klein in view of Nath does not disclose the remote client device to establish a p2p connection with the information concentrating center via the internet and wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a p2p connection according to the network addressing information provided by the at least one linking server.

McGuire discloses enable the remote client device to establish a p2p connection with the information concentrating center via the internet **(McGuire, Para.30, sing the IP addresses and ports for the devices, the devices begin a process for establishing a peer to peer network connection between the devices.)** and wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a p2p connection according to the network addressing information provided by the at least one linking server **(McGuire, Para.51, Relay server 214 is an intermediate host that acts as a relay for packets being transferred between devices on network 220. Generally, relay server 214 is located at a well-known IP address and port on network 220, Para.30, using the IP addresses and ports for the devices, the devices begin a process for establishing a peer to peer network connection between the devices…this process includes using the relay server to send a message from each electronic device to the other**

**electronic device to indicate potential IP addresses and ports for communicating with the electronic device.).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein, Nath and in view of McGuire by implementing the remote client device to establish a p2p connection with the information concentrating center via the internet and wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a p2p connection according to the network addressing information provided by the at least one linking server in order to avoid the latency of existing systems and secure communication **(McGuire, Para.32).**

As per claim 2, the modified Klein discloses the information concentrating center according to claim 1, wherein the information concentrating center is a set top box **(Klein, Para.9, an STB over a multimedia content distribution network).**

As per claim 3, the modified Klein discloses the information concentrating center according to claim 1, wherein the remote client device is a portable electronic device **(Klein, Para.18, hand-held communications device such as a smart phone to manage delivery of digital television content to one or more STBs).**

As per claim 4, the modified Klein discloses the information concentrating center according to claim 1, wherein the remote client device is a mobile phone **(Klein, Para.18, hand-held communications device such as a smart phone to manage delivery of digital television content to one or more STBs).**

As per claim 6, the modified Klein discloses the information concentrating center according to claim 1, wherein the second interface couples to the Internet through an external routing device or an

internal routing device **(Klein, Para.24, plurality of network switching and routing devices referred to simply as switches 113 through 117).**

As per claim 7, the modified Klein discloses the information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs **(Klein, Para.13 Television programs, video on demand (VOD) movies, digital television content, music programming, and a variety of other types of multimedia content.).**

As per claim 8, the modified Klein discloses the information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs **(Klein, Para.14, traditional coaxial-based "cable" networks, whether analog or digital).**

As per claim 9, the modified Klein discloses the information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Klien, Para.35, When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155.).**

As per claim 10, the modified Klein discloses the information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Klien, Para.35, When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155.).**

As per claim 11, the modified Klein discloses the information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed **(Klien, Para.13, coaxial-based networks, satellite-based networks).**

As per claim 12, the modified Klein discloses the information concentrating center according to claim 6, wherein the routing device is an IP router **(Klien, Para.26, a router, Para.39, client-facing switch 113 routes multimedia content encapsulated into IP packets over access network 130, ).**

As per claim 14, the modified Klein discloses the information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device **(Klien, Para.52, and one or more web-enabled backend servers running software that allows a communications network (e.g., cellular or WiFi network) to tie into a video delivery network via a web portal or applet running on the smart phone).**

As per claim 15, the modified Klein discloses the information concentrating center according to claim 1, wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device **(Klien, Para.56, The communication device may have a touch screen display that supports a touch interface that includes a plurality of configurable, virtual buttons for controlling which digital television content is provided to the STB or STBs that are controlled).**

As per claim 18, the modified Klein discloses the information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection **(McGuire, Para.35,**

**the described embodiments can be considered to perform hole-punching operations upon establishing the network connection with the relay server and using the relay server to communicate packets, and upon establishing the peer to peer connection and using the peer to peer network connection to communicate packets.).**

**Claims 13, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Nath et al., "hereinafter Nath" (US Patent Publication: 20080310425), in view of McGuire et al., "hereinafter McGuire" (US Patent Publication: 20130111043) and further in view of Perez et al., "hereinafter Perez" (US Patent Publication: 20120242526).**

As per claim 13, the modified Klein discloses the information concentrating center according to claim 6,

However Klein in view of Nath and McGuire do not discloses the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

Perez discloses the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center **(Perez, Fig.6, Para.28, STB or DVR 114 may act as an intermediary device in a similar manner to that described above, receiving command requests from smart phone 102 and relaying these to remote control 600 via two-way communication link 602. Programming in remote control 600 may perform as previously described to translate the received requests into command transmissions 106 in a format recognizable by an appliance to be controlled, for example TV 108).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Perez by implementing the information

concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center in order to incorporated into some other item of equipment, for example a smart phone charging base, a portable keyboard or game controller device, a table lamp, etc **(Perez,Para.29).**

As per claim 19, Klein in view of Nath and McGuire discloses an interface coupling to an information concentrating center recited as in claim 1, wherein a p2p connection is established between the information concentrating center and the remote client device.

However Klein in view of Nath and McGuire do not discloses the remote control device sends a command to the information concentrating center wherein said command is transmitted to the interface for controlling the appliance.

Perez discloses the remote control device sends a command to the information concentrating center via the connection wherein said command is transmitted to the interface for controlling the appliance **(Perez, Fig.6, Para.28, STB or DVR 114 may act as an intermediary device in a similar manner to that described above, receiving command requests from smart phone 102 and relaying these to remote control 600 via two-way communication link 602. Programming in remote control 600 may perform as previously described to translate the received requests into command transmissions 106 in a format recognizable by an appliance to be controlled, for example TV 108).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Perez by implementing the remote control device sends a command to the information concentrating center via the connection wherein said command is transmitted to the interface for controlling the appliance in order to incorporated into some other item of equipment, for example a smart phone charging base, a portable keyboard or game controller device, a table lamp, etc **(Perez,Para.29).**

**Claims 5, 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over are rejected under 35**

**U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Nath et al., "hereinafter Nath" (US Patent Publication: 20080310425), in view of McGuire et al., "hereinafter McGuire" (US Patent Publication: 20130111043) and further in view of Rouse et al., "hereinafter Rouse" (US Patent Publication: 20110307930).**

As per claim 5, the modified Klein discloses the information concentrating center according to claim 1.

However modified Klein dose not disclose the remote client device is not registered in the at least one linking server while the P2P connection is being established**.**

Rouse discloses the remote client device is not registered in the at least one linking server while the connection is being established **(Rouse, Para.34, a user may desire resuming viewing of the movie over a laptop computer connected to a hotel's Wi-Fi service. This laptop may not have been previously registered).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Rouse by implementing the remote client device is not registered in the at least one linking server while the connection is being established in order to allowing a viewer to watch a first portion of a VOD program, and then view the remainder portion at a later time at a different location and using a different service provider **(Rouse, Para.4).**

As per claim 17, the modified Klein discloses the information concentrating center according to claim 1.

However modified Klein dose not disclose the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

Rouse discloses the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection **(Rouse, Para.47, the user has not previously registered the device from which resumption is requested. This may encompass the situation where the user is using a laptop or other computer (which does not have a fixed IP address, mobile identifier, or originating mobile number) at a remote location (e.g., a hotel room). This could reflect the user desiring to resume watching a movie while on a business trip, and connectivity is obtained through a Wi-Fi connection though the Internet to the cable service provider. In this case, the user may be prompted to provide identification information such as their name, account number, and/or address information.).**

The motivation is as like as claim 5.

***Conclusion***

Applicant's amendments necessitated the new ground(s) of rejection presented in this office action. THIS ACTION IS MADE FINAL. Application 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 mailing date of this final action.

/NORMIN ABEDIN/

Examiner, Art Unit 2449

| Notice of References Cited | Application/Control No. 14/591,008 | Applicant(s)/Patent Under Reexamination KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | 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-2013/0111043 A1 | 05-2013 | McGuire; Rory L. | H04L61/256 | 709/228 |
| * | B | US-2012/0242526 A1 | 09-2012 | Perez; Jesus | G08C17/02 | 341/176 |
| * | C | US-2008/0310425 A1 | 12-2008 | Nath; Badri | H04L29/12028 | 370/395.54 |
| | D | US- | | | | |
| | E | US- | | | | |
| | F | US- | | | | |
| | G | US- | | | | |
| | H | US- | | | | |
| | I | US- | | | | |
| | J | US- | | | | |
| | K | US- | | | | |
| | L | US- | | | | |
| | M | US- | | | | |

**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | CPC Classification |
|---|---|---|---|---|---|---|
| | N | | | | | |
| | O | | | | | |
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| | 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.

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | Examiner | Art Unit |
| | NORMIN ABEDIN | 2449 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| H04L12/2818 | 2/21/2016 | NA |
| H04L12/6418 | 2/14/2016 | NA |
| H04L61/1535 | 2/21/2016 | NA |
| H04L65/00 | 2/21/2016 | NA |
| H04N21/4788 | 2/21/2016 | NA |
| H04N21/6168 | 2/21/2016 | NA |
| H04N21/6175 | 2/21/2016 | NA |
| H04N21/6193 | 2/21/2016 | NA |

| CPC COMBINATION SETS - SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 709 | 220-226 | 7/27/2015 | NA |
| 709 | 220-226 | 2/21/2016 | NA |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 7/27/2015 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 2/21/2016 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 9/23/2016 | NA |

| INTERFERENCE SEARCH |
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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 |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

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

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 07/27/2015 | 02/21/2016 | 09/23/2016 | | | | | | |
| | 1 | ✓ | ✓ | ✓ | | | | | | |
| | 2 | ✓ | ✓ | ✓ | | | | | | |
| | 3 | ✓ | ✓ | ✓ | | | | | | |
| | 4 | ✓ | ✓ | ✓ | | | | | | |
| | 5 | ✓ | ✓ | ✓ | | | | | | |
| | 6 | ✓ | ✓ | ✓ | | | | | | |
| | 7 | ✓ | ✓ | ✓ | | | | | | |
| | 8 | ✓ | ✓ | ✓ | | | | | | |
| | 9 | ✓ | ✓ | ✓ | | | | | | |
| | 10 | ✓ | ✓ | ✓ | | | | | | |
| | 11 | ✓ | ✓ | ✓ | | | | | | |
| | 12 | ✓ | ✓ | ✓ | | | | | | |
| | 13 | ✓ | ✓ | ✓ | | | | | | |
| | 14 | ✓ | ✓ | ✓ | | | | | | |
| | 15 | ✓ | ✓ | ✓ | | | | | | |
| | 16 | ✓ | - | - | | | | | | |
| | 17 | ✓ | ✓ | ✓ | | | | | | |
| | 18 | ✓ | ✓ | ✓ | | | | | | |
| | 19 | ✓ | ✓ | ✓ | | | | | | |
| | 20 | ✓ | - | - | | | | | | |

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

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. 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.

# REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
## (Submitted Only via EFS-Web)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Application Number | 14/591,008 | Filing Date | 2015-01-07 | Docket Number (if applicable) | 6121.007US | Art Unit | 2449 |
| First Named Inventor | Chi-Ming KUO | | | Examiner Name | ABEDIN, NORMIN | | |

**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 _____

☒ Enclosed

- ☒ 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 _____

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. 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.

| Signature of Registered U.S. Patent Practitioner | | | |
|---|---|---|---|
| Signature | /Min-Lee Teng/ | Date (YYYY-MM-DD) | 2016-08-23 |
| Name | Min-Lee Teng | Registration Number | 65623 |

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.

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

| | | | | | |
|---|---|---|---|---|---|
| Appl. No. | : | 14/591,008 | Confirmation No. | : | 9077 |
| First Named Applicant | : | Chi-Ming Kuo | Filed | : | 01/07/2015 |
| Examiner | : | ABEDIN, NORMIN | TC/A.U. | : | 2449 |
| Docket No. | : | 6121.007US | Customer No. | : | 11336 |

Title: **INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES**

**AMENDMENT**

Sir:

In response to the Office action of Feb. 26, 2016, please amend the above-identified application as follows.

**Amendments to the claims** are reflected in the listing of claims beginning on page 2 of this paper.

**Remarks** are reflected in the remarks section beginning on page 5 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) An information concentrating center, comprising:

at least one interface for receiving information from at least one information source;

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet; and

a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers ~~the~~ said unique identification (UID) ~~of the information concentrating center is registered~~ in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;

wherein the remote client device sends a request to the at least one linking server with ~~the~~ said unique identification (UID) of the information concentrating center therein so as to establish ~~establishing~~ a P2P connection between the remote client device and the information concentrating center via the Internet according to the network addressing information provided by the at least one linking server, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

2. (Original) The information concentrating center according to claim 1, wherein the information concentrating center is a set top box.

3. (Original) The information concentrating center according to claim 1, wherein the remote client device is a portable electronic device.

4. (Original) The information concentrating center according to claim 1, wherein the remote client device is a mobile phone.

5. (Previously presented) The information concentrating center according to claim 1, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

6. (Previously presented) The information concentrating center according to claim 1, wherein the second interface couples to the Internet through an external routing device or an internal routing device.

7. (Original) The information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs.

8. (Original) The information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs.

9. (Original) The information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

10. (Original) The information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

11. (Original) The information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed.

12. (Original) The information concentrating center according to claim 6, wherein the routing device is an IP router.

13 (Original) The information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

14. (Original) The information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device.

15. (Previously presented) The information concentrating center according to claim 1, wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device.

16. (Cancelled)

17. (Previously presented) The information concentrating center according to claim 1, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

18. (Original) The information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

19. (Previously presented) An appliance, comprising:

an interface coupling to an information concentrating center recited as in claim 1, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection, wherein said command is transmitted to the interface for controlling the appliance.

20. (Cancelled)

## REMARKS/ARGUMENTS

**Claim 1 is amended and listed for reference**:

An information concentrating center, comprising:

at least one interface for receiving information from at least one information source;

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet; and

**a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification (UID) in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center**;

wherein **the remote client device sends a request to the at least one linking server with said unique identification (UID) of the information concentrating center therein so as to establish a P2P connection between the remote client device and the information concentrating center via the Internet** according to the network addressing information provided by the at least one linking server, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

The amendment of claim 1 can be fund supportive from **Fig. 19** and paragraph **[0070]** of the specification of instant application filed on 01/07/2015.

**The paragraph [0070] of the specification is listed here for reference**:

***[0070]*** *FIG. 19 illustrates a linking server 1750 connected to the Internet 1704 for establishing the P2P connection 1708 between the information concentrating center such as a set top box 1730 and the remote client device 1706.* ***The set top box 1730 has a UID module 1760 which can communicate with the linking server 1750 directly or through an administration server to obtain the address of the linking server first so that the linking server can be contacted by the set top box 1730 for registering a Unique Identification (UID) of the set top box 1730 in the linking server 1750****.* ***Afterwards, the remote client device 1706, such as a mobile phone, PAD,***

***notebook or other electronic device, can communicate with the linking server directly or through the administration server to obtain the address of the linking server 1750 first so that the linking server 1750 can be contacted by the remote client device 1706 for establishing the P2P connection 1708 between the set top box 1730 and the remote client device 1706****. The P2P connection 1708 can be set up quickly in this way without complex procedures. In addition, the bandwidth for carrying P2P connections is scalable due to the fact that each home user can establish a P2P connection to his/her own set top box separately without having bandwidth issues associated with video on demand (VoD) technology.*

As a result, the amended claim 1 is supported by the specification and the Drawings of instant application filed on 01/07/2015; no new matter is introduced.

**Claims 1-20 are rejected under 35 U.S.C. 103(a)** as being unpatentable by "**Klein**" in view of "**Joseph**"

**Response**:

Claim 1 is amended to have the limitation: "**a unique identification (UID) embedded in the information concentrating center**, wherein **the information concentrating center registers said unique identification (UID) in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center**" which is not disclosed by the cited references, Klein or Joseph or in any combination of them.

Klein does not disclose or teach the limitation of claim 1: "**a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification (UID) in at least one linking server for identifying network addressing information of the information concentrating center**."

Furthermore, the Examiner states that the STB of Klein is an Ethernet compliant device, and hence the STB of Klein has an embedded UID. **Applicant will assume that the Examiner is**

**referring to the MAC address (or equivalent) of an Ethernet compliant device. However, Klein does NOT disclose or teach that the STB registers the MAC address (Ethernet compliant device has an embedded MAC address) into the linking server for identifying network addressing information of the STB so as to enable the remote client device to establish a P2P connection with the STB.**

**The following is copied from Fig. 3 of the cited reference Klein:**

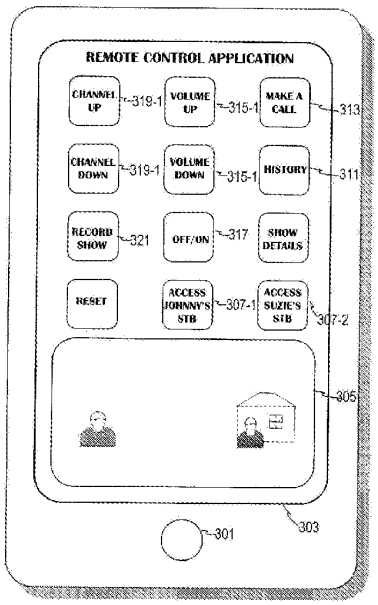



FIG. 3

**In the above Fig. 3 of the cited reference Klein, the virtual buttons 307-1 and 307-2 refer to two STB(s) that can be controlled by the remote client device; however, the cited reference Klein does NOT disclose that the virtual buttons 307-1 and 307-2 are MAC addresses (or an equivalent embedded UID)of the STB**, and as a result, the cited reference **Klein** does not disclose or teach the limitation of the amended claim 1: "**a unique identification (UID) embedded in the information concentrating center** " and wherein "**the remote client device sends a request to the at least one linking server with said unique identification (UID) of the information concentrating center therein** so as to establish a P2P connection between the remote client device and the information concentrating center **via the Internet** according to the network addressing information provided by the at least one linking server."

Furthermore, in the cited reference Joseph, the "**DIRECT COMMUNICATION**" is established between the User device and the STB in a "**WIRELESS LOCAL AREA NETWORK**," which is NOT applicable to be combined with Klein to derive the claim 1 of instant application in which the remote client device sends a request to the at least one linking server with said unique identification (UID) of the information concentrating center therein so as to establish a P2P connection between the remote client device and the information concentrating center via the Internet, due to the fact that **in Joseph, the DIRECT COMMUNICATION between the User device and the STB DOES NOT go through the Internet, which is different from the amended claim 1 in which the P2P connection is established between the remote client device and the information concentrating center via the Internet**.

Based on the above reasoning, **Klein** or **Joseph or in any combination of them do not disclose or teach the limitation of claim 1 of instant application: "a unique identification (UID) embedded in the information concentrating center, wherein the information concentrating center registers said unique identification (UID) in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center**; wherein **the remote client device sends a request to the at least one linking server with said unique identification (UID) of the information concentrating center therein so as to establish a P2P connection between the remote client device and the information concentrating center via the Internet.**"

**Claim 19 is listed here for reference**:

An appliance, comprising: **an interface coupling to an information concentrating center recited as in claim 1**, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection, **wherein said command is transmitted to the interface for controlling the appliance**.

The claim 19 has the limitation: "**an interface coupling to an information concentrating center recited as in claim 1** and **the remote client device sends a command to the information concentrating center via the P2P connection controls the appliance**," which is not disclosed by the cited reference **Klein** or **Joseph or in combination of them** due to the fact that none of the cited reference discloses an appliance comprising an interface that can receive a command through the information concentrating center **recited as in claim 1** for controlling the appliance.

## CONCLUSION

The claim 1 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 1 is novel and patentable.

Claims 2-15 and 17-18 are dependent on claim 1 and should be allowed if claim 1 is allowed.

The claim 19 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 19 is novel and patentable.

Claims 16 and 20 are cancelled.

Applicants respectfully request your reconsideration and that timely Notice of Allowance be issued in this case.

Respectfully Submitted,

Date: Aug. 21, 2016

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Reg. No. 65,623

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 14591008 |
| **Filing Date:** | 07-Jan-2015 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Filer:** | Min-Lee Teng |
| **Attorney Docket Number:** | 6121.007US |

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 $0 paid | 2253 | 1 | 700 | 700 |
| **Miscellaneous:** | | | | |
| Request for Continued Examination | 2801 | 1 | 600 | 600 |
| | | **Total in USD ($)** | | **1300** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 26716010 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
| **Filer:** | Min-Lee Teng |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 6121.007US |
| **Receipt Date:** | 23-AUG-2016 |
| **Filing Date:** | 07-JAN-2015 |
| **Time Stamp:** | 00:05:52 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Credit Card |
| Payment was successfully received in RAM | $1300 |
| RAM confirmation Number | 7495 |
| 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) | 6121_007_RCE_REQUEST.pdf | 697621<br>4aefeb5c9ee8ff91317016a7d9ccc43e9d45d970 | no | 3 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Amendment Submitted/Entered with Filing of CPA/RCE | 6121_007US_AMENDMENT_1.pdf | 436061<br>37b22d8c426b7509157214f7ac9a58ad8ffa327c | no | 10 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Fee Worksheet (SB06) | fee-info.pdf | 32717<br>09029bf48b857e6f765da11a6ece05b718e55184 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 1166399 | | |

**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.**

**<u>New Applications Under 35 U.S.C. 111</u>**
**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.**

**<u>National Stage of an International Application under 35 U.S.C. 371</u>**
**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.**

**<u>New International Application Filed with the USPTO as a Receiving Office</u>**
**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
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>14/591,008 | Filing Date<br>01/07/2015 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☐ LARGE ☒ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | RATE ($) | FEE ($) |
|---|---|---|---|---|
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ 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

| AMENDMENT | | (Column 1) | | (Column 2) | (Column 3) | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | **08/23/2016** | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | | |
| | Total (37 CFR 1.16(i)) | * 18 | Minus | ** 20 | = 0 | X $40 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 1 | Minus | ***3 | = 0 | X $210 = | 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** |

| AMENDMENT | | (Column 1) | | (Column 2) | (Column 3) | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | | |
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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.

LIE
PARTHENIA D. MERRILL

This collection of information is required by 37 CFR 1.16. 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 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. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, 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.*

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

11336 7590 08/12/2016

Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2449 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 08/12/2016 | ELECTRONIC |

**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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

miketeng@litron-intl.com
janiceshih@litron-intl.com
wilasato@litron-intl.com

1. The present application is being examined under the pre-AIA first to invent provisions.

**The applicant Argue:**

**Argument 1:**

Applicant argues that the reference Klein in view of Joseph fails to teach or suggest "a unique identification (UID) embedded in the information concentrating center, wherein the unique identification (UID) of the information concentrating center is registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;" as recited in claim 1.

**In response,** Examiner would like to point out that the reference Klein does teach in Para.26, "*RG 122 may include elements of a broadband modem such as a DSL modem, as well as elements of a router and/or access point for an Ethernet or other suitable local area network (LAN) 127.**STB 121 is a uniquely addressable Ethernet compliant device***" and

And in Para52. "*Each hand-held communication device and **each STB may have a unique network identifier** that permits the authentication between devices without requiring a user to present log-in credentials. Accordingly, disclosed embodiments may permit the control and management of a plurality of STBs from a plurality of remote hand-held communication devices without requiring log-in or manual authentication.*" And in Para.56, **"unique (or network-unique) identifiers are used to identify the controlled STB** and the embodied communication devices to set and verify permission levels between the devices.".

Each STB (the information concentrating center) uniquely addressable (UID) Ethernet compliant device. Each STB (the information concentrating center) have unique identifier. Each STB connected with the residential gateway and have unique network identifier which is used to identify the STB. The hand-held communication device can control or manage (establish connection) the STB device. The Examiner weighted "unique identification" as a broadest interpretation. The applicant claims unique identification

(UID) which could be interpreted as network identifier or any kind of unique identification.

However Klein does not discloses enable the remote client device to establish **a p2p connection** with the information concentrating center.

Joseph discloses establishing a **direct communication** between the remote client device and the Set-top-box in Para.19, **"***The mobile phone device is configured to display a graphical user interface that is configured to facilitate inputting of one or more control commands by a user of the mobile phone device, establish a wireless local area network communication channel with the set-top box device, and control at least one operation of the set-top box device via the wireless local area network communication channel and in accordance with the one or more control commands."*

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Joseph by implementing enable the remote client device to establish a p2p connection with the information concentrating center in order to facilitate inputting of one or more control commands by a user of the mobile phone device, establish a wireless local area network communication channel with the set-top box device, and control at least one operation of the set-top box device via the wireless local area network communication channel and in accordance with the one or more control commands. **(Joseph, Para.19).**

**Argument 2:**

Applicant argues that the reference Klein in view of Joseph fails to teach or suggest "wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server".

**In response,** Examiner would like to point out that the reference Klein does teach in Para52. "*Each hand-held communication device and each STB may have a unique network identifier that permits the authentication between devices without requiring a user to present log-in credentials. Accordingly, disclosed embodiments may permit the control and management of a plurality of STBs from a plurality of*

*remote hand-held communication devices without requiring log-in or manual authentication.*" and in Para.52**, "***Embodied smart phones may communicate with proprietary networks (e.g., a mobile telephone network) to automatically authenticate a* ***user's*** **credentials [unique identification (UID)]** *and determine which STBs or other equipment are associated with the user who is requesting control.*"

The client gateway is used to identify the unique network identifier of the STB device and the unique network identifier of the communication device by accessing the storage device. The client gateway is also used to identify the permitted STB for the authorized user by their respective unique identifier. The communication device send the request to control or manage (establish connection) the STB device and the client gateway device determine which STBs or other equipment are associated with the user who is requesting control by using the network identifier of the STB device and the communication device. However Klein does not discloses enable the remote client device to establish **a p2p connection** with the information concentrating center.

Joseph discloses establishing a **direct communication** between the remote client device and the Set-top-box in Para.19.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NORMIN ABEDIN whose telephone number is (571)270-5970. The examiner can normally be reached on Mon to Friday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)272-7304. 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.

/NORMIN ABEDIN/
Examiner, Art Unit 2449

| **Advisory Action Before the Filing of an Appeal Brief** | **Application No.** *14/591,008* | **Applicant(s)** KUO ET AL. | |
|---|---|---|---|
| | **Examiner** NORMIN ABEDIN | **Art Unit** 2449 | **AIA (First Inventor to File) Status** No |

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

THE REPLY FILED 07 July 2016 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
   *Examiner Note*: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☐ will not be entered, or (b) ☒ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment.
13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
14. ☐ Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
    Claim(s) allowed: .
    Claim(s) objected to: .
    Claim(s) rejected: 1-15, 17-19.
    Claim(s) withdrawn from consideration: .

| /VIVEK SRIVASTAVA/<br>Supervisory Patent Examiner, Art Unit 2449 | /NORMIN ABEDIN/<br>Examiner, Art Unit 2449 |
|---|---|

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

| | | | | | |
|---|---|---|---|---|---|
| Appl. No. | : | 14/591,008 | Confirmation No. | : | 9077 |
| First Named Applicant | : | Chi-Ming Kuo | Filed | : | 01/07/2015 |
| Examiner | : | ABEDIN, NORMIN | TC/A.U. | : | 2449 |
| Docket No. | : | 6121.007US | Customer No. | : | 11336 |

Title: **INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES**

**AMENDMENT AND RESPONSE AFTER FINAL AND ADVISORY ACTION AND REQUEST FOR RECONSIDERATION**

Sir:

In response to the Final Office action of Feb. 26, 2016 and the Advisory Action dated Jun. 9, 2016, please amend the above-identified application as follows.

**Amendments to the claims** are reflected in the listing of claims beginning on page 2 of this paper.

**Remarks** are reflected in the remarks section beginning on page 5 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) An information concentrating center, comprising:

at least one interface for receiving information from at least one information source; ~~and~~

a second interface coupling to the Internet, for establishing a ~~P2P~~ connection with a remote client device through the Internet; and

a unique identification (UID) embedded in the information concentrating center, wherein the unique identification (UID) of the information concentrating center is registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;

wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) of the information concentrating center therein so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

2. (Original) The information concentrating center according to claim 1, wherein the information concentrating center is a set top box.

3. (Original) The information concentrating center according to claim 1, wherein the remote client device is a portable electronic device.

4. (Original) The information concentrating center according to claim 1, wherein the remote client device is a mobile phone.

5. (Previously presented) The information concentrating center according to claim 1, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

6. (Previously presented) The information concentrating center according to claim 1, wherein the second interface couples to the Internet through an external routing device or an internal routing device.

7. (Original) The information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs.

8. (Original) The information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs.

9. (Original) The information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

10. (Original) The information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

11. (Original) The information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed.

12. (Original) The information concentrating center according to claim 6, wherein the routing device is an IP router.

13 (Original) The information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

14. (Original) The information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device.

15. (Previously presented) The information concentrating center according to claim 1, wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device.

16. (Cancelled)

17. (Previously presented) The information concentrating center according to claim 1, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

18. (Original) The information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

19. (Previously presented) An appliance, comprising:

an interface coupling to an information concentrating center recited as in claim 1, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection, wherein said command is transmitted to the interface for controlling the appliance.

20. (Cancelled)

## REMARKS/ARGUMENTS

**(A) Claim 1 is amended to add "of the information concentrating center"** after "the unique identification (UID)," **based on the conclusion of the telephone interview conducted on 06/29/2016**. Furthermore, since the above-mentioned amendment does not change any merits or scope of the claim 1, based on **the conclusion of the telephone interview conducted on 06/29/2016**, Applicant hereby **submits this document as a response after final Office Action and the Advisory Action dated 06/09/2016 without a Request for Continued Examination (RCE)** to advance the prosecution of instant application.

**(B) Claims 1-20 are rejected under 35 U.S.C. 103(a)** as being unpatentable by **Klein** and in view of **Joseph**

**Response**:

Claim 1 has the limitation: "**a unique identification (UID) embedded in the information concentrating center**, wherein **the unique identification (UID)** of the information concentrating center is registered in a linking server **for identifying network addressing information of the information concentrating center** so as to enable the remote client device to establish a P2P connection with the information concentrating center, wherein **the remote client device sends a request to the at least one linking server with the unique identification (UID) of the information concentrating center therein** so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server," which is not disclosed by the cited references, **Klein** or **Joseph or in combination of them.**

In the cited reference **Klein, the identifiers for setting and verifying "permission levels" are totally different from identifiers for obtaining "networking addressing information" for making a P2P connection.**

In the cited reference **Klein**, the user sends a **request** to **the content delivery server 155 to obtain a particular channel to deliver video conten**t, which means when the user sends the

**request** to **the content delivery server 155 to obtain a particular channel to deliver video content, a connection between the remote device of the user and the STB must be established already, and hence there is no need to include the unique identification (UID) of the information concentrating center in said request for obtaining networking addressing information of the STB.**

Based on the above reasoning, **Klein** or **Joseph or in combination of them do not disclose or teach the limitation of claim 1 of instant application: "**wherein **the remote client device sends a request to the at least one linking server with the unique identification (UID) the information concentrating center therein** so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server," because **in the cited reference Klein, the remote client device DOES NOT send a request to the at least one linking server with the unique identification (UID) of the information concentrating center therein so as to** establishing a P2P connection according to the network addressing information provided by the at least one linking server.

**Claim 19 is listed here for reference**:

The claim 19 has the limitation: "**an interface coupling to an information concentrating center recited as in claim 1** and **the remote client device sends a command to the information concentrating center via the P2P connection controls the appliance**," which is not disclosed by the cited reference **Klein** or **Joseph or in combination of them** due to the fact that none of the cited reference discloses an appliance comprising an interface that can receive a command through the information concentrating center **recited as in claim 1** for controlling the appliance.

## CONCLUSION

The claim 1 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 1 is novel and patentable.

Claims 2-15 and 17-18 are dependent on claim 1 and should be allowed if claim 1 is allowed.

The claim 19 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 19 is novel and patentable.

Claims 16 and 20 are cancelled.

Applicants respectfully request your reconsideration and that timely Notice of Allowance be issued in this case.

Respectfully Submitted,

Date: Jul. 7, 2016

/Min-Lee Teng/
Min-Lee Teng
Reg. No. 65,623

7F-2, No. 79, Sec. 2, Roosevelt Rd.
Taipei, Taiwan
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# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 14591008 |
| **Filing Date:** | 07-Jan-2015 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Filer:** | Min-Lee Teng |
| **Attorney Docket Number:** | 6121.007US |

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 - 2 months with $0 paid | 2252 | 1 | 300 | 300 |
| **Miscellaneous:** | | | | |
| | | **Total in USD ($)** | | **300** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 26276524 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
| **Filer:** | Min-Lee Teng |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 6121.007US |
| **Receipt Date:** | 07-JUL-2016 |
| **Filing Date:** | 07-JAN-2015 |
| **Time Stamp:** | 05:28:36 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Credit Card |
| Payment was successfully received in RAM | $300 |
| RAM confirmation Number | 8536 |
| 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 | Response After Final Action | 6121_007US_RESPONSE_AFTER_FINAL_2.pdf | 169085<br>5f78c3b0aa8d25fe760ed1eb0861c698b68b3105 | no | 7 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 30913<br>38d6fa930ea0ba1d57bb6ae375af7389ad7cb486 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 199998 | | |

**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>14/591,008 | Filing Date<br>01/07/2015 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☐ LARGE ☒ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | RATE ($) | FEE ($) |
|---|---|---|---|---|
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ 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

| AMENDMENT | 07/07/2016 | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * 18 | Minus | ** 20 | = 0 | X $40 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 1 | Minus | ***3 | = 0 | X $210 = | 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 |

| AMENDMENT | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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.

LIE
WANDA MEREDITH

This collection of information is required by 37 CFR 1.16. 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 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. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, 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.*

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UNITED STATES DEPARTMENT OF COMMERCE
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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

11336 7590 06/09/2016

Min-Lee Teng
Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2449 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 06/09/2016 | ELECTRONIC |

**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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

miketeng13569@yahoo.com.tw
miketeng@litron-intl.com
janiceshih@litron-intl.com

1. The present application is being examined under the pre-AIA first to invent provisions.

## DETAILED ACTION

### Response to Arguments

Applicant's arguments filed in the amendment filed 05/03/201 have been fully considered but they are not persuasive. The reasons are set forth below.

### The applicant Argue:

**Argument 1:**

Applicant argues that the reference Klein in view of Joseph fails to teach or suggest "a unique identification (UID) embedded in the information concentrating center, wherein the unique identification (UID) of the information concentrating center is registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;" as recited in claim 1.

**In response,** Examiner would like to point out that the reference Klein does teach in Para.26, "***STB 121 is a uniquely addressable Ethernet compliant device***" and in Para.47, "*Network identification (ID) 216 may be used by an access network within a multimedia content distribution network to verify the rights of communication device 173 to remotely control an STB in accordance with disclosed embodiments. In operation, the multimedia content distribution network may associate network ID 216 with a user account* ***(registration process)*** *that is also associated with one or more STBs that communication device 173 is permitted to control or monitor. In this way, using network ID 216, disclosed systems may not require the user to manually enter credentials that verify the user's permission level for*

*remotely controlling or monitoring STBs. For example, in FIG. 1,* ***client gateway 153 may use network ID 216 and a similar network ID for STB 121-2 to verify, based on stored account information for a user, whether communication device 173 was permitted to manage STB 121-2.***" And in Para.52, "*Embodied smart phones may communicate with proprietary networks (e.g., a mobile telephone network) to automatically authenticate a user's credentials and determine which STBs or other equipment are associated with the user who is requesting control.*" And in Para52. "*Each hand-held communication device and each STB may have a unique network identifier that permits the authentication* ***(register)*** *between devices without requiring a user to present log-in credentials. Accordingly, disclosed embodiments may* ***permit the control and management of a plurality of STBs from a plurality of remote hand-held communication devices*** *without requiring log-in or manual authentication.*" and Para.56, "*a web browser includes a graphical user interface that permits traditional remote control capabilities such as channel up, channel down, volume up, volume down, record, and the like.* ***The communication device may have a touch screen display that supports a touch interface that includes a plurality of configurable, virtual buttons for controlling which digital television content is provided to the STB or STBs that are controlled***." And in Para.47, "*a user may set up virtual buttons to control access to multiple STBs at the same time or to view a history, at the touch of a button, of what one or more STBs have been tuned to*".

Each STB (the information concentrating center) is embedded with network-unique identifiers (UID). Each hand-held communication device (remote client device) and each STB (the information concentrating center) have unique network identifier. The client gateway is used to identify the permitted STB for the authorized user by their respective unique identifier. The hand-held communication device can control or manage (establish connection) the STB device. In the claim language there is no specific step or process is used for registration. The Examiner weighted "the registration" as a broadest interpretation.

However Klein does not discloses enable the remote client device to establish **a p2p connection** with the information concentrating center.

Joseph discloses establishing a **direct communication** between the remote client device and the Set-top-box in Para.19, **"***The mobile phone device is configured to display a graphical user interface that is configured to facilitate inputting of one or more control commands by a user of the mobile phone device, establish a wireless local area network communication channel with the set-top box device, and control at least one operation of the set-top box device via the wireless local area network communication channel and in accordance with the one or more control commands."*

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Joseph by implementing enable the remote client device to establish a p2p connection with the information concentrating center in order to facilitate inputting of one or more control commands by a user of the mobile phone device, establish a wireless local area network communication channel with the set-top box device, and control at least one operation of the set-top box device via the wireless local area network communication channel and in accordance with the one or more control commands. **(Joseph, Para.19).**

**Argument 2:**

Applicant argues that the reference Klein in view of Joseph fails to teach or suggest "wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server".

**In response,** Examiner would like to point out that the reference Klein does teach in Para52. "*Each hand-held communication device and each STB may have a unique network identifier that permits the authentication **(register)** between devices without requiring a user to present log-in credentials. Accordingly, disclosed embodiments may **permit the control and management of a plurality of STBs from a plurality of remote hand-held communication devices** without requiring log-in or manual authentication.*" and in Para.52**, "***Embodied smart phones may communicate with proprietary networks (e.g., a mobile telephone network) to automatically authenticate a **user's*** **credentials [unique**

**identification (UID)]** *and determine which STBs or other equipment are associated with the user who is requesting control.*"

The client gateway is used to identify the unique network identifier of the STB device and the unique network identifier of the communication device by accessing the storage device. The client gateway is also used to identify the permitted STB for the authorized user by their respective unique identifier. The communication device send the request to control or manage (establish connection) the STB device and the client gateway device determine which STBs or other equipment are associated with the user who is requesting control by using the network identifier of the STB device and the communication device. In the claim language it is claimed that "the remote device sends the request with unique identification". However the Examiner interpreted "request with unique identification" as the broadest interpretation as it is not specified whom unique identification is associated with the request.

However Klein does not discloses enable the remote client device to establish **a p2p connection** with the information concentrating center.

Joseph discloses establishing a **direct communication** between the remote client device and the Set-top-box in Para.19.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NORMIN ABEDIN whose telephone number is (571)270-5970. The examiner can normally be reached on Mon to Friday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)272-7304. 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.

/NORMIN ABEDIN/
Examiner, Art Unit 2449

| **Advisory Action Before the Filing of an Appeal Brief** | **Application No.** *14/591,008* | **Applicant(s)** KUO ET AL. | |
|---|---|---|---|
| | **Examiner** NORMIN ABEDIN | **Art Unit** 2449 | **AIA (First Inventor to File) Status** No |

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

THE REPLY FILED 03 May 2016 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
   *Examiner Note*: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment.
13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
14. ☐ Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
    Claim(s) allowed: .
    Claim(s) objected to: .
    Claim(s) rejected: 1-15 and 17-19.
    Claim(s) withdrawn from consideration: .

| /VIVEK SRIVASTAVA/<br>Supervisory Patent Examiner, Art Unit 2449 | /NORMIN ABEDIN/<br>Examiner, Art Unit 2449 |
|---|---|

/NA/ /Ok to enter/ 06/02/2016

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

| | | | | | |
|---|---|---|---|---|---|
| Appl. No. | : | 14/591,008 | Confirmation No. | : | 9077 |
| First Named Applicant | : | Chi-Ming Kuo | Filed | : | 01/07/2015 |
| Examiner | : | ABEDIN, NORMIN | TC/A.U. | : | 2449 |
| Docket No. | : | 6121.007US | Customer No. | : | 11336 |

Title: **INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES**

**AMENDMENT**

Sir:

In response to the Office action of Feb. 26, 2016, please amend the above-identified application as follows.

**Remarks** are reflected in the remarks section beginning on page 2 of this paper.

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

| | | | | | |
|---|---|---|---|---|---|
| Appl. No. | : | 14/591,008 | Confirmation No. | : | 9077 |
| First Named Applicant | : | Chi-Ming Kuo | Filed | : | 01/07/2015 |
| Examiner | : | ABEDIN, NORMIN | TC/A.U. | : | 2449 |
| Docket No. | : | 6121.007US | Customer No. | : | 11336 |

Title: **INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES**

**AMENDMENT**

Sir:

In response to the Office action of Feb. 26, 2016, please amend the above-identified application as follows.

**Remarks** are reflected in the remarks section beginning on page 2 of this paper.

## REMARKS/ARGUMENTS

**Claim 1 is listed for reference**:

*An information concentrating center, comprising:*

*at least one interface for receiving information from at least one information source;*

*a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet; and*

*a unique identification (UID) embedded in the information concentrating center, wherein the unique identification (UID) of the information concentrating center is registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;*

*wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.*

**Claims 1-20 are rejected under 35 U.S.C. 103(a)** as being unpatentable by "**Klein**" in view of "**Joseph**"

**Response**:

Claim 1 has the limitation: "**a unique identification (UID) embedded in the information concentrating center**, wherein **the unique identification (UID)** of the information concentrating center is registered in a linking server **for identifying network addressing information of the information concentrating center** so as to enable the remote client device to establish a P2P connection with the information concentrating center, wherein **the remote client device sends a request to the at least one linking server with the unique identification (UID) therein** so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server," which is not disclosed by the cited references, **Klein** or **Joseph or in combination of them.**

As described in the **paragraph [0056]** of the specification of the cited reference **Klein**: "unique (or network-unique) **identifiers are used to identify the controlled STB and the embodied communication devices to set and verify permission levels between the devices;**" and **paragraph [0047]** of the specification of the cited reference **Klein:** "In operation, the multimedia content distribution network may associate **network ID 216 with a user account that is also associated with one or more STBs** that communication device 173 is permitted to control or monitor. In this way, using network ID 216, disclosed systems may not require the user to manually enter credentials **that verify the user's permission level** for remotely controlling or monitoring STBs."

However, in the cited reference **Klein, the identifiers for setting and verifying "permission level" are totally different from identifiers for obtaining "networking addressing information" for making a P2P connection. That is, "Klein fails to teach how to use identifiers to identify networking addressing information of a STB** so as to **allow a remote device to make a P2P connection with the STB**, as stated in the claim 1 of instant application.

As described in the **paragraph [0035]** of the specification of the cited reference **Klein**: "**User requests received by content delivery server 155 may include an indication of the content that is being requested**. In some embodiments, this **indication includes an IP address associated with the desired content**. For example, a particular local broadcast television station may be associated with a particular channel and the feed for that channel may be associated with a particular IP address. When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. **When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155**."

However, in the cited reference **Klein**, the user sends a **request** to **the content delivery server 155 is for obtaining a particular channel to deliver video content, which means the**

**request is NOT related to obtain the networking addressing information of the STB by including the UID of the STB in the user request.** Furthermore, in the paragraph [0035] of the specification of the cited reference Klein, **the connections are established already between the user device, the content delivery server 155 and the STB, although there is NO P2P connection between the user device and the STB**. That is, **the cited reference Klein DOES NOT teach how to uses a UID of the STB for allowing a User device to make a P2P connection with the STB at all**.

**Furthermore, Klein** or **Joseph** do not disclose or teach the limitation of claim 1: "**a unique identification (UID) embedded in the information concentrating center for establishing a P2P connection" in the first place.** However, **in the last Office Action dated Feb-26-2016**, **the above-mentioned limitation has been ignored in the reasoning for rejecting the claim 1. Applicant would like to know if there is a basis to ignore the above limitation of the claim 1 of instant application. Otherwise, the claim 1 of instant application is NOT disclosed by the cited reference Klein or in combination with other cited references for at least the above limitation.**

Furthermore, in the cited reference **Joseph, the "P2P connection is established between the User device and the STB in a "WIRELESS LOCAL AREA NETWORK," which is NOT applicable to be combined with Klein to derive the claim 1 of instant application, since the "WIRELESS LOCAL AREA NETWORK" of Joseph is NOT applicable to the infrastructure of the Klein because a P2P connection is based on the Internet and NOT a Local area Network.**

Based on the above reasoning, **Klein** or **Joseph or in combination of them do not disclose or teach the limitation of claim 1 of instant application: "a unique identification (UID) embedded in the information concentrating center**, wherein the unique identification (UID) of the information concentrating center is registered in a linking server **for** identifying **network addressing information of the information concentrating center** so as to enable the remote client device to establish a P2P connection with the information concentrating center, wherein **the remote client device sends a request to the at least one linking server with the unique**

**identification (UID) therein** so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server."

**Claim 19 is listed here for reference**:

An appliance, comprising: **an interface coupling to an information concentrating center recited as in claim 1**, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection, **wherein said command is transmitted to the interface for controlling the appliance**.

The claim 19 has the limitation: "**an interface coupling to an information concentrating center recited as in claim 1** and **the remote client device sends a command to the information concentrating center via the P2P connection controls the appliance**," which is not disclosed by the cited reference **Klein** or **Joseph or in combination of them** due to the fact that none of the cited reference discloses an appliance comprising an interface that can receive a command through the information concentrating center **recited as in claim 1** for controlling the appliance.

## CONCLUSION

The claim 1 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 1 is novel and patentable.

Claims 2-15 and 17-18 are dependent on claim 1 and should be allowed if claim 1 is allowed.

The claim 19 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 19 is novel and patentable.

Claims 16 and 20 are cancelled.

Applicants respectfully request your reconsideration and that timely Notice of Allowance be issued in this case.

Respectfully Submitted,

Date: May. 3, 2016

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# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 25664256 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
| **Filer:** | Min-Lee Teng |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 6121.007US |
| **Receipt Date:** | 03-MAY-2016 |
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| **Time Stamp:** | 04:59:30 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

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| Submitted with Payment | no |

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Response After Final Action | 6121_007US_RESPONSE_AFTER_FINAL.pdf | 233892<br>837702ee7687a0e31d536b8f0b121c0bd3ee573d | no | 6 |

**Warnings:**

**Information:**

| Total Files Size (in bytes): | 233892 |
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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. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

11336 7590 02/26/2016

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Taipei, 106
TAIWAN

| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2449 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 02/26/2016 | ELECTRONIC |

**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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

miketeng13569@yahoo.com.tw
miketeng@litron-intl.com
janiceshih@litron-intl.com

| Office Action Summary | Application No. 14/591,008 | Applicant(s) KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | AIA (First Inventor to File) 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 *11/10/2015*.

☐ 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) *1-15 and 17-19* 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) *1-15 and 17-19* 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 *01/07/2015* 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: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

## DETAILED ACTION

### *Status of Claims:*

1. Claims 1-15, 17-19 are pending in this Office Action.

2. Claims 1, 5, 6, 15, 19 are amended.

3. Claims 16, 20 are canceled.

4. Claims 1-15, 17-19 are rejected.

### *Response to arguments*

Applicant's arguments filed in the amendment filed 11/10/2015 have been fully considered but are moot in view grounds of rejection. The reasons set forth below.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 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(a) 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.

**Claims 1-4, 6-15, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Joseph et al., "hereinafter**

**Joseph" (US Patent Publication: 20110085526).**

As per claim 1, Klein discloses an information concentrating center, comprising:

at least one interface for receiving information from at least one information source **(Klein, Para.9, multimedia content (e.g., digital television content) sent to an STB over a multimedia content distribution network);** and

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet **(Klein, Para.10, The digital television service includes receiving a plurality of commands from a hand-held communication device over an Internet protocol (IP) network.);**

registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a connection with the information concentrating center **(Klein, Para.56, unique (or network-unique) identifiers are used to identify the controlled STB and the embodied communication devices to set and verify permission levels between the devices, Para.26, STB 121 is a uniquely addressable Ethernet compliant device, para.47, the multimedia content distribution network may associate network ID 216 with a user account that is also associated with one or more STBs that communication device 173 is permitted to control or monitor);**

wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a connection according to the network addressing information provided by the at least one linking server **(Klein, Para.34, Content delivery server 155, in conjunction with live content server 156 and VOD delivery server 158, responds to user requests for content by providing the requested content to the user, Para.52, Each hand-held communication device and each STB may have a unique network identifier that permits the authentication between devices without requiring a user to present log-in credentials )**, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection **(Klein, Para.35, When a subscriber wishes to view the**

**station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155, Para.52, Embodied smart phones may communicate with proprietary networks (e.g., a mobile telephone network) to automatically authenticate a user's credentials and determine which STBs or other equipment are associated with the user who is requesting control).**

However Klein does not discloses enable the remote client device to establish a p2p connection with the information concentrating center.

Joseph discloses enable the remote client device to establish a p2p connection with the information concentrating center **(Joseph, Para.82, Selection of any of the graphical objects included within remote control emulation GUI 700 and in the other GUIs described herein may cause control facility 110 of mobile phone device 102 to control a corresponding operation of set-top box device 104… such control may be realized by control facility 110 directing communication facility 106 to transmit a control command indicative of the requested channel change to set-top box device 104 via a wireless local area network communication channel).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Joseph by implementing enable the remote client device to establish a p2p connection with the information concentrating center in order to facilitate inputting of one or more control commands by a user of the mobile phone device, establish a wireless local area network communication channel with the set-top box device, and control at least one operation of the set-top box device via the wireless local area network communication channel and in accordance with the one or more control commands. **(Joseph, Para.19).**

As per claim 2, the modified Klein discloses the information concentrating center according to claim 1, wherein the information concentrating center is a set top box **(Klein, Para.9, an STB over a multimedia content distribution network).**

As per claim 3, the modified Klein discloses the information concentrating center according to claim 1, wherein the remote client device is a portable electronic device **(Klein, Para.18, hand-held communications device such as a smart phone to manage delivery of digital television content to one or more STBs).**

As per claim 4, the modified Klein discloses the information concentrating center according to claim 1, wherein the remote client device is a mobile phone **(Klein, Para.18, hand-held communications device such as a smart phone to manage delivery of digital television content to one or more STBs).**

As per claim 6, the modified Klein discloses the information concentrating center according to claim 1, wherein the second interface couples to the Internet through an external routing device or an internal routing device **(Klein, Para.24, plurality of network switching and routing devices referred to simply as switches 113 through 117).**

As per claim 7, the modified Klein discloses the information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs **(Klein, Para.13 Television programs, video on demand (VOD) movies, digital television content, music programming, and a variety of other types of multimedia content.).**

As per claim 8, the modified Klein discloses the information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs (Klein, **Para.14, traditional coaxial-based "cable" networks, whether analog or digital).**

As per claim 9, the modified Klein discloses the information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Klien, Para.35, When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155.).**

As per claim 10, the modified Klein discloses the information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Klien, Para.35, When a subscriber wishes to view the station, the subscriber may interact with remote control device 126 to send a signal to STB 121 indicating a request for the particular channel. When STB 121 responds to the remote control signal, the STB 121 changes to the requested channel by transmitting a request that includes an IP address associated with the desired channel to content delivery server 155.).**

As per claim 11, the modified Klein discloses the information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed **(Klien, Para.13, coaxial-based networks, satellite-based networks).**

As per claim 12, the modified Klein discloses the information concentrating center according to claim 6, wherein the routing device is an IP router **(Klien, Para.26, a router, Para.39, client-facing switch 113 routes multimedia content encapsulated into IP packets over access network 130, ).**

As per claim 13, the modified Klein discloses the information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center

**(Klien, Para.48, Virtual button 321 allows a user to record a particular television program and buttons 315 allow the user to either control the volume of audio played by communication device 173 or of audio played remotely by the STB. Virtual button 317 permits a user to remotely turn on and off the STB. ).**

As per claim 14, the modified Klein discloses the information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device **(Klien, Para.52, and one or more web-enabled backend servers running software that allows a communications network (e.g., cellular or WiFi network) to tie into a video delivery network via a web portal or applet running on the smart phone).**

As per claim 15, the modified Klein discloses the information concentrating center according to claim 1, wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device **(Klien, Para.56, The communication device may have a touch screen display that supports a touch interface that includes a plurality of configurable, virtual buttons for controlling which digital television content is provided to the STB or STBs that are controlled).**

As per claim 19, the modified Klein discloses an appliance, comprising: an interface coupling to an information concentrating center recited as in claim 1, wherein the remote control device sends a command to the information concentrating center via the connection wherein said command is transmitted to the interface for controlling the appliance **(Klein, Para.9, The hand-held communication device includes a transceiver for sending a plurality of commands through the digital television**

**network to the STB. The plurality of commands are for managing multimedia content sent to or available to the STB.).**

However the modified Klein does not discloses P2P connection is established between the information concentrating center and a remote client device, wherein the remote control device sends a command to the information concentrating center via the P2P connection wherein said command is transmitted to the interface for controlling the appliance.

Joseph discloses P2P connection is established between the information concentrating center and a remote client device, **(Joseph, Para.82, Selection of any of the graphical objects included within remote control emulation GUI 700 and in the other GUIs described herein may cause control facility 110 of mobile phone device 102 to control a corresponding operation of set-top box device 104… such control may be realized by control facility 110 directing communication facility 106 to transmit a control command indicative of the requested channel change to set-top box device 104 via a wireless local area network communication channel).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Klein and in view of Joseph by implementing enable the remote client device to establish a p2p connection with the information concentrating center in order to facilitate inputting of one or more control commands by a user of the mobile phone device, establish a wireless local area network communication channel with the set-top box device, and control at least one operation of the set-top box device via the wireless local area network communication channel and in accordance with the one or more control commands. **(Joseph, Para.19).**

**Claims 5, 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Joseph et al., "hereinafter Joseph" (US Patent Publication: 20110085526) and further in view of Rouse et al., "hereinafter Rouse" (US Patent Publication: 20110307930).**

As per claim 5, the modified Klein discloses the information concentrating center according to claim 1.

However modified Klein dose not disclose the remote client device is not registered in the at least one linking server while the P2P connection is being established**.**

Rouse discloses the remote client device is not registered in the at least one linking server while the connection is being established **(Rouse, Para.34, a user may desire resuming viewing of the movie over a laptop computer connected to a hotel's Wi-Fi service. This laptop may not have been previously registered).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Rouse by implementing the remote client device is not registered in the at least one linking server while the connection is being established in order to allowing a viewer to watch a first portion of a VOD program, and then view the remainder portion at a later time at a different location and using a different service provider **(Rouse, Para.4).**

As per claim 17, the modified Klein discloses the information concentrating center according to claim 1.

However modified Klein dose not disclose the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

Rouse discloses the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection **(Rouse, Para.47, the user has not previously registered the device from which resumption is requested. This may encompass the situation where the user is using a laptop or other computer**

**(which does not have a fixed IP address, mobile identifier, or originating mobile number) at a remote location (e.g., a hotel room). This could reflect the user desiring to resume watching a movie while on a business trip, and connectivity is obtained through a Wi-Fi connection though the Internet to the cable service provider. In this case, the user may be prompted to provide identification information such as their name, account number, and/or address information.).**

The motivation is as like as claim 5.

**Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klein et al., "hereinafter Klein" (US Patent Publication: 20090298535) in view of Joseph et al., "hereinafter Joseph" (US Patent Publication: 20110085526) and further in view of Gillespie et al., "hereinafter Gillespie" (US Patent Publication: 20110066739).**

As per claim 18, the modified Klein discloses the information concentrating center according to claim 5.

However the modified Klein does not disclose the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

Gillespie discloses the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection **(Gillespie, Para.26, The UDP hole punching technique is based on the general behavior of firewalls that allow applications to "punch holes" through the NAT router and establish direct connectivity with one another).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of the modified Klein and in view of Gillespie by implementing the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client

device to establish the P2P connection in order to automatically and dynamically initiating and establishing secure connections between a computer (i.e., Server) and a plurality of computers (i.e., clients), each of which is behind a Network Address Translator router and/or firewall **(Gillespie, Para.2).**

***Conclusion***

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. 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.

Applicant's amendments necessitated the new ground(s) of rejection presented in this office action. THIS ACTION IS MADE FINAL. Application 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 mailing date of this final action.

/NORMIN ABEDIN/

Examiner, Art Unit 2449

/VIVEK SRIVASTAVA/

Supervisory Patent Examiner, Art Unit 2449

| Notice of References Cited | Application/Control No. 14/591,008 | Applicant(s)/Patent Under Reexamination KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | 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-2011/0085526 A1 | 04-2011 | Joseph; Peter | H04M1/72533 | 370/338 |
| * | B | US-2011/0066739 A1 | 03-2011 | Gillespie; Brian | H04L29/12509 | 709/229 |
| * | C | US-2011/0307930 A1 | 12-2011 | Rouse; Alan | H04N21/2387 | 725/98 |
| * | D | US-2009/0298535 A1 | 12-2009 | Klein; Adam | H04N21/43615 | 455/556.1 |
| | E | US- | | | | |
| | F | US- | | | | |
| | G | US- | | | | |
| | H | US- | | | | |
| | I | US- | | | | |
| | J | US- | | | | |
| | K | US- | | | | |
| | L | US- | | | | |
| | M | US- | | | | |

**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | CPC Classification |
|---|---|---|---|---|---|---|
| | N | | | | | |
| | O | | | | | |
| | P | | | | | |
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**NON-PATENT DOCUMENTS**

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

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | Examiner | Art Unit |
| | NORMIN ABEDIN | 2449 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| H04L12/2818 | 2/21/2016 | NA |
| H04L12/6418 | 2/14/2016 | NA |
| H04L61/1535 | 2/21/2016 | NA |
| H04L65/00 | 2/21/2016 | NA |
| H04N21/4788 | 2/21/2016 | NA |
| H04N21/6168 | 2/21/2016 | NA |
| H04N21/6175 | 2/21/2016 | NA |
| H04N21/6193 | 2/21/2016 | NA |

| CPC COMBINATION SETS - SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 709 | 220-226 | 7/27/2015 | NA |
| 709 | 220-226 | 2/21/2016 | NA |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 7/27/2015 | NA |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 2/21/2016 | NA |

| INTERFERENCE SEARCH | | | |
|---|---|---|---|
| US Class/ CPC Symbol | US Subclass / CPC Group | Date | Examiner |
| | | | |

| /NORMIN ABEDIN/<br>Examiner, Art Unit 2449 | |
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**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:01 |
| L4 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:14 |
| L6 | 3 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and (smart near2 phone)and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:17 |
| L7 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:18 |
| L8 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:18 |
| L9 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:19 |
| L10 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:19 |
| L11 | 0 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satallite | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:19 |
| L12 | 30 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:20 |
| L13 | 27 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:20 |

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|---|---|---|---|---|---|---|
| | | and subscriber | | | | |
| L14 | 27 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source | US-PGPUB; USPAT | OR | OFF | 2016/02/21 21:20 |
| L15 | 1 | "14591008" and portion | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:08 |
| L16 | 15 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source and smart | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:09 |
| L17 | 2 | "20120159546" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:23 |
| L18 | 2 | "20090298535" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:24 |
| L19 | 2 | "20090298535" and identifier and set$top and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:24 |
| L20 | 2 | "20090298535" and identifier and set$top and provider and point | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:25 |
| L21 | 0 | "20090298535" and identifier and set$top and provider and p2p | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:26 |
| L22 | 0 | "20110209177" and identifier and set$top and provider and p2p | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:27 |
| L23 | 0 | "20110209177" and identifier and set$top and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:27 |
| L24 | 2 | "20090298535" and identifier and set$top and provider and point and program | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:28 |
| L25 | 0 | "20120086563" and identifier and set$top and provider and point and program | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:30 |
| L26 | 0 | "20120086563" and identifier and set$top and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:30 |
| L27 | 2 | "20120086563" and identifier and set$top | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:32 |
| L28 | 1481 | control$4 with (set$top) with (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:33 |
| L29 | 90 | control$4 near5 (set$top) near5 (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:33 |
| L30 | 8 | IPTV and (control$4 near5 (set$top) near5 (smart near2 phone)) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:33 |
| L31 | 71 | (control$4 near5 (set$top) near5 (smart near2 phone)) and (provider or subscriber) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:37 |
| L32 | 5 | @ad<="20111110" and (control$4 near5 (set$top) near5 (smart near2 phone)) and (provider or subscriber) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:37 |
| L33 | 2 | "20120086563" | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:43 |

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|---|---|---|---|---|---|---|
| L34 | 2 | "20120086563" and identifier | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:43 |
| L35 | 2 | "20120086563" and identifier and set$top | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:44 |
| L36 | 2 | "20120086563" and identifier and STB | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:45 |
| L37 | 2 | "20120086563" and identifier and STB and smart | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:46 |
| L38 | 2 | "20120086563" and identifier and STB and smart and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:46 |
| L39 | 0 | "20120086563" and identifier and STB and smart and (point near2 point) and register | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:47 |
| L40 | 2 | "20120086563" and identifier and STB and smart and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 22:47 |
| L42 | 28259 | (hole near3 punch$4) | US-PGPUB; USPAT | OR | OFF | 2016/02/21 23:58 |
| L43 | 13 | (hole near3 punch$4) and IPTV | US-PGPUB; USPAT | OR | OFF | 2016/02/21 23:58 |
| L44 | 0 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and @ad<="20111110" and control$4 and (cell or mobile or phone or remote) and program and satellite and subscriber and source and punch$4 | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:00 |
| L49 | 1 | "20120117590" | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:07 |
| L51 | 908 | (hole near2 punch$4) and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:31 |
| L52 | 0 | (hole near2 punch$4) and (point near2 point) and (remote near3 revice) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:31 |
| L53 | 95 | (hole near2 punch$4) and (point near2 point) and (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:31 |
| L54 | 25 | (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:32 |
| L55 | 25 | @ad<="201111110" and (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:32 |
| L56 | 13 | @ad<="20111110" and (hole near2 punch$4) and (point near2 point) and (remote near3 device) and 709/$.ccls. | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:32 |
| L57 | 1 | "20110307930" | US-PGPUB; USPAT | OR | OFF | 2016/02/22 00:57 |
| L66 | 7 | "12148444" | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:48 |
| L67 | 17 | (point near2 point) same (set$top or STB) same (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:50 |
| L68 | 1 | (direct near3 connection) same (set$top or STB) same (smart near2 | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:53 |

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|---|---|---|---|---|---|---|
| | | phone) | | | | |
| L69 | 48 | (direct near3 connection) same (set$top or STB) same (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:57 |
| L70 | 47 | @ad<="20111110" and (direct near3 connection) same (set$top or STB) same (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 01:58 |
| L71 | 12 | @ad<="20111110" and (point near2 point) same (set$top or STB) same (remote near3 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/22 02:02 |
| S1 | 1 | "13293506" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 16:07 |
| S2 | 2 | ((CHI-MING) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:08 |
| S3 | 3 | ((YU-LI) near2 (KAO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:09 |
| S4 | 1 | ((CHIEN-CHIH) near2 (YANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:09 |
| S5 | 2 | ((SHENG-FU) near2 (CHANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:10 |
| S6 | 8 | ("20040186908" \| "20050047379" \| "20090100309" \| "6373851").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 16:12 |
| S7 | 865597 | surveillance near1 camera or anti$theft or smoke or fire | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:29 |
| S8 | 1393846 | ((surveillance near1 camera) or anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:30 |
| S9 | 1040469 | @ad<="20110127" and ((surveillance near1 camera) or anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:31 |
| S10 | 1001838 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft or | US-PGPUB; USPAT; | OR | ON | 2013/10/10 17:31 |

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|---|---|---|---|---|---|---|
| | | smoke or fire or appliance) | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S11 | 0 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft and smoke and fire and appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S12 | 153 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S13 | 0 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S14 | 26 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:33 |
| S15 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:33 |
| S16 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:34 |
| S17 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) and remote | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:34 |
| S18 | 4 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) and remote and administra$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:35 |

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|---|---|---|---|---|---|---|
| S19 | 1385 | @ad<="20110127" and (surveillance and anti$theft) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S20 | 60 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S21 | 21 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S22 | 21 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:38 |
| S23 | 351 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:20 |
| S24 | 299 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:20 |
| S25 | 200 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:21 |
| S26 | 0 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security and home and "ADT" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:21 |
| S27 | 924 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/10 18:22 |

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|---|---|---|---|---|---|---|
| | | | DERWENT; IBM_TDB | | | |
| S28 | 322 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:22 |
| S29 | 189 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:23 |
| S30 | 45 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm and fire | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:23 |
| S31 | 18 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and alarm | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:25 |
| S32 | 0 | 2012/0203917 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:38 |
| S33 | 2 | "20120203917" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:38 |
| S34 | 0 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm and fire and linking near3 server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:48 |
| S35 | 272276 | @ad<="20110127" and (remote near3 device) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S36 | 1444 | @ad<="20110127" and (remote near3 device) and (administration near3 server) | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/10 18:49 |

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|---|---|---|---|---|---|---|
| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S37 | 15 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and (linking near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S38 | 3 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and (linking near3 server) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:56 |
| S39 | 243 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and register and proxy | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:00 |
| S40 | 124 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and register and proxy and (security near3 system) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:01 |
| S41 | 2 | "20090119364" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:07 |
| S42 | 1898 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S43 | 510 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S44 | 122 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) and (server near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S45 | 37 | @ad<="20110127" and (remote | US-PGPUB; | OR | ON | 2013/10/10 |

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|---|---|---|---|---|---|---|
| | | near3 device) and proxy and (link$4 near1 server) and (server near1 list) | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 19:10 |
| S46 | 3 | "20090100309" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:01 |
| S47 | 17501 | (hole near1 punching) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:07 |
| S48 | 13259 | @ad<="20110127" and (hole near1 punching) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:08 |
| S49 | 1272 | @ad<="20110127" and (hole near1 punching) and (remote or client or terminal or user) near5 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:09 |
| S50 | 748 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:11 |
| S51 | 692 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) and (control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:11 |
| S52 | 442 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:12 |
| S53 | 14 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/11 13:12 |

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| | | | IBM_TDB | | | |
| S54 | 2 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and (home near3 security near3 system) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:05 |
| S55 | 458 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic or appliance) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:07 |
| S56 | 0 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke and fire) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:11 |
| S57 | 1428 | @ad<="20110127" and (remote near3 device) same register$4 same server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:11 |
| S58 | 758 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:12 |
| S59 | 136 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:13 |
| S60 | 41 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and install | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:13 |
| S61 | 24 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and (install near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:14 |
| S62 | 20 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 | US-PGPUB; USPAT; USOCR; FPRS; | OR | ON | 2013/10/11 15:11 |

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| | | server) and (download near3 software) | EPO; JPO; DERWENT; IBM_TDB | | | |
| S63 | 8 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server) and (download near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:16 |
| S64 | 30 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:20 |
| S65 | 1206 | @ad<="20110127" and control$4 with (smoke$fire or CCTV or alrm or air$cooler) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:25 |
| S66 | 272 | @ad<="20110127" and control$4 with (smoke$fire or CCTV or alrm or air$cooler) and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:25 |
| S67 | 0 | @ad<="20110127" and (control$4 with air$cooler) and server and cell | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:26 |
| S68 | 593 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:27 |
| S69 | 25 | @ad<="20110127" and (control$4 with (security near3 alarm)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:28 |
| S70 | 247 | @ad<="20110127" and (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S71 | 308 | (control$4 with (home near3 appliance)) same server same (cell or | US-PGPUB; USPAT; | OR | ON | 2013/10/11 16:38 |

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| | | mobile or laptop) | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S72 | 0 | remore near3 (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S73 | 94 | (remote near3 control$4) with (home near3 appliance) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:39 |
| S74 | 94 | (remote near3 control$4) with (home near3 network) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:50 |
| S75 | 703 | (remote near3 control$4) with (home near3 network) and server and (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:50 |
| S76 | 22 | (remote near3 control$4) with (home near3 network) and server and (cell or mobile or laptop) and 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:51 |
| S77 | 128136 | (register$4 near2 (device or server)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:32 |
| S78 | 1370 | ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:33 |
| S79 | 1143 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:34 |

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| S80 | 0 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and derectory | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:35 |
| S81 | 177 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and directory | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:35 |
| S82 | 1058 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home nera3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:37 |
| S83 | 147 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:37 |
| S84 | 31 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home near3 network) and appliance | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:38 |
| S85 | 54299 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:53 |
| S86 | 1 | 2009/0154474 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 14:52 |
| S87 | 53 | ((Home near2 monitor$4) near system) with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 14:56 |
| S88 | 40 | @ad<="20110127" and ((Home near2 monitor$4) near system) with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/13 15:19 |

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| | | | DERWENT; IBM_TDB | | | |
| S89 | 520 | (search$4 with (remote near2 device) with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 02:03 |
| S90 | 50 | (search$4 with (remote near2 device) with server) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 02:03 |
| S91 | 14 | (search$4 with (remote near2 device) with server) and (device with unavailable) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 03:14 |
| S92 | 45 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (server near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:31 |
| S93 | 4 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (server near3 list) and (device near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:32 |
| S94 | 28 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (device near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:36 |
| S95 | 7 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (device near3 list) and back$up | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:39 |
| S96 | 14 | @ad<="20110127" and (control$4 with (electronic near2 device)) same server same (cell or mobile or laptop) and (device near3 list) and back$up | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:42 |
| S97 | 1 | ((Home near2 monitor$4) near system) with server and point$to$point | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/15 01:24 |

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| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S98 | 0 | ((Home near2 monitor$4) near system) with server and (hole near3 punch$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S99 | 85891 | (hole near3 punch$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S100 | 103 | (hole near3 punch$4) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S101 | 25 | (hole near3 punch$4) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:27 |
| S102 | 1 | (hole near3 punch$4) and (home near3 network)with server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:27 |
| S103 | 0 | (hole near3 punch$4) and (home near3 network)with server and control$4 and resgister | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:45 |
| S104 | 7 | (hole near3 punch$4) and (home near3 network)with server and control$4 and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:45 |
| S105 | 7 | (hole near3 punch$4) and (home near3 network)with server and (control$4 with device)and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:48 |
| S106 | 0 | ((hole near3 punch$4) with fail) and | US-PGPUB; | OR | ON | 2013/10/16 |

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| | | (home near3 network)with server | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 15:41 |
| S107 | 107 | ((hole near3 punch$4) with fail) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S108 | 0 | ((hole near3 punch$4) with fail) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S109 | 2 | ((hole near3 punch$4) with fail) and device and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:42 |
| S110 | 0 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 deviec) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:24 |
| S111 | 13629 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 device) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:24 |
| S112 | 50 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 device) same (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:25 |
| S113 | 8 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server with address with register) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:30 |
| S114 | 99 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/16 18:32 |

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| | | | IBM_TDB | | | |
| S115 | 34 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:32 |
| S116 | 99 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:36 |
| S117 | 24 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:37 |
| S118 | 2751 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:43 |
| S119 | 268 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance) with register) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:44 |
| S120 | 424 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same (server near3 address) same(register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:45 |
| S121 | 13 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same ((provod$4 oe send$4) near3(server near3 address)) same(register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:46 |
| S122 | 2 | "20060053216" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/26 23:50 |
| S123 | 1 | "13274955" | US-PGPUB; USPAT; USOCR; FPRS; | OR | ON | 2013/10/26 23:59 |

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| | | | EPO; JPO; DERWENT; IBM_TDB | | | |
| S124 | 13 | (pluralit$4 near3 server) and (home near3 server) with direct with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:04 |
| S125 | 305 | (pluralit$4 near3 server) and provider with direct with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:08 |
| S126 | 0 | (pluralit$4 near3 server) and provider with (direct near3 connecrtion)with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:09 |
| S127 | 57 | (pluralit$4 near3 server) and provider with (direct near3 connection)with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:09 |
| S128 | 13 | device near1 management near1 software near1 systems | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:33 |
| S129 | 5437 | (device near1 management near1 systems) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S130 | 843 | (device near1 management near1 systems) and (service near2 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S131 | 137734 | (device near1 management near1 systems) and (service near2 provider) amd set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S132 | 50 | (device near1 management near1 systems) and (service near2 | US-PGPUB; USPAT; | OR | ON | 2013/10/27 00:35 |

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| | | provider) and set$top | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S133 | 27 | (device near1 management near1 systems) and (service near2 provider) and set$top and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S134 | 26 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S135 | 4 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:36 |
| S136 | 98 | (device near1 management near1 systems) and (service near2 provider) and register and server and (direct near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:41 |
| S137 | 23 | (device near1 management near1 systems) and (service near2 provider) and register and server and (direct near3 connect$4) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:42 |
| S138 | 1983 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:33 |
| S139 | 419 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:33 |
| S140 | 143 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:34 |

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| S141 | 2 | ((service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:35 |
| S142 | 11 | ((service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:37 |
| S143 | 66 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:41 |
| S144 | 40 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and set$top and direct | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:41 |
| S145 | 3 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/226.ccls. and set$top and direct | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:42 |
| S146 | 13 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:43 |
| S147 | 4 | ("20060053216" \| "20040103166" \| "20060053216").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 03:06 |
| S148 | 1 | "13039720" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:34 |
| S149 | 2 | "20120226799" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/27 15:38 |

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| | | | DERWENT; IBM_TDB | | | |
| S150 | 2 | "20110022642" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:43 |
| S151 | 2 | 2011/0208695 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:53 |
| S152 | 3 | "20110208695" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:53 |
| S153 | 22669 | 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:18 |
| S154 | 1199 | S153 AND ( (G06F15/173 OR G06F15/16 OR H04L41/50 OR H04L41/00 OR H04L41/04).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:18 |
| S155 | 1252 | S153 AND ( (G06F15/173 OR G06F15/16 OR H04L41/50 OR H04L41/00 OR H04L41/04 OR H04L61/2539 OR H04L61/2076 OR H04L61/256).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:19 |
| S156 | 3 | ((Chi-Ming) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/04/23 20:20 |
| S157 | 480 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. andp2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:32 |
| S158 | 17 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:32 |

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| S159 | 126 | ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:42 |
| S160 | 91 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:43 |
| S161 | 51 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and provider | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:45 |
| S162 | 3 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and provider near3 address | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:57 |
| S163 | 438 | @ad<="20110127" and client same request same (address near3 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:00 |
| S164 | 1 | @ad<="20110127" and client same request same (address near3 provider) same admin | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:00 |
| S165 | 1392 | @ad<="20110127" and (client or user) same request same (address near3 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:02 |
| S166 | 13 | @ad<="20110127" and (client or user) same request same (address near3 provider) same admin | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:03 |
| S167 | 21 | ("20040186908" \| "20100274859" \| "8180891" \| "6373851" \| "20110302324" \| "20120158161" \| "20050047379" \| "20090100309" \| "20030105854").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2014/04/24 18:15 |

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| | | | DERWENT; IBM_TDB | | | |
| S168 | 1 | ("20040186908" \| "20100274859" \| "8180891" \| "6373851" \| "20110302324" \| "20120158161" \| "20050047379" \| "20090100309" \| "20030105854").PN. and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:20 |
| S169 | 15 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and (ad$hoc near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:30 |
| S170 | 11189 | @ad<="20110127" and address near3 provider | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:33 |
| S171 | 6420 | @ad<="20110127" and address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S172 | 397 | @ad<="20110127" and request near5 address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S173 | 24 | @ad<="20110127" and client near3 request near5 address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S174 | 5 | (client near3 request near3 (server near3 address)) same (device near5 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:59 |
| S175 | 2481 | point$to$point and (service near3 provider) and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:34 |
| S176 | 133 | point$to$point and (service near3 provider) near6 account and (device near4 register$4) | US-PGPUB; USPAT; USOCR; | OR | ON | 2014/04/24 19:34 |

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| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S177 | 94 | @ad<="20110127" and point$to$point and (service near3 provider) near6 account and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:35 |
| S178 | 10626 | @ad<="20110127" and point$to$point and (service near3 provider) and (control$4 or monitor$4 or manag$4) near4 (device$1 or home) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:41 |
| S179 | 10626 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (device$1 or home)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:41 |
| S180 | 75 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:42 |
| S181 | 29 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:05 |
| S182 | 36 | 2002/0009078 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:11 |
| S183 | 6 | "20020009078" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:11 |
| S184 | 2 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:17 |
| S185 | 19825 | ad$hoc near3 network | US-PGPUB; | OR | ON | 2014/04/24 |

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| | | | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 20:19 |
| S186 | 6321 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:19 |
| S187 | 232482 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device @ad<="20110127" and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:20 |
| S188 | 1066 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:21 |
| S189 | 207 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:21 |
| S190 | 204 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S191 | 100 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S192 | 85 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 and client | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S193 | 2418 | hole$punch$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2014/04/25 14:22 |

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| | | | IBM_TDB | | | |
| S194 | 7 | hole$punch$4 and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:23 |
| S195 | 4 | hole$punch$4 and point$to$point and peer$to$peer | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:23 |
| S196 | 51 | hole$punch$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:26 |
| S197 | 41 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S198 | 23 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and (direct near3 connection) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S199 | 9 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and (direct near3 connection) and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S200 | 24 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:28 |
| S201 | 11 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S202 | 137 | @ad<"20111110" and hole$punch$4 and camera | US-PGPUB; USPAT; USOCR; FPRS; | OR | ON | 2014/05/30 18:03 |

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| | | | EPO; JPO; DERWENT; IBM_TDB | | | |
| S203 | 4 | @ad<"20111110" and hole$punch$4 and camera and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S204 | 5 | @ad<"20111110" and hole$punch$4 and camera and (p2p or point$to$point) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:04 |
| S205 | 21 | @ad<"20111110" and hole$punch$4 and camera and (p2p or point$to$point or peer$to$peer) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:04 |
| S206 | 1 | @ad<"20111110" and hole$punch$4 and camera and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:05 |
| S207 | 24064 | 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:34 |
| S208 | 6 | hole$punch$4 and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:35 |
| S209 | 3 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 and client and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:35 |
| S210 | 0 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4) and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:37 |

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| S211 | 3 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 18:38 |
| S212 | 5 | ((CHI-MING) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S213 | 4 | ((YU-LI) near2 (KAO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S214 | 1 | ((CHIEN-CHIH) near2 (YANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S215 | 2 | ((SHENG-FU) near2 (CHANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S216 | 4 | @ad<"20111110" and hole$punch$4 and camera and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 19:07 |
| S217 | 14 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 19:07 |
| S218 | 3 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2015/03/09 12:40 |
| S219 | 0 | "14951008" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:09 |
| S220 | 3 | "13950282" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:09 |
| S221 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:11 |
| S222 | 1 | "13776197" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:27 |
| S223 | 72444 | (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:52 |
| S224 | 144 | (set$top near1 box) and (TV near1 program) and p2p | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:52 |
| S225 | 202 | (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:53 |
| S226 | 123 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:53 |

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| | | (peer near1 peer)) | | | | |
| S227 | 113 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:57 |
| S228 | 76 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:57 |
| S229 | 71 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:58 |
| S230 | 47 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:04 |
| S231 | 14 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register and hole | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:06 |
| S232 | 0 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register and (hole near1 punch) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:08 |
| S233 | 16 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:10 |
| S234 | 16 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 channel) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:11 |
| S235 | 0 | @ad<="20111110" and (set$top near1 box) and (control$4 near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:17 |
| S236 | 0 | @ad<="20111110" and (set$top near1 box) and (switch$4 near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:17 |
| S237 | 0 | @ad<="20111110" and (set$top near1 box) and (switch$4 near3(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:18 |
| S238 | 63 | @ad<="20111110" and (set$top near1 box) and (switch$4 near3(TV near1 channel)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:18 |
| S239 | 43 | @ad<="20111110" and (set$top near1 box) and (control$4 or switch$4) near1(TV near1 channel) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:22 |
| S240 | 14 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same remote | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:23 |
| | | | | | | |

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|---|---|---|---|---|---|---|
| S241 | 0 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:24 |
| S242 | 0 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same cell | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:24 |
| S243 | 123 | @ad<="20111110" and (mobile near1 phone) same request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:36 |
| S244 | 4 | @ad<="20111110" and (mobile near1 phone) near3 request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:36 |
| S245 | 737 | @ad<="20111110" and (mobile near1 phone) near3 (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:39 |
| S246 | 26 | @ad<="20111110" and ((mobile near1 phone) near3 (set$top near1 box)) and (TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:39 |
| S247 | 1 | @ad<="20111110" and ((mobile near1 phone) near3 (set$top near1 box)) and control$4 near1 (TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:40 |
| S248 | 372 | @ad<="20111110" and (control$4 near3 (TV near1 program)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
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| S252 | 0 | @ad<="20111110" and (switch$4 near3 (TV near1 program)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| S253 | 0 | @ad<="20111110" and (switch$4 near3 (TV near1 channel)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| S254 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 channel)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| S255 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:56 |
| S256 | 33 | @ad<="20111110" and (smart near1 phone) same request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:56 |
| S257 | 2 | @ad<="20111110" and (smart near1 phone) same request same (set$top near1 box) and TV near1 program | US-PGPUB; USPAT | OR | OFF | 2015/07/27 07:02 |
| S258 | 6 | ((Chi-Ming) near2 (Kuo)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S259 | 5 | ((Yu-Li) near2 (Kao)).INV. | US-PGPUB; | OR | OFF | 2015/07/27 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | USPAT; USOCR | | | 07:59 |
| S260 | 1 | ((Bai-Jian) near2 (Xiao)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S261 | 17 | ((Cheng-Wei) near2 (Li)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S262 | 7 | ("20050097612" \| "20050157217" \| "20060064723" \| "20050108751" \| "20070038516" \| "6359661" \| "20050097595" \| "20080141293" \| "20020013950" \| "20060179452" \| "5663756" \| "20020116500" \| "20070240182" \| "7127733" \| "20080136664" \| "5410326" \| "20040104806" \| "6426705").PN. and (set$top) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:02 |
| S263 | 1 | ("8320901").pn. | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:15 |
| S264 | 0 | "14951008" | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:31 |
| S265 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:31 |
| S266 | 1 | (set$top near3 box) same P2p same (remote near1 device) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:34 |
| S267 | 1 | (set$top near3 box) same P2p same (remote near1 device) and point | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:35 |
| S268 | 1 | (set$top near3 box) same P2p same (remote near1 device) and router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:35 |
| S269 | 0 | (set$top near3 box) same P2p same (remote near1 device) same router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:36 |
| S270 | 0 | (set$top near3 box) same p2p same (remote near1 device) same router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:36 |
| S271 | 20 | (set$top near3 box) same p2p same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:36 |
| S272 | 6 | (set$top near3 box) with UID | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:39 |
| S273 | 0 | (set$top near3 box) with reguster with provider | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:41 |
| S274 | 27 | (set$top near3 box) with register with provider | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:41 |
| S275 | 17288 | IPTV | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S276 | 9165 | IPTV and set$top | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S277 | 1941 | IPTV and set$top and register | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S278 | 382 | IPTV and set$top and register and (unique near1 identifier) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S279 | 352 | IPTV and set$top and register and (unique near1 identifier) and provider | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:50 |
| S280 | 62 | IPTV and set$top and register and (unique near1 identifier) and provider and (p2p or | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:51 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | "point$to$point") | | | | |
| S281 | 0 | IPTV and set$top and register and (unique near1 identifier) and provider and "point$to$point" | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:51 |
| S282 | 148 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near3 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:53 |
| S283 | 27 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near1 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:53 |
| S284 | 130 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:53 |
| S285 | 47 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:54 |
| S286 | 47 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart or mobile or remote) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:54 |
| S287 | 43 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and smart | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:55 |
| S288 | 36 | IPTV and set$top and register and (unique near1 identifier) and provider and (point near2 point) and router and (smart near2 phone) | US-PGPUB; USPAT | OR | OFF | 2016/02/17 19:55 |

**EAST Search History (Interference)**

<This search history is empty>

**2/22/2016 2:55:27 AM**
**C:\Users\nabedin\Documents\EAST\Workspaces\14591008.wsp**

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

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

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 07/27/2015 | 02/21/2016 | | | | | | | |
| | 1 | ✓ | ✓ | | | | | | | |
| | 2 | ✓ | ✓ | | | | | | | |
| | 3 | ✓ | ✓ | | | | | | | |
| | 4 | ✓ | ✓ | | | | | | | |
| | 5 | ✓ | ✓ | | | | | | | |
| | 6 | ✓ | ✓ | | | | | | | |
| | 7 | ✓ | ✓ | | | | | | | |
| | 8 | ✓ | ✓ | | | | | | | |
| | 9 | ✓ | ✓ | | | | | | | |
| | 10 | ✓ | ✓ | | | | | | | |
| | 11 | ✓ | ✓ | | | | | | | |
| | 12 | ✓ | ✓ | | | | | | | |
| | 13 | ✓ | ✓ | | | | | | | |
| | 14 | ✓ | ✓ | | | | | | | |
| | 15 | ✓ | ✓ | | | | | | | |
| | 16 | ✓ | - | | | | | | | |
| | 17 | ✓ | ✓ | | | | | | | |
| | 18 | ✓ | ✓ | | | | | | | |
| | 19 | ✓ | ✓ | | | | | | | |
| | 20 | ✓ | - | | | | | | | |

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

| | | | | | |
|---|---|---|---|---|---|
| Appl. No. | : | 14/591,008 | Confirmation No. | : | 9077 |
| First Named Applicant | : | Chi-Ming Kuo | Filed | : | 01/07/2015 |
| Examiner | : | ABEDIN, NORMIN | TC/A.U. | : | 2449 |
| Docket No. | : | 6121.007US | Customer No. | : | 11336 |

Title: **INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES**

**AMENDMENT**

Sir:

In response to the Office action of Aug. 13, 2015, please amend the above-identified application as follows.

**Amendments to the claims** are reflected in the listing of claims beginning on page 2 of this paper.

**Remarks** are reflected in the remarks section beginning on page 6 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) An information concentrating center, comprising:

at least one ~~first module~~ interface for ~~concentrating~~ receiving information from at least one information source; ~~and~~

~~at least one second module~~ a second interface coupling to the Internet, for establishing a ~~P2P~~ connection with a remote client device through the Internet~~, wherein at least one portion of the information is delivered to the remote client device on the P2P connection~~; and

a unique identification (UID) embedded in the information concentrating center, wherein the unique identification (UID) of the information concentrating center is registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;

wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

2. (Original) The information concentrating center according to claim 1, wherein the information concentrating center is a set top box.

3. (Original) The information concentrating center according to claim 1, wherein the remote client device is a portable electronic device.

4. (Original) The information concentrating center according to claim 1, wherein the remote client device is a mobile phone.

5. (Currently amended) The information concentrating center according to claim 1, ~~wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information concentrating center, wherein the remote client device communicates with the at least one linking server for establishing the P2P connection according to the connecting information provided by the at least one linking server,~~ wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

6. (Currently amended) The information concentrating center according to claim 1, wherein the ~~at least one~~ second ~~module~~ interface couples to the Internet through an external routing device or an internal routing device.

7. (Original) The information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs.

8. (Original) The information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs.

9. (Original) The information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

10. (Original) The information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

11. (Original) The information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed.

12. (Original) The information concentrating center according to claim 6, wherein the routing device is an IP router.

13 (Original) The information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

14. (Original) The information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device.

15. (Currently amended) The information concentrating center according to claim 1, ~~further comprising a third format module to format~~ wherein the information is formatted by the information concentrating center in a way suitable for viewing by the remote client device.

16. (Cancelled)

17. (Currently amended) The information concentrating center according to claim 1 ~~16~~, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

18. (Original) The information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

19. (Currently amended) An appliance, comprising:

~~at least one module~~ an interface coupling to an information concentrating center recited as in claim 1, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device ~~controls the appliance~~

~~through~~ sends a command to the information concentrating center via the P2P connection, wherein said command is transmitted to the interface for controlling the appliance.

20. (Cancelled)

## REMARKS/ARGUMENTS

**Claim 1 is rejected under 112 sixth paragraph:**

**Response:**

**Claim 1 is amended and listed for reference**:

An information concentrating center, comprising:

at least one interface for receiving information from at least one information source;

a second interface coupling to the Internet, for establishing a connection with a remote client device through the Internet; and

a unique identification (UID) embedded in the information concentrating center, wherein the unique identification (UID) of the information concentrating center is registered in at least one linking server for identifying network addressing information of the information concentrating center so as to enable the remote client device to establish a P2P connection with the information concentrating center;

wherein the remote client device sends a request to the at least one linking server with the unique identification (UID) therein so as to establishing a P2P connection according to the network addressing information provided by the at least one linking server, wherein at least one portion of the information received by the information concentrating center is delivered to the remote client device on the P2P connection.

The amendment of claim 1 can be fund supportive from Fig. 19 and paragraph [0077] of the specification of instant application filed on 01/07/2015.

**The paragraph [0077] of the specification is listed here for reference**:

**[0077]** In one embodiment, **a unique identification (UID) of the information concentrating center is embedded in the information concentrating center when the information concentrating center is manufactured**, **wherein the unique identification (UID) of the information concentrating center is created without using networking addressing information**, **such as an IP address**. Likewise, the aforementioned second unique identification (UID) does not include networking addressing information, such as an IP address.

In addition, in the amended claim 1, "**module**" is changed to "**interface**," which can be found supportive in Fig. 19, wherein **the set top box has an interface for receiving information from satellite or cable and another interface coupling to the Internet**. Also, it is well know that each device must have an interface to couple to another device, hence an "interface" is inherent in each device for coupling to another device to a skilled person in the art.

Based on the above reasoning, the amended claim 1 is supported by the specification and the Drawings of instant application filed on 01/07/2015; no new matter is introduced.

**Claims 1-20 are rejected under 35 U.S.C. 103(a)** as being unpatentable by McGuire et al., "**McGuire**" (US 20130111043) and in view of **Belz** (US 20090125971)

**Response**:

Claim 1 is amended to have the limitation: "**a unique identification (UID) embedded in the information concentrating center**, wherein the unique identification (UID) of the information concentrating center is registered in a linking server **for** identifying **network addressing information of the information concentrating center** so as to enable the remote client device to establish a P2P connection with the information concentrating center," which is not disclosed by the cited references, **McGuir** or **Belz or in combination of them.**

**McGuir** or **Belz** does not disclose or teach the limitation of claim 1: "**a unique identification (UID) embedded in the information concentrating center for establishing a P2P connection" in the first place.**

As described in the paragraph [0070] of the specification of instant application, a **remote device, such as a mobile phone, can establish a P2P connection with the information concentrating center as long as the remote device has the unique identification (UID) of the information concentrating center**, **By embedding the unique identification (UID) in the information concentrating center** will simplify the P2P connection setup due to the fact that the unique identification (UID) is already embedded in the information concentrating center for allowing

remote devices to establish P2P connections with the information concentrating center. As a result, none of the cited references discloses such limitation of the claim 1 of instant application: "**a unique identification (UID) embedded in the information concentrating center for establishing a P2P connection.**"

Furthermore, in the claim 1, the unique identification (UID) is used for **identifying the network addressing** information of the information concentrating center in the linking service, wherein **the network addressing information means addressing information in the network layer, such as an IP address**. Therefore, **in claim 1,** the **unique identification (UID) itself is NOT a network address, such as an IP address;** on the contrary, **in the cited reference, McGuir, the unique identifier in the relay server is an IP address itself**, which is different from the definition of the unique identifier in claim 1 of instant application in which **the unique identifier is used for** identifying **a network address such as an IP address, and hence the unique identifier is NOT an IP address in the amended claim 1.**

The following is copied from the **paragraph [0033]** of the specification of **McGuire**:

"In addition, because the peer to peer network connection can be lost when the devices have not sent a packet using the peer to peer network connection for longer than a specified timeout period, in existing systems, the devices can again use the relay server to exchange the desired communication packets, or can restart the process for establishing the network connection between the devices, which means that communication of the desired communication packets is again delayed, awaiting the completion of the establishment process. However, in an improvement over these existing systems, **the devices in the described embodiments can use the relay server to communicate packets** (i.e., data packets, control packets, etc.) **between the devices after the peer to peer network connection is lost**, but also, **in parallel with using the relay server to communicate packets**, **perform the operations to establish a peer to peer network connection between the devices so that direct peer to peer communication can be commenced**, and the devices can stop using the relay server. Thus, **the devices can dynamically detect when the relay server is**

**being used to exchange the desired communication packets, and can, in parallel with the continued exchange of the desired communication packets, start the process for establishing the peer to peer network connection**."

**Base on the above description,** the relay server, in McGuire, forwards packets in PARALLEL with the activities of establishing of the P2P connection. As a result, **the P2P connection is totally different from "the data path via the relay server"**. In other words, McGuire does not disclose or teach how to establish a P2P connection between the remote client device and the information concentrating center as stated in claim 1 of instant application.

Based on the above reasoning, **the cited reference McGuire, Belz or in combination of them do not disclose or teach the limitation of claim 1 of instant application: "a unique identification (UID) embedded in the information concentrating center**, wherein **the unique identification (UID)** of the information concentrating center **is registered in a linking server for identifying network addressing information of the information concentrating center** so as to allow the remote client device to establish a P2P connection with the information concentrating center."

**Claim 19 is amended and listed here for reference**:

An appliance, comprising:

**an interface coupling to an information concentrating center recited as in claim 1**, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device sends a command to the information concentrating center via the P2P connection**, wherein said command is transmitted to the interface for controlling the appliance**.

In the amended claim 19, "**module**" is changed to "**interface**," which can be found supportive in Fig. 19, wherein the appliance has an interface coupling to an information concentrating center recited as in claim 1 through a router. Also, it is well know that each device must have an interface to couple to another device, hence an "interface" is inherent in each device for coupling to another device to a skilled person in the art.

The amended claim 19 has the limitation: "**an interface coupling to an information concentrating center recited as in claim 1** and **the remote client device sends a command to the information concentrating center via the P2P connection controls the appliance**," which is not disclosed by the cited reference **McGuire, Belz or in combination of them** due to the fact that none of the cited reference discloses an appliance comprising an interface that can receive a command through the information concentrating center **recited as in claim 1** for controlling the appliance.

## CONCLUSION

The claim 1 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 1 is novel and patentable.

Claims 2-15 and 17-18 are dependent on claim 1 and should be allowed if claim 1 is allowed.

The claim 19 is not disclosed or taught by either single or a combination of the cited references; therefore, claim 19 is novel and patentable.

Claims 16 and 20 are cancelled.

Applicants respectfully request your reconsideration and that timely Notice of Allowance be issued in this case.

Respectfully Submitted,

Date: Nov. 10, 2015

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Reg. No. 65,623

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 24032716 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
| **Filer:** | Min-Lee Teng |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 6121.007US |
| **Receipt Date:** | 10-NOV-2015 |
| **Filing Date:** | 07-JAN-2015 |
| **Time Stamp:** | 08:13:07 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

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|---|---|
| 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 | 6121_007US_AMENDMENT_1.pdf | 288165<br>75cfbaa5db0651babc44cb2a9e59d353c939b47a | no | 11 |

| | |
|---|---|
| **Warnings:** | |
| **Information:** | |

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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.**

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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.**

PTO/SB/06 (09-11)
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>14/591,008 | Filing Date<br>01/07/2015 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY**: ☐ LARGE ☒ SMALL ☐ MICRO

## APPLICATION AS FILED – PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | RATE ($) | FEE ($) |
|---|---|---|---|---|
| ☐ BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | |
| ☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | |
| ☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | minus 20 = | * | X $ = | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | minus 3 = | * | X $ = | |
| ☐ 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

| AMENDMENT | 11/10/2015 | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * 18 | Minus | ** 20 | = 0 | X $40 = | 0 |
| | Independent (37 CFR 1.16(h)) | * 1 | Minus | ***3 | = 0 | X $210 = | 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 |

| AMENDMENT | | (Column 1) CLAIMS REMAINING AFTER AMENDMENT | | (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR | (Column 3) PRESENT EXTRA | RATE ($) | ADDITIONAL FEE ($) |
|---|---|---|---|---|---|---|---|
| | Total (37 CFR 1.16(i)) | * | Minus | ** | = | X $ = | |
| | Independent (37 CFR 1.16(h)) | * | Minus | *** | = | X $ = | |
| | ☐ 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.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** 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.

LIE
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This collection of information is required by 37 CFR 1.16. 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 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. 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 NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US | 9077 |

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| EXAMINER | |
|---|---|
| ABEDIN, NORMIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2449 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 08/13/2015 | ELECTRONIC |

**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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. 14/591,008 | Applicant(s) KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | AIA (First Inventor to File) 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 *01/07/2015*.

☐ 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) *1-20* 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) *1-20* 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 *01/07/2015* 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: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

## DETAILED ACTION

2. Claims 1-20 are pending in Instant **Application**.

## Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being **indefinite** for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim elements "one first module", "one second module" are limitations that invoke 35 U.S.C. 112, **sixth paragraph.** However, the **written description fails to disclose the corresponding structure, material, or acts** for the claimed function. For a computer implemented means-plus-function claim limitation that invokes 35 U.S.C. 112, sixth paragraph, the corresponding structure is required to be more than simply a general purpose computer or microprocessor. See *Aristocrat,* 521 F.3d 1328, 1333 (Fed. Cir. 2008). The corresponding structure for a computer-implemented function must include the algorithm as well as the general purpose computer or microprocessor. See *WMS Gaming, Inc.,* 184 F.3d 1339 (Fed. Cir. 1999). The written description of the specification must at least disclose the algorithm that transforms the general purpose microprocessor to a special purpose computer programmed to perform the disclosed algorithm that performs the claimed function. *Aristocrat* at 1338. Applicant may express the algorithm in any understandable terms including as a mathematical formula, in prose, in a flow chart, or in any other manner that provides sufficient structure. See *Finisar Corp.,* 523 F.3d 1323, 1340 (Fed. Cir. 2008).

A rejection under 35 U.S.C. 112, second paragraph, is appropriate if the written description of the specification discloses no corresponding algorithm. *Aristocrat at* 1337-1338. For example, merely referencing to a general purpose computer with appropriate programming without providing any detailed explanation of the appropriate programming, see *Id.* at 1334, or simply reciting software without providing some detail about the means to accomplish the function, would not be an adequate disclosure of the corresponding structure to satisfy the requirements of 35 U.S.C. 112, second paragraph, even when one of ordinary skill in the art is capable of writing the software to convert a general purpose computer to a special purpose computer to perform the claimed function. See *Finisar,* 523 F.3d at 1340-1341.

Applicant may:

(a) Amend the claim so that the claim limitation will no longer be interpreted as a limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant should clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01 (0) and 2181.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 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(a) 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.

**Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGuire (US Patent Publication: 20130111043) in view of Belz et al., "hereinafter Belz" (US Patent Publication: 20090125971).**

As per claim 1, McGuire discloses an information concentrating center, comprising: at least one second module coupling to the Internet, for establishing a P2P connection with a remote client device through the Internet **(McGuire, Para.30, the devices begin a process for establishing a peer to peer network connection between the devices.),** wherein at least one portion of the information is delivered to the remote client device on the P2P connection **(McGuire, Para.24, the IP addresses and ports of NATs between the devices, the devices can also communicate directly with one another (e.g., without relaying packets through the relay server) using a peer to peer network connection. To enable communication using a peer to peer network connection, the devices each first send an inquiry to an address resolution server on the first network to determine IP addresses and ports on the first network to which packets should be sent to ensure that they reach the electronic device.).**

However McGuire does not discloses at least one first module for concentrating information from at least one information source.

Belz discloses at least one first module for concentrating information from at least one information source **(Belz, Para.13, a request to power the set-top box device 104 on, a request to remove the set-top box device 104 from a standby state, a request to access a particular channel or a particular plurality of channels, a channel change request, a request to view a portion of an electronic programming guide, or any combination thereof, Para.25, the set-top box device 202 includes a network interface 208 adapted to facilitate communication between the set-top box device 202 and a media distribution network, such as a cable network, satellite dish or network, or an Internet Protocol Television (IPTV) network.).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of McGuire and in view of Belz by implementing at least one first module for concentrating information from at least one information source in order to controlling access to media content received via a communications network, such as a video distribution network (Belz, Para.1).

As per claim 2, the modified McGuire discloses the information concentrating center according to claim 1, wherein the information concentrating center is a set top box **(McGuire, Para.44, Electronic device 100 can be (or can be included in) any device with at least one network interface. For example, electronic device 100 can be (or can be included in) a desktop computer, a laptop computer, a server, a media player, an appliance, a subnotebook/netbook, a tablet computer, a cellular phone, a piece of testing equipment, a network appliance, a set-top box, a personal digital assistant (PDA), a smart phone, a toy, a controller, or another device.).**

As per claim 3, the modified McGuire discloses the information concentrating center according to claim 1, wherein the remote client device is a portable electronic device **(McGuire, Para.44, Electronic device 100 can be (or can be included in) any device with at least one network interface. For example, electronic device 100 can be (or can be included in) a desktop computer, a laptop computer, a server, a media player, an appliance, a subnotebook/netbook, a tablet computer, a**

**cellular phone, a piece of testing equipment, a network appliance, a set-top box, a personal digital assistant (PDA), a smart phone, a toy, a controller, or another device.).**

As per claim 4, the modified McGuire discloses the information concentrating center according to claim 1, wherein the remote client device is a mobile phone **(McGuire, Para.44, Electronic device 100 can be (or can be included in) any device with at least one network interface. For example, electronic device 100 can be (or can be included in) a desktop computer, a laptop computer, a server, a media player, an appliance, a subnotebook/netbook, a tablet computer, a cellular phone, a piece of testing equipment, a network appliance, a set-top box, a personal digital assistant (PDA), a smart phone, a toy, a controller, or another device.).**

As per claim 5, the modified McGuire discloses the information concentrating center according to claim 1, wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information concentrating center **(McGuire, Para.25, After establishing the TCP session, the electronic devices register with the relay server. Registering a given electronic device comprises negotiating an identifier, such as another IP address, with the relay server, and recording that IP address and information about the TCP connection in a memory in the relay server to enable delivery of subsequent packets to the device from the relay server.),** wherein the remote client device communicates with the at least one linking server for establishing the P2P connection according to the connecting information provided by the at least one linking server **(McGuire, Para.24, the IP addresses and ports of NATs between the devices, the devices can also communicate directly with one another (e.g., without relaying packets through the relay server) using a peer to peer network connection. To enable communication using a peer to peer network connection, the devices each first send an inquiry to an address resolution server on the first network to determine IP addresses and ports on the first network to which packets should be sent to ensure that they reach the electronic device.)**, wherein the remote client device is not registered in the at least one

linking server while the P2P connection is being established **(Belz, Para.55, The identified wireless device can be one of a plurality of wireless devices associated with the permission policy. At decision node 504, the set-top box device determines whether the viewing request exceeds a base level of permissions associated with the permission policy.).**

As per claim 6, the modified McGuire discloses the information concentrating center according to claim 1, wherein the at least one second module couples to the Internet through an external routing device or an internal routing device **(McGuire, Para.31, the devices are described as "communicating directly" with one another using the peer to peer network connection, one or more devices (e.g., routers, switches, repeaters, and/or other network devices) can be used when exchanging communications between the devices using the peer to peer network connection.).**

As per claim 7, the modified McGuire discloses the information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs **(Belz, Para.25, the set-top box device 202 includes a network interface 208 adapted to facilitate communication between the set-top box device 202 and a media distribution network, such as a cable network, satellite dish or network, or an Internet Protocol Television (IPTV) network.).**

As per claim 8, the modified McGuire discloses the information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs **(Belz, Para.25, the set-top box device 202 includes a network interface 208 adapted to facilitate communication between the set-top box device 202 and a media distribution network, such as a cable network, satellite dish or network, or an Internet Protocol Television (IPTV) network.).**

As per claim 9, the modified McGuire discloses the information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Belz, Para.29, The viewing request can be received via the**

**remote control device 216, for example, and can include, for example, a request to power the set-top box device 202 on, a request to remove the set-top box device 202 from a standby state, a request to access a particular channel or a particular plurality of channels, a channel change request, a request to view a portion of an electronic programming guide, or any combination thereof.).**

As per claim 10, the modified McGuire discloses the information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs **(Belz, Para.29, The viewing request can be received via the remote control device 216, for example, and can include, for example, a request to power the set-top box device 202 on, a request to remove the set-top box device 202 from a standby state, a request to access a particular channel or a particular plurality of channels, a channel change request, a request to view a portion of an electronic programming guide, or any combination thereof.).**

As per claim 11, the modified McGuire discloses the information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed **(Belz, Para.25, the set-top box device 202 includes a network interface 208 adapted to facilitate communication between the set-top box device 202 and a media distribution network, such as a cable network, satellite dish or network, or an Internet Protocol Television (IPTV) network.).**

As per claim 12, the modified McGuire discloses the information concentrating center according to claim 6, wherein the routing device is an IP router **(McGuire, Para.31, the devices are described as "communicating directly" with one another using the peer to peer network connection, one or more devices (e.g., routers, switches, repeaters, and/or other network devices) can be used when exchanging communications between the devices using the peer to peer network connection.).**

As per claim 13, the modified McGuire discloses the information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center **(Belz, Para.29, The viewing request can be received via the remote control device 216, for example, and can include, for example, a request to power the set-top box device 202 on, a request to remove the set-top box device 202 from a standby state, a request to access a particular channel or a particular plurality of channels, a channel change request, a request to view a portion of an electronic programming guide, or any combination thereof.).**

As per claim 14, the modified McGuire discloses the information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device **(McGuire, Para.47, networks 206, 212, and 220 can be any type of network that enables electronic, optical, or electro-optical communication of packets (data packets, control packets, etc.) between the electronic devices coupled to the network. For example, networks 206, 212, and 220 can comprise cellular networks (e.g., 3G/4G networks such as UMTS, LTE, etc.), Wi-Fi networks, ).**

As per claim 15, the modified McGuire discloses the information concentrating center according to claim 1, further comprising a third module to format the information in a way suitable for viewing by the remote client device **(Belz, Para.43, the activation module 235 can be executable by the logic 234 to receive input via a graphical user interface shown at a display of the wireless device 230, where the input indicates that the content control function is to be activated or deactivated.).**

As per claim 16, the modified McGuire discloses the information concentrating center according to claim 1, wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information

concentrating center **(McGuire, Para.26, After registering with the relay server, an electronic device can communicate specially-formatted packets to the relay server that are destined for another electronic device at the other device's IP address and port on the second network, and the relay server can use the record of the other electronic device to forward/relay the packets to the other electronic device.),** wherein the remote client device contacts the at least one linking server for establishing the P2P connection according to the first unique identification (UID) of the information concentrating center for identifying the connecting information of the information concentrating center in the at least one linking server **(McGuire, Para.28, given knowledge about the IP addresses and ports of NATs between the devices, the devices can also communicate directly with one another (e.g., without relaying packets through the relay server) using a peer to peer network connection. To enable communication using a peer to peer network connection, the devices each first send an inquiry to an address resolution server on the first network to determine IP addresses and ports on the first network to which packets should be sent to ensure that they reach the electronic device.).**

As per claim 17, the modified McGuire discloses the information concentrating center according to claim 16, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection **(Belz, Para.55, The identified wireless device can be one of a plurality of wireless devices associated with the permission policy. At decision node 504, the set-top box device determines whether the viewing request exceeds a base level of permissions associated with the permission policy.).**

As per claim 18, the modified McGuire discloses the information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection **(McGuire, Para.35, the described embodiments can be considered to perform hole-punching operations upon**

**establishing the network connection with the relay server and using the relay server to communicate packets, and upon establishing the peer to peer connection and using the peer to peer network connection to communicate packets.).**

As per claim 19, the modified McGuire discloses an appliance, comprising: at least one second module coupling to the Internet, for establishing a P2P connection with a remote client device through the Internet **(McGuire, Para.30, the devices begin a process for establishing a peer to peer network connection between the devices.),** wherein at least one portion of the information is delivered to the remote client device on the P2P connection **(McGuire, Para.24, the IP addresses and ports of NATs between the devices, the devices can also communicate directly with one another (e.g., without relaying packets through the relay server) using a peer to peer network connection. To enable communication using a peer to peer network connection, the devices each first send an inquiry to an address resolution server on the first network to determine IP addresses and ports on the first network to which packets should be sent to ensure that they reach the electronic device.).**

However McGuire does not discloses at least one first module for concentrating information from at least one information source.

Belz discloses at least one first module for concentrating information from at least one information source **(Belz, Para.13, a request to power the set-top box device 104 on, a request to remove the set-top box device 104 from a standby state, a request to access a particular channel or a particular plurality of channels, a channel change request, a request to view a portion of an electronic programming guide, or any combination thereof, Para.25, the set-top box device 202 includes a network interface 208 adapted to facilitate communication between the set-top box device 202 and a media distribution network, such as a cable network, satellite dish or network, or an Internet Protocol Television (IPTV) network.).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of McGuire and in view of Belz by implementing at least one first module for

concentrating information from at least one information source in order to controlling access to media content received via a communications network, such as a video distribution network (Belz, Para.1).

As per claim 20, the modified McGuire discloses the information concentrating center according to claim 19, wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information concentrating center **(McGuire, Para.25, After establishing the TCP session, the electronic devices register with the relay server. Registering a given electronic device comprises negotiating an identifier, such as another IP address, with the relay server, and recording that IP address and information about the TCP connection in a memory in the relay server to enable delivery of subsequent packets to the device from the relay server.),** wherein the remote client device communicates with the at least one linking server for establishing the P2P connection according to the connecting information provided by the at least one linking server **(McGuire, Para.24, the IP addresses and ports of NATs between the devices, the devices can also communicate directly with one another (e.g., without relaying packets through the relay server) using a peer to peer network connection. To enable communication using a peer to peer network connection, the devices each first send an inquiry to an address resolution server on the first network to determine IP addresses and ports on the first network to which packets should be sent to ensure that they reach the electronic device.)**, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established **(Belz, Para.55, The identified wireless device can be one of a plurality of wireless devices associated with the permission policy. At decision node 504, the set-top box device determines whether the viewing request exceeds a base level of permissions associated with the permission policy.).**

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NORMIN ABEDIN whose telephone number is (571)270-5970. The examiner can normally be reached on Mon to Friday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)272-7304. 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.

/NORMIN ABEDIN/
Examiner, Art Unit 2449

/VIVEK SRIVASTAVA/
Supervisory Patent Examiner, Art Unit 2449

| Notice of References Cited | Application/Control No. 14/591,008 | Applicant(s)/Patent Under Reexamination KUO ET AL. | |
|---|---|---|---|
| | Examiner NORMIN ABEDIN | Art Unit 2449 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | Classification |
|---|---|---|---|---|---|
| * | A | US-2013/0111043 | 05-2013 | McGuire, Rory L. | 709/228 |
| * | B | US-2009/0125971 | 05-2009 | Belz et al. | 725/153 |
| | C | US- | | | |
| | D | US- | | | |
| | E | US- | | | |
| | F | US- | | | |
| | G | US- | | | |
| | H | US- | | | |
| | I | US- | | | |
| | J | US- | | | |
| | K | US- | | | |
| | L | US- | | | |
| | M | US- | | | |

**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | Classification |
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**NON-PATENT DOCUMENTS**

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
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| | 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.

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# BIB DATA SHEET

**CONFIRMATION NO. 9077**

| SERIAL NUMBER | FILING or 371(c) DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. |
|---|---|---|---|---|
| 14/591,008 | 01/07/2015<br>RULE | 709 | 2449 | 6121.007US |

**APPLICANTS**

Through Tek Technology (ShenZhen) Co., Ltd., Shenzhen, CHINA;
ThroughTek Co., Ltd., Taipei, TAIWAN;

**INVENTORS**

Chi-Ming Kuo, Taipei, TAIWAN;
Yu-Li Kao, Taipei, TAIWAN;
Bai-Jian Xiao, Taipei, TAIWAN;
Cheng-Wei Li, Taipei, TAIWAN;

**** CONTINUING DATA *************************

This application is a CIP of 13/950,282 07/25/2013
which is a CIP of 13/293,506 11/10/2011 *
This application 14/591,008 01/07/2015
claims benefit of 61/924,240 01/07/2014
(*)Data provided by applicant is not consistent with PTO records.

**** FOREIGN APPLICATIONS *************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
01/22/2015

| Foreign Priority claimed | ☐ Yes ☑ No | ☐ Met after Allowance | STATE OR COUNTRY | SHEETS DRAWINGS | TOTAL CLAIMS | INDEPENDENT CLAIMS |
|---|---|---|---|---|---|---|
| 35 USC 119(a-d) conditions met | ☐ Yes ☑ No | | | | | |
| Verified and Acknowledged | /NORMIN ABEDIN/ Examiner's Signature | Initials | TAIWAN | 23 | 20 | 2 |

**ADDRESS**

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Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

**TITLE**

INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

| FILING FEE RECEIVED | | |
|---|---|---|
| 730 | FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following: | ☐ All Fees<br>☐ 1.16 Fees (Filing)<br>☐ 1.17 Fees (Processing Ext. of time)<br>☐ 1.18 Fees (Issue)<br>☐ Other _____<br>☐ Credit |

BIB (Rev. 05/07).

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | **Examiner** | **Art Unit** |
| | NORMIN ABEDIN | 2449 |

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

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

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 07/27/2015 | | | | | | | | |
| | 1 | ✓ | | | | | | | | |
| | 2 | ✓ | | | | | | | | |
| | 3 | ✓ | | | | | | | | |
| | 4 | ✓ | | | | | | | | |
| | 5 | ✓ | | | | | | | | |
| | 6 | ✓ | | | | | | | | |
| | 7 | ✓ | | | | | | | | |
| | 8 | ✓ | | | | | | | | |
| | 9 | ✓ | | | | | | | | |
| | 10 | ✓ | | | | | | | | |
| | 11 | ✓ | | | | | | | | |
| | 12 | ✓ | | | | | | | | |
| | 13 | ✓ | | | | | | | | |
| | 14 | ✓ | | | | | | | | |
| | 15 | ✓ | | | | | | | | |
| | 16 | ✓ | | | | | | | | |
| | 17 | ✓ | | | | | | | | |
| | 18 | ✓ | | | | | | | | |
| | 19 | ✓ | | | | | | | | |
| | 20 | ✓ | | | | | | | | |

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L2 | 72444 | (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:52 |
| L3 | 144 | (set$top near1 box) and (TV near1 program) and p2p | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:52 |
| L4 | 202 | (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:53 |
| L5 | 123 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:53 |
| L7 | 113 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:57 |
| L8 | 76 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:57 |
| L9 | 71 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 05:58 |
| L10 | 47 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:04 |
| L11 | 14 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register and hole | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:06 |
| L12 | 0 | @ad<="20111110" and (set$top near1 box) and (TV near1 program) and (p2p or (point near1 point) or (peer near1 peer))and remote and mobile and (phone or cell) and register and (hole near1 punch) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:08 |
| L13 | 16 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:10 |
| L14 | 16 | @ad<="20111110" and (set$top near1 box) and control$4 near1(TV near1 channel) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:11 |

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| L15 | 0 | @ad<="20111110" and (set$top near1 box) and (control$4 near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:17 |
| L16 | 0 | @ad<="20111110" and (set$top near1 box) and (switch$4 near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:17 |
| L17 | 0 | @ad<="20111110" and (set$top near1 box) and (switch$4 near3(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:18 |
| L18 | 63 | @ad<="20111110" and (set$top near1 box) and (switch$4 near3(TV near1 channel)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:18 |
| L19 | 43 | @ad<="20111110" and (set$top near1 box) and (control$4 or switch$4) near1(TV near1 channel) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:22 |
| L20 | 14 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same remote | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:23 |
| L21 | 0 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same phone | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:24 |
| L22 | 0 | @ad<="20111110" and (set$top near1 box) and ((control$4 or switch$4) near1(TV near1 channel)) same cell | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:24 |
| L23 | 123 | @ad<="20111110" and (mobile near1 phone) same request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:36 |
| L24 | 4 | @ad<="20111110" and (mobile near1 phone) near3 request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:36 |
| L25 | 737 | @ad<="20111110" and (mobile near1 phone) near3 (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:39 |
| L26 | 26 | @ad<="20111110" and ((mobile near1 phone) near3 (set$top near1 box)) and (TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:39 |
| L27 | 1 | @ad<="20111110" and ((mobile near1 phone) near3 (set$top near1 box)) and control$4 near1 (TV near1 program) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:40 |
| L35 | 372 | @ad<="20111110" and (control$4 near3 (TV near1 program)) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
| L36 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 program)) with (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
| L37 | 3 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:51 |
| L38 | 1 | @ad<="20111110" and (switch$4 near3 (TV near1 program)) same (mobile near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:53 |
| L39 | 0 | @ad<="20111110" and (switch$4 near3 (TV near1 program)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |

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| L40 | 0 | @ad<="20111110" and (switch$4 near3 (TV near1 channel)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| L41 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 channel)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:55 |
| L42 | 0 | @ad<="20111110" and (control$4 near3 (TV near1 program)) same (smart near1 phone) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:56 |
| L43 | 33 | @ad<="20111110" and (smart near1 phone) same request same (set$top near1 box) | US-PGPUB; USPAT | OR | OFF | 2015/07/27 06:56 |
| L44 | 2 | @ad<="20111110" and (smart near1 phone) same request same (set$top near1 box) and TV near1 program | US-PGPUB; USPAT | OR | OFF | 2015/07/27 07:02 |
| L45 | 6 | ((Chi-Ming) near2 (Kuo)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| L46 | 5 | ((Yu-Li) near2 (Kao)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| L47 | 1 | ((Bai-Jian) near2 (Xiao)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| L48 | 17 | ((Cheng-Wei) near2 (Li)).INV. | US-PGPUB; USPAT; USOCR | OR | OFF | 2015/07/27 07:59 |
| S1 | 1 | "13293506" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 16:07 |
| S2 | 2 | ((CHI-MING) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:08 |
| S3 | 3 | ((YU-LI) near2 (KAO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:09 |
| S4 | 1 | ((CHIEN-CHIH) near2 (YANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:09 |
| S5 | 2 | ((SHENG-FU) near2 (CHANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2013/10/10 16:10 |
| S6 | 8 | ("20040186908" \| "20050047379" \| "20090100309" \| "6373851").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 16:12 |
| S7 | 865597 | surveillance near1 camera or anti$theft or smoke or fire | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/10 17:29 |

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|---|---|---|---|---|---|---|
| | | | DERWENT; IBM_TDB | | | |
| S8 | 1393846 | ((surveillance near1 camera) or anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:30 |
| S9 | 1040469 | @ad<="20110127" and ((surveillance near1 camera) or anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:31 |
| S10 | 1001838 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft or smoke or fire or appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:31 |
| S11 | 0 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft and smoke and fire and appliance) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S12 | 153 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S13 | 0 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:32 |
| S14 | 26 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:33 |
| S15 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:33 |
| S16 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/10 17:34 |

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|---|---|---|---|---|---|---|
| | | and (monitro$4 or control$4) | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S17 | 5 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) and remote | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:34 |
| S18 | 4 | @ad<="20110127" and ((surveillance near1 camera) and anti$theft) and server and prox$4 and (monitro$4 or control$4) and remote and administra$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:35 |
| S19 | 1385 | @ad<="20110127" and (surveillance and anti$theft) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S20 | 60 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S21 | 21 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:36 |
| S22 | 21 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 17:38 |
| S23 | 351 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:20 |
| S24 | 299 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:20 |
| S25 | 200 | @ad<="20110127" and (surveillance | US-PGPUB; | OR | ON | 2013/10/10 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security and home | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 18:21 |
| S26 | 0 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security and home and "ADT" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:21 |
| S27 | 924 | @ad<="20110127" and (surveillance or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:22 |
| S28 | 322 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:22 |
| S29 | 189 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:23 |
| S30 | 45 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm and fire | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:23 |
| S31 | 18 | @ad<="20110127" and (surveillance and anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and alarm | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:25 |
| S32 | 0 | 2012/0203917 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:38 |
| S33 | 2 | "20120203917" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/10 18:38 |

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|---|---|---|---|---|---|---|
| | | | IBM_TDB | | | |
| S34 | 0 | @ad<="20110127" and ((surveillance near3 video)or anti$theft) and server and prox$4 and (monitor$4 or control$4) and security and home and alarm and fire and linking near3 server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:48 |
| S35 | 272276 | @ad<="20110127" and (remote near3 device) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S36 | 1444 | @ad<="20110127" and (remote near3 device) and (administration near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S37 | 15 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and (linking near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:49 |
| S38 | 3 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and (linking near3 server) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 18:56 |
| S39 | 243 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and register and proxy | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:00 |
| S40 | 124 | @ad<="20110127" and (remote near3 device) and (administration near3 server) and register and proxy and (security near3 system) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:01 |
| S41 | 2 | "20090119364" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:07 |
| S42 | 1898 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2013/10/10 19:10 |

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|---|---|---|---|---|---|---|
| | | | JPO; DERWENT; IBM_TDB | | | |
| S43 | 510 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S44 | 122 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) and (server near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S45 | 37 | @ad<="20110127" and (remote near3 device) and proxy and (link$4 near1 server) and (server near1 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/10 19:10 |
| S46 | 3 | "20090100309" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:01 |
| S47 | 17501 | (hole near1 punching) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:07 |
| S48 | 13259 | @ad<="20110127" and (hole near1 punching) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:08 |
| S49 | 1272 | @ad<="20110127" and (hole near1 punching) and (remote or client or terminal or user) near5 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:09 |
| S50 | 748 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:11 |
| S51 | 692 | @ad<="20110127" and (hole near1 punching) and ((remote or client or | US-PGPUB; USPAT; | OR | ON | 2013/10/11 13:11 |

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| | | terminal or user) near5 device) and (smoke or fire or surveillance or electronic) and (control$4 or monitor) | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S52 | 442 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:12 |
| S53 | 14 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 13:12 |
| S54 | 2 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and (home near3 security near3 system) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:05 |
| S55 | 458 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic or appliance) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:07 |
| S56 | 0 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke and fire) same(control$4 or monitor) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:11 |
| S57 | 1428 | @ad<="20110127" and (remote near3 device) same register$4 same server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:11 |
| S58 | 758 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:12 |
| S59 | 136 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:13 |

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| S60 | 41 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and install | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:13 |
| S61 | 24 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and (install near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 14:14 |
| S62 | 20 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (multiple near3 server) and (download near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:11 |
| S63 | 8 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server) and (download near3 software) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:16 |
| S64 | 30 | @ad<="20110127" and ((remote near3 device) same register$4 same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:20 |
| S65 | 1206 | @ad<="20110127" and control$4 with (smoke$fire or CCTV or alrm or air$cooler) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:25 |
| S66 | 272 | @ad<="20110127" and control$4 with (smoke$fire or CCTV or alrm or air$cooler) and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:25 |
| S67 | 0 | @ad<="20110127" and (control$4 with air$cooler) and server and cell | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:26 |
| S68 | 593 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/11 15:27 |

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| | | | DERWENT; IBM_TDB | | | |
| S69 | 25 | @ad<="20110127" and (control$4 with (security near3 alarm)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 15:28 |
| S70 | 247 | @ad<="20110127" and (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S71 | 308 | (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S72 | 0 | remore near3 (control$4 with (home near3 appliance)) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:38 |
| S73 | 94 | (remote near3 control$4) with (home near3 appliance) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:39 |
| S74 | 94 | (remote near3 control$4) with (home near3 network) same server same (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:50 |
| S75 | 703 | (remote near3 control$4) with (home near3 network) and server and (cell or mobile or laptop) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:50 |
| S76 | 22 | (remote near3 control$4) with (home near3 network) and server and (cell or mobile or laptop) and 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 16:51 |
| S77 | 128136 | (register$4 near2 (device or server)) | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/11 18:32 |

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| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S78 | 1370 | ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:33 |
| S79 | 1143 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:34 |
| S80 | 0 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and derectory | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:35 |
| S81 | 177 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and directory | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:35 |
| S82 | 1058 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home nera3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:37 |
| S83 | 147 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:37 |
| S84 | 31 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and (home near3 network) and appliance | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:38 |
| S85 | 54299 | @ad<="20110127" and ((remote or client or terminal or user) naer3 device) same register same server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/11 18:53 |
| S86 | 1 | 2009/0154474 | US-PGPUB; | OR | ON | 2013/10/13 |

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| | | | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 14:52 |
| S87 | 53 | ((Home near2 monitor$4) near system) with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 14:56 |
| S88 | 40 | @ad<="20110127" and ((Home near2 monitor$4) near system) with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/13 15:19 |
| S89 | 520 | (search$4 with (remote near2 device) with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 02:03 |
| S90 | 50 | (search$4 with (remote near2 device) with server) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 02:03 |
| S91 | 14 | (search$4 with (remote near2 device) with server) and (device with unavailable) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 03:14 |
| S92 | 45 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (server near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:31 |
| S93 | 4 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (server near3 list) and (device near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:32 |
| S94 | 28 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (device near3 list) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2013/10/14 04:36 |

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| | | | IBM_TDB | | | |
| S95 | 7 | @ad<="20110127" and (control$4 with alarm) same server same (cell or mobile or laptop) and (device near3 list) and back$up | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:39 |
| S96 | 14 | @ad<="20110127" and (control$4 with (electronic near2 device)) same server same (cell or mobile or laptop) and (device near3 list) and back$up | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/14 04:42 |
| S97 | 1 | ((Home near2 monitor$4) near system) with server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:24 |
| S98 | 0 | ((Home near2 monitor$4) near system) with server and (hole near3 punch$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S99 | 85891 | (hole near3 punch$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S100 | 103 | (hole near3 punch$4) and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:26 |
| S101 | 25 | (hole near3 punch$4) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:27 |
| S102 | 1 | (hole near3 punch$4) and (home near3 network)with server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/15 01:27 |
| S103 | 0 | (hole near3 punch$4) and (home near3 network)with server and control$4 and resgister | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2013/10/16 12:45 |

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| | | | JPO; DERWENT; IBM_TDB | | | |
| S104 | 7 | (hole near3 punch$4) and (home near3 network)with server and control$4 and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:45 |
| S105 | 7 | (hole near3 punch$4) and (home near3 network)with server and (control$4 with device)and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 12:48 |
| S106 | 0 | ((hole near3 punch$4) with fail) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S107 | 107 | ((hole near3 punch$4) with fail) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S108 | 0 | ((hole near3 punch$4) with fail) and (home near3 network)with server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:41 |
| S109 | 2 | ((hole near3 punch$4) with fail) and device and (home near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 15:42 |
| S110 | 0 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 deviec) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:24 |
| S111 | 13629 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) with (remote near3 device) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:24 |
| S112 | 50 | @ad<="20110127" and (find$4 or search$4 or look$4 or identif$4) | US-PGPUB; USPAT; | OR | ON | 2013/10/16 18:25 |

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| | | with (remote near3 device) same (register with server) | USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S113 | 8 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server with address with register) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:30 |
| S114 | 99 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:32 |
| S115 | 34 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:32 |
| S116 | 99 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:36 |
| S117 | 24 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (remote near3 device)) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:37 |
| S118 | 2751 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:43 |
| S119 | 268 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance) with register) same (server near3 address) and (register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:44 |
| S120 | 424 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same (server near3 address) same(register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:45 |

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| S121 | 13 | @ad<="20110127" and ((find$4 or search$4 or look$4 or identif$4) with (device or user or client or appliance)) same ((provod$4 oe send$4) near3(server near3 address)) same(register with server) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/16 18:46 |
| S122 | 2 | "20060053216" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/26 23:50 |
| S123 | 1 | "13274955" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/26 23:59 |
| S124 | 13 | (pluralit$4 near3 server) and (home near3 server) with direct with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:04 |
| S125 | 305 | (pluralit$4 near3 server) and provider with direct with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:08 |
| S126 | 0 | (pluralit$4 near3 server) and provider with (direct near3 connecrtion)with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:09 |
| S127 | 57 | (pluralit$4 near3 server) and provider with (direct near3 connection)with device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:09 |
| S128 | 13 | device near1 management near1 software near1 systems | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:33 |
| S129 | 5437 | (device near1 management near1 systems) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2013/10/27 00:34 |

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| | | | DERWENT; IBM_TDB | | | |
| S130 | 843 | (device near1 management near1 systems) and (service near2 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S131 | 137734 | (device near1 management near1 systems) and (service near2 provider) amd set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:34 |
| S132 | 50 | (device near1 management near1 systems) and (service near2 provider) and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S133 | 27 | (device near1 management near1 systems) and (service near2 provider) and set$top and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S134 | 26 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:35 |
| S135 | 4 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:36 |
| S136 | 98 | (device near1 management near1 systems) and (service near2 provider) and register and server and (direct near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:41 |
| S137 | 23 | (device near1 management near1 systems) and (service near2 provider) and register and server and (direct near3 connect$4) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 00:42 |
| S138 | 1983 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device | US-PGPUB; USPAT; USOCR; | OR | ON | 2013/10/27 01:33 |

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| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S139 | 419 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:33 |
| S140 | 143 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:34 |
| S141 | 2 | ((service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:35 |
| S142 | 11 | ((service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:37 |
| S143 | 66 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:41 |
| S144 | 40 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and set$top and direct | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:41 |
| S145 | 3 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/226.ccls. and set$top and direct | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:42 |
| S146 | 13 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) and set$top | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 01:43 |
| S147 | 4 | ("20060053216" \| "20040103166" \| | US-PGPUB; | OR | ON | 2013/10/27 |

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| | | "20060053216").PN. | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 03:06 |
| S148 | 1 | "13039720" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:34 |
| S149 | 2 | "20120226799" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:38 |
| S150 | 2 | "20110022642" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:43 |
| S151 | 2 | 2011/0208695 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:53 |
| S152 | 3 | "20110208695" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2013/10/27 15:53 |
| S153 | 22669 | 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:18 |
| S154 | 1199 | S153 AND ( (G06F15/173 OR G06F15/16 OR H04L41/50 OR H04L41/00 OR H04L41/04).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/23 20:18 |
| S155 | 1252 | S153 AND ( (G06F15/173 OR G06F15/16 OR H04L41/50 OR H04L41/00 OR H04L41/04 OR H04L61/2539 OR H04L61/2076 OR H04L61/256).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2014/04/23 20:19 |

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| | | | IBM_TDB | | | |
| S156 | 3 | ((Chi-Ming) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/04/23 20:20 |
| S157 | 480 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. andp2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:32 |
| S158 | 17 | (service near2 provider) near3 (control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:32 |
| S159 | 126 | ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:42 |
| S160 | 91 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:43 |
| S161 | 51 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and provider | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:45 |
| S162 | 3 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and provider near3 address | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 17:57 |
| S163 | 438 | @ad<="20110127" and client same request same (address near3 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:00 |
| S164 | 1 | @ad<="20110127" and client same request same (address near3 provider) same admin | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:00 |
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| S165 | 1392 | @ad<="20110127" and (client or user) same request same (address near3 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:02 |
| S166 | 13 | @ad<="20110127" and (client or user) same request same (address near3 provider) same admin | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:03 |
| S167 | 21 | ("20040186908" \| "20100274859" \| "8180891" \| "6373851" \| "20110302324" \| "20120158161" \| "20050047379" \| "20090100309" \| "20030105854").PN. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:15 |
| S168 | 1 | ("20040186908" \| "20100274859" \| "8180891" \| "6373851" \| "20110302324" \| "20120158161" \| "20050047379" \| "20090100309" \| "20030105854").PN. and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:20 |
| S169 | 15 | @ad<="20110127" and ((control$4 or monitor$4 or manag$4) with (home near5 appliance$1)) and (p2p or "peer to peer") and (ad$hoc near3 network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:30 |
| S170 | 11189 | @ad<="20110127" and address near3 provider | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:33 |
| S171 | 6420 | @ad<="20110127" and address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S172 | 397 | @ad<="20110127" and request near5 address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:34 |
| S173 | 24 | @ad<="20110127" and client near3 request near5 address near3 (service near1 provider) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; | OR | ON | 2014/04/24 18:34 |

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| | | | DERWENT; IBM_TDB | | | |
| S174 | 5 | (client near3 request near3 (server near3 address)) same (device near5 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 18:59 |
| S175 | 2481 | point$to$point and (service near3 provider) and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:34 |
| S176 | 133 | point$to$point and (service near3 provider) near6 account and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:34 |
| S177 | 94 | @ad<="20110127" and point$to$point and (service near3 provider) near6 account and (device near4 register$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:35 |
| S178 | 10626 | @ad<="20110127" and point$to$point and (service near3 provider) and (control$4 or monitor$4 or manag$4) near4 (device$1 or home) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:41 |
| S179 | 10626 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (device$1 or home)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:41 |
| S180 | 75 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 19:42 |
| S181 | 29 | @ad<="20110127" and point$to$point and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:05 |
| S182 | 36 | 2002/0009078 | US-PGPUB; USPAT; USOCR; | OR | ON | 2014/04/24 20:11 |

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| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S183 | 6 | "20020009078" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:11 |
| S184 | 2 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:17 |
| S185 | 19825 | ad$hoc near3 network | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:19 |
| S186 | 6321 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:19 |
| S187 | 232482 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device @ad<="20110127" and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:20 |
| S188 | 1066 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:21 |
| S189 | 207 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:21 |
| S190 | 204 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S191 | 100 | (ad$hoc near3 network) and | US-PGPUB; | OR | ON | 2014/04/24 |

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|---|---|---|---|---|---|---|
| | | (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 | USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | | | 20:22 |
| S192 | 85 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 and client | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/24 20:22 |
| S193 | 2418 | hole$punch$4 | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:22 |
| S194 | 7 | hole$punch$4 and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:23 |
| S195 | 4 | hole$punch$4 and point$to$point and peer$to$peer | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:23 |
| S196 | 51 | hole$punch$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:26 |
| S197 | 41 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S198 | 23 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and (direct near3 connection) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:27 |
| S199 | 9 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and (direct near3 connection) and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; | OR | ON | 2014/04/25 14:27 |

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| | | | IBM_TDB | | | |
| S200 | 24 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and register | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/04/25 14:28 |
| S201 | 11 | @ad<"20111110" and hole$punch$4 and "709"/$.ccls. and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S202 | 137 | @ad<"20111110" and hole$punch$4 and camera | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S203 | 4 | @ad<"20111110" and hole$punch$4 and camera and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:03 |
| S204 | 5 | @ad<"20111110" and hole$punch$4 and camera and (p2p or point$to$point) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:04 |
| S205 | 21 | @ad<"20111110" and hole$punch$4 and camera and (p2p or point$to$point or peer$to$peer) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:04 |
| S206 | 1 | @ad<"20111110" and hole$punch$4 and camera and point$to$point | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/05/30 18:05 |
| S207 | 24064 | 709/223.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:34 |
| S208 | 6 | hole$punch$4 and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2014/07/26 19:35 |

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| | | | JPO; DERWENT; IBM_TDB | | | |
| S209 | 3 | (ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and point$to$point and direct$4 near3 connect$4 and client and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:35 |
| S210 | 0 | (device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4) and ( (H04L41/00 OR H04L41/50 OR H04L41/12 OR G06F15/177 OR G06F15/173).CPC. ) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/07/26 19:37 |
| S211 | 3 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 18:38 |
| S212 | 5 | ((CHI-MING) near2 (KUO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S213 | 4 | ((YU-LI) near2 (KAO)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S214 | 1 | ((CHIEN-CHIH) near2 (YANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S215 | 2 | ((SHENG-FU) near2 (CHANG)).INV. | US-PGPUB; USPAT; USOCR | OR | ON | 2014/10/27 19:06 |
| S216 | 4 | @ad<"20111110" and hole$punch$4 and camera and p2p | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 19:07 |
| S217 | 14 | @ad<="20110127" and (hole near1 punching) and ((remote or client or terminal or user) near5 device) and (smoke or fire or surveillance or electronic) same(control$4 or monitor) and "709"/$.ccls. | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2014/10/27 19:07 |
| S218 | 3 | "13950282" | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2015/03/09 12:40 |

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|---|---|---|---|---|---|---|
| S219 | 0 | "14951008" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:09 |
| S220 | 3 | "13950282" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:09 |
| S221 | 1 | "14591008" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:11 |
| S222 | 1 | "13776197" | US-PGPUB; USPAT | OR | OFF | 2015/07/27 03:27 |

**EAST Search History (Interference)**

< This search history is empty>

**7/ 27/ 2015 8:00:11 AM**
**C:\ Users\ nabedin\ Documents\ EAST\ Workspaces\ 14591008.wsp**

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 14591008 | KUO ET AL. |
| | Examiner | Art Unit |
| | NORMIN ABEDIN | 2449 |

| CPC- SEARCHED | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| CPC COMBINATION SETS - SEARCHED | | |
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| Symbol | Date | Examiner |
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| US CLASSIFICATION SEARCHED | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| 709 | 220-226 | 7/27/2015 | NA |

| SEARCH NOTES | | |
|---|---|---|
| Search Notes | Date | Examiner |
| Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO) | 7/27/2015 | NA |

| INTERFERENCE SEARCH | | | |
|---|---|---|---|
| US Class/ CPC Symbol | US Subclass / CPC Group | Date | Examiner |
| | | | |

| /NORMIN ABEDIN/<br>Examiner, Art Unit 2449 | |
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|---|---|---|---|
| 14/591,008 | 01/07/2015 | Chi-Ming Kuo | 6121.007US |

**CONFIRMATION NO. 9077**

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**Title:**INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

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| 14/591,008 | 01/07/2015 | 2465 | 730 | 6121.007US | 20 | 2 |

**CONFIRMATION NO. 9077**

11336
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**FILING RECEIPT**




Date Mailed: 01/26/2015

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**Power of Attorney:** None

**Domestic Priority data as claimed by applicant**

This application is a CIP of 13/950,282 07/25/2013
which is a CIP of 13/293,506 11/10/2011 *
This application 14/591,008
claims benefit of 61/924,240 01/07/2014
(*)Data provided by applicant is not consistent with PTO records.

**Foreign Applications** for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/591,008**

**Projected Publication Date:** 05/07/2015

**Non-Publication Request:** No

**Early Publication Request:** No
**** SMALL ENTITY ****
**Title**

INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

**Preliminary Class**

370

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:** No

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## Title 37, Code of Federal Regulations, 5.11 & 5.15

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## PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 14/591,008

### APPLICATION AS FILED - PART I

| FOR | (Column 1) NUMBER FILED | (Column 2) NUMBER EXTRA | SMALL ENTITY RATE($) | SMALL ENTITY FEE($) | OR | OTHER THAN SMALL ENTITY RATE($) | OTHER THAN SMALL ENTITY FEE($) |
|---|---|---|---|---|---|---|---|
| BASIC FEE (37 CFR 1.16(a), (b), or (c)) | N/A | N/A | N/A | 70 | | N/A | |
| SEARCH FEE (37 CFR 1.16(k), (i), or (m)) | N/A | N/A | N/A | 300 | | N/A | |
| EXAMINATION FEE (37 CFR 1.16(o), (p), or (q)) | N/A | N/A | N/A | 360 | | N/A | |
| TOTAL CLAIMS (37 CFR 1.16(i)) | 20 minus 20 = | * | x 40 = | 0.00 | OR | | |
| INDEPENDENT CLAIMS (37 CFR 1.16(h)) | 2 minus 3 = | * | x 210 = | 0.00 | | | |
| 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). | | | 0.00 | | | |
| MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | 0.00 | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | TOTAL | 730 | | TOTAL | |

### APPLICATION AS AMENDED - PART II

AMENDMENT A

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

AMENDMENT B

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** 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 found in the appropriate box in column 1.

## ABSTRACT

An information concentrating center, is disclosed, wherein the information concentrating center comprises: at least one module for concentrating information from at least one information source; and at least one module coupling to the Internet, for establishing a P2P connection with a remote client device through the Internet, wherein at least one portion of the information is delivered to the remote client device on the P2P connection.

What is claimed is:

1. An information concentrating center, comprising:

at least one first module for concentrating information from at least one information source; and

at least one second module coupling to the Internet, for establishing a P2P connection with a remote client device through the Internet, wherein at least one portion of the information is delivered to the remote client device on the P2P connection.

2. The information concentrating center according to claim 1, wherein the information concentrating center is a set top box.

3. The information concentrating center according to claim 1, wherein the remote client device is a portable electronic device.

4. The information concentrating center according to claim 1, wherein the remote client device is a mobile phone.

5. The information concentrating center according to claim 1, wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information concentrating center, wherein the remote client device communicates with the at least one linking server for establishing the P2P connection according to the connecting information provided by the at least one linking server, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

6. The information concentrating center according to claim 1, wherein the at least one second

module couples to the Internet through an external routing device or an internal routing device.

7. The information concentrating center according to claim 1, wherein the information source is a satellite feed comprising TV programs.

8. The information concentrating center according to claim 1, wherein the information source is a cable feed comprising TV programs.

9. The information concentrating center according to claim 7, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

10. The information concentrating center according to claim 8, wherein the remote client device sends commands to the information concentrating center to switch the TV channel of the TV programs.

11. The information concentrating center according to claim 1, wherein the at least one information source includes both a satellite feed and a cable feed.

12. The information concentrating center according to claim 6, wherein the routing device is an IP router.

13 The information concentrating center according to claim 6, wherein the information concentrating center is connected to an appliance through the routing device and the remote client device controls the appliance through the information concentrating center.

14. The information concentrating center according to claim 6, wherein the routing device has a wireless access point for connecting to a portable electronic device so as to deliver the information to the portable electronic device.

15. The information concentrating center according to claim 1, further comprising a third module to format the information in a way suitable for viewing by the remote client device.

16. The information concentrating center according to claim 1, wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information concentrating center, wherein the remote client device contacts the at least one linking server for establishing the P2P connection according to the first unique identification (UID) of the information concentrating center for identifying the connecting information of the information concentrating center in the at least one linking server.

17. The information concentrating center according to claim 16, wherein the remote client device does not have a unique identification (UID) to register in the at least one linking server for associating connecting information of the remote client device when the remote client device contacts the at least one linking server for establishing the P2P connection.

18. The information concentrating center according to claim 5, wherein the at least one linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

19. An appliance, comprising:

at least one module coupling to an information concentrating center, wherein a P2P connection is established between the information concentrating center and a remote client device, wherein the remote client device controls the appliance through the information concentrating center via the P2P connection.

20. The information concentrating center according to claim 19, wherein the information concentrating center has a first unique identification (UID) that is registered in at least one linking server for associating connecting information of the information concentrating center, wherein the remote client device communicates with the at least one linking server for establishing the P2P connection according to the connecting information provided by the at least one linking server, wherein the remote client device is not registered in the at least one linking server while the P2P connection is being established.

# INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES

## CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part of U.S. patent application No. 13/950,282, filed Jul. 25, 2013, which is a continuation-in-part of U.S. patent application No. 13/293,506, filed Nov. 8, 2011 and claims the benefit of US provisional application No. 61/924,240, filed Jan. 7, 2014, each of which is incorporated by reference herein in their entirety.

## BACKGROUND OF THE INVENTION

### Field of the Invention

**[0001]** The present invention relates to a communication system and more particularly to a communication system using P2P (Point to Point) connections.

### Description of the Prior Art

**[0002]** Conventionally, a set top box is used to connect with a television to watch TV programs which are sent through satellite or cable. The set top box can be viewed as an information concentrating center in which varieties of information can be concentrated, and information, such as video and audio, can then be delivered to a device, such as a TV for viewing. However, conventional set top box is used mainly for providing information to TV for viewing and hence has limited use. Therefore what is needed is an effective and efficient way to explore the full capability of a set top box.

## SUMMARY OF THE INVENTION

**[0003]** One object of the present invention is to provide an effective and efficient way to connect an information concentrating center through the internet by using a P2P connection.

**[0004]** Present invention discloses a way to set up the connection from the remote client device to the information concentrating center through the internet by establishing a P2P (point to point) connection from the remote client device to the information concentrating center. By using a P2P connection between the remote client device and the information concentrating center, bidirectional communication can be established for not only accessing services such as streaming video conferences or inspecting statuses of appliances at home provided by the information concentrating center, but also sending control information, such as switching TV channels, from the remote client device to the information concentrating center.

**[0005]** In one embodiment, an information concentrating center, comprising: at least one module for concentrating information from at least one information source; and at least one module connected to a routing device, for establishing a P2P connection with a remote client device through Internet, wherein at least one portion of the information is delivered to the remote client device on the P2P connection. In one embodiment, the at least one information source includes a satellite feed and/or a cable feed.

**[0006]** In one embodiment, the information concentrating center has a unique identification (UID) for allowing the remote client device to establish the P2P connection, wherein the unique identification is registered in a linking server and the P2P connection is established through the linking server.

**[0007]** In one embodiment, the remote client device is not registered in the linking server when the remote client device sends a first message to the linking server for establishing a P2P connection with the information concentrating center according to the unique identification (UID) of the information concentrating center.

**[0008]** In one embodiment, the remote client does not have a unique identification (UID) to register to the linking server when the remote client device sends the first message to the linking server for establishing a P2P connection with the information concentrating center.

**[0009]** In one embodiment, the linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0010]** The foregoing aspects and many of the accompanying advantages of this invention will become more readily appreciated as the same becomes better understood by reference to the following detailed description, when taken in conjunction with the accompanying drawings, wherein:

**[0011]** Fig.1 is a first diagram schematically showing the architecture of a remote information communication system according to a first embodiment of the present invention;

**[0012]** Fig.2 is a second diagram schematically showing the architecture of a remote information communication system according to the first embodiment of the present invention;

**[0013]** Fig.3 is a third diagram schematically showing the architecture of a remote information communication system according to the first embodiment of the present invention;

**[0014]** Fig.4 is a fourth diagram schematically showing the architecture of a remote information communication system according to the first embodiment of the present invention;

**[0015]** Fig.5 is a fifth diagram schematically showing the architecture of a remote information communication system according to the first embodiment of the present invention;

**[0016]** Fig.6 is a sixth diagram schematically showing the architecture of a remote information communication system according to the first embodiment of the present invention;

**[0017]** Fig.7 is a seventh diagram schematically showing the architecture of a remote information communication system according to the first embodiment of the present invention;

**[0018]** Fig.8 schematically shows that a remote device registers in a plurality of linking server groups according to one embodiment of the present invention;

**[0019]** Fig.9 shows a flowchart of the connection and interaction of a linking server and an administration server according to one embodiment of the present invention;

**[0020]** Fig.10 shows a flowchart of the connection and interaction of a remote device and a linking server according to one embodiment of the present invention; and

**[0021]** Fig.11 shows a flowchart of the connection and interaction of a proximal device and a remote device according to one embodiment of the present invention;

**[0022]** Fig. 12 illustrates the architecture of IOTC (Internet of Things Cross-platform) in accordance with one embodiment of present invention;

**[0023]** Fig. 13A-13D illustrates a block diagram of an integrated circuit in accordance with one embodiment of present invention;

**[0024]** FIG. 14A-14B illustrates a block diagram of two connected devices when a P2P connection is established in accordance with one embodiment of present invention.

**[0025]** FIG. 15 illustrates a processor for establishing a P2P connection in accordance with one embodiment of present invention;

**[0026]** FIG. 16 illustrates a processor for establishing a P2P connection in accordance with another embodiment of present invention;

**[0027]** Fig. 17 illustrates a schematic of a system of connecting an information concentrating center to a remote client device through the Internet by using a P2P connection according to one embodiment of present invention;

**[0028]** Fig. 18 illustrates a schematic of a system of connecting a set top box to a remote client device through the Internet by using a P2P connection according to one embodiment of present invention; and

**[0029]** Fig.19 illustrates a schematic of a system for establishing a P2P connection by using a Unique Identification associated with the set top box and a linking server.

## DETAILED DESCRIPTION OF THE INVENTION

**[0030]** The detailed explanation of the present invention is described as following. The described preferred embodiments are presented for purposes of illustrations and description, and they are not intended to limit the scope of the present invention.

**[0031]** In the following description, "remote device" and "remote client device" are exchangeable when a "proximal device" acts as a service device that provides a service to a remote device.

**[0032]** The remote information communication system of the present invention comprises at least one remote device, an administration server, and at least one linking server. The remote information communication system is requested by at least one proximal device to establish a link between the proximal device and the remote device. The linking method of the

remote information communication system comprises steps of: A. at least one remote device requesting an administration server to provide an address of at least one linking server supporting the remote device via the Internet; B. the remote device registering the information thereof in the linking server according to the address provided by the administration server; C. a proximal device requesting the administration server to find out a specified remote device via the Internet; D. the administration server responding the address of the linker server that the specified remote device registers to the proximal device; E. a proximal device requesting the linking server to establish a link with the specified remote device according to the responded address; F. the linking server establishing a link between the proximal device and the specified remote device according to the request of the proximal device. The present invention has the following features: the linking server and the remote device needn't open the domain names or IPs to the public; all proximal devices can only request the administration server to find out a specified remote server; the administration server provides IP of the linking server for the proximal device; the proximal server requests the linking server to establish a link between the proximal device and the remote server. Thereby is reduced the probability that the linking server or the remote device is invaded by hackers. It is unnecessary for the proximal device to have a fixed IP or remember fixed IPs or domain names. Thus, the user of the proximal device is exempted from many technical problems of linking.

**[0033]** In order to demonstrate the above-mentioned method in detail, the present invention further discloses a practical remote information communication system, which comprises at least one administration server, at least one linking server and at least one remote device. Refer to Fig.1 a diagram schematically showing the architecture of a remote information communication system according to one embodiment of the present invention. As shown in Fig.1, two administration servers 11 and 12 constitute an administration server group 1 that

back up with each other. Each of the administration servers 11 and 12 stores a device list and a server list. The device list stores the data of a plurality of remote devices allowed for registering. The server list stores the information of a plurality of linking servers. In one embodiment, the server list contains a plurality of linking servers managed by different service providers. In one embodiment, the server list contains a plurality linking servers supporting different types of devices. In one embodiment, the server list contains a plurality linking servers distributed at different geographic locations. In one embodiment, the device list and the server list have a mapping relationship therebetween. As shown in Fig.1, the remote information communication system includes a linking server 201 and a linking server 211. In this embodiment, the linking server 201 and a linking server 202 are respectively managed by different service providers. As shown in Fig.1, the linking server 201 and the linking server 202 constitute a linking server group A (20) that back up with each other. Similarly, the linking server 211 and a linking server 212 constitute a linking server group B (21) that back up with each other. In order to describe the present invention conveniently, the administration server group 1, the linking server group A (20) and the linking server group B (21) are used to represent the servers of the linked targets thereinafter. The remote information communication system also includes a remote device A (31), a remote device B (32) and a remote device C (33). As stated hereinbefore, the device list stores the information of a plurality of remote devices. The remote devices A, B and C (31, 32 and 33) respectively have their unique IDs. The information of the service providers managing the remote devices A, B and C (31, 32 and 33) are stored in the device list of the administration server group 1 beforehand. When the linking server group A (20), linking server group B (21), remote device A (31), remote device B (32) and remote device C (33) has just accessed the Internet, the linking server group A (20) and linking server group B (21) transmit server-register information 92 to the administration server group 1 via the Internet to register the IPs and configurations thereof (such as the specifications, linking states, etc.). The administration

server group 1 then verifies whether the linking server group A (20) and linking server group B (21) are the legal server groups pre-stored in the server list. If they are legal server groups, the administration server group 1 respectively responds to the linking server group A (20) and linking server group B (21) that their registers are done. When the remote device A, B or C (31, 32 or 33) intend to find out servers able to support them, it sends out linking server requesting information 91 to the administration server group 1 via the Internet. The administration server group 1 then verifies whether the remote device A, B or C (31, 32 or 33) is the legal device pre-stored in the device list. If the remote device A, B or C (31, 32 or 33) is a legal device, the administration server group 1 responds linked targets to it.

**[0034]** In practical application, the linking server group A (20) and the linking server group B (21) may be respectively managed by different service providers. In such a case, the administration server group 1 would assign the remote device A (31) to the linking server group A (20), which is managed by the service provider supporting the remote device A (31). Similarly, the administration server group 1 assigns the remote device B (32) and the remote device C (33) to the linking server group B (21) which is managed by the service provider supporting the remote device B (32) and the remote device C (33). In one embodiment, the remote devices A, B and C (32, 32 and 33) respectively belong to different types of products, and the administration server group 1 respectively assigns them to the linking server group A (20) and the linking server group B (21). In one embodiment, the remote devices A, B and C (31, 32 and 33) are respectively at different geographic locations, and the administration server group 1 assigns each to the nearer linking server group A (20) or nearer linking server group B (21).

**[0035]** Refer to Fig.2. According to the linking address the administration server group 1 responds to the remote device A (31), the remote device A (31) links to the linking server

group A (20) and registers the information thereof in the linking server group A (20), whereby the linking server group A (20) learns IP of the remote device A (31). According to the linking address the administration server group 1 responds to the remote device B (32) and the remote device C (33), the remote device B (32) and the remote device C (33) link to the linking server group B (21) and registers the information thereof in the linking server group B (21) whereby the linking server group B (21) learns IPs of the remote device B (32) and the remote device C (33).

**[0036]** Refer to Fig.3. The remote information communication system of the present invention can accept one or more proximal devices 4 linked thereto. The proximal devices 4 need API (Application Programming Interface) supporting the linking to the administration server group 1. The proximal device 4 can select a specified remote device via API. Suppose that the proximal device 4 chooses the remote device A (31) as the linked target via API. The proximal device 4 sends a linked target requesting information 94 to the administration server group 1 via API to ask which linking server group can link the proximal device 4 to the remote device A (31). The administration server group 1 provides the location of the linking server group A (20) that the specified remote device A (31) registers. Via API, the proximal server 4 links to the linking server group A (20) according to the location that the administration server group 1 responds to the proximal device 4. Then, the proximal device 4 sends link requesting information 95 to the linking server group A (20) for being linked to the remote device A (31). Refer to Fig.5. The linking server group A (20) takes priority to use the hole punching technology and respectively sends hole-punching information 960 and hole-punching information 961 to the proximal device 4 and the remote device A (31) so as to establish a P2P link 97 between the proximal device 4 and the specified remote device A (31). The proximal device 4 can obtain the information of the remote device A (31) or control the remote device A (31) via the P2P link 97. Refer to a U.S. publication No. 2009/0100309 and a

GB publication No. 2475279 for the hole punching technology. As the hole punching technology is not a technical feature of the present invention but a prior art, it does not repeat herein. Refer to Fig.6. If the linking server group A (20) does not complete the hole punching process, the linking server group A (20) forwards data packets between the proximal device 4 and the specified remote device A (31).

**[0037]** The proximal device 4 cannot obtain the IPs of the linking server group A (20) and the linking server group B (21) unless via the administration server group 1. Therefore, the variation of IP or mechanical specification of the linking server group A (20) and the linking server group B (21) would not hinder the proximal device 4 from finding a linked target. Favored by the abovementioned feature, the architecture of the linking server group (such as quantity, specification, type, etc.) can be modified according to the market requirement. For example, when some type of products increases on line, the linking servers supporting the type of products can be increased to meet the load capacity required by the type of products. When new linking server groups are added, or when the linking information (such as IP) is varied, or when the number of the machines inside a linking server group is varied, what needs doing is only renewing the server list and making the linking server group send the server-register information 92 to register in the administration server group 1 again. When the number or type of the remote devices is varied or when the linking server group that the remote device registers is varied, the device list has to be updated and the remote device has to request the linking server groups with the information of the linking server groups.

**[0038]** Refer to Fig.7 a diagram schematically an embodiment of expanding the remote information communication system. In this embodiment, a remote device D (34) is added to the system. In the present invention, the number or addresses of the supported remote devices can be varied via renewing the device list of the administration server group 1. The remote

devices A-D (31-34) can ask and learn new available linking server groups via sending the linking server requesting information 91 to the administration server group 1 again. As shown in Fig.7, a new linking server 213 is added to the linking server group B (21), and a new linking server group C (22) consisting of linking servers 221, 222 and 223 is added to the system. Similarly, the content of the linking servers of the remote information communication system is expanded via renewing the server list of the administration server group 1 in this embodiment. In the present invention, the quantities, specifications and types of the remote devices or linking servers can be expanded or varied according to requirement via only renewing the server list or device list and registering in the administration server group 1 once more. Thereby, the manufacturers can easily vary the load capacity of the system according to requirement.

**[0039]** The remote information communication system of the present invention allows an identical remote device to register in several different linking servers. As shown in Fig.8, the remote information communication system includes the linking server groups A, D and E (20, 23, and 24). The linking server group D (23) includes linking servers 231 and 232. The linking server group E (24) includes linking servers 241 and 242. After the remote device A (31) sends the linking server requesting information 91 to the administration server group 1, the administration server group 1 responds to the remote device A (31) that it can register in the server groups A, D and E (20, 23, and 24). Favored by the feature, the server groups A, D and E (20, 23, and 24) can jointly support the remote device A (31). When the linking server group A (20) is out of order or off-line, the remote device A (31) can still register in the linking server group D (23) or the linking server group E (24). Further, if the remote device A (31) is a mobile one, the administration server group 1 may assign the remote device A (31) to a linking server group nearest to the remote device A (31).

**[0040]** The mapping relationship between the remote devices and the linking server groups is shown in Table.1.

**[0041]**

| | Codes of Linking Servers | Serial Numbers of Remote Devices | Notes |
|---|---|---|---|
| Service Provider A | Ser 01<br>Ser 02<br>Ser 03 | D01, D02, D03, D04, D05 | Ser 01: Shanghai<br>Ser 02: Tokyo<br>Ser 03: Los Angeles |
| | Ser 04<br>Ser 05 | D06, D07, D08, D09 | Ser 04: New York<br>Ser 05: Berlin |
| Service Provider B | Ser 11<br>Ser 12 | D11, D12, D13, D14 | Ser 11: Paris<br>Ser 12: Cairo |

Table.1 the mapping relationship between the remote devices and the linking server groups

**[0042]** In the example shown in Table.1, the server list of the administration server stores the linking servers Ser 01-Ser 05 managed by Service Provider A and the linking servers Ser 11-Ser 12 managed by Service Provider B. Remote devices D01-D05 are assigned to register in the linking servers Ser 01-Ser 03. D01-D05 are respectively the serial numbers of remote devices. As mentioned above, each remote device has a unique serial number, whereby the administration server or the linking server can verify or recognize the remote device. Requested by proximal devices, the linking servers Ser 01-Ser 03 establish links between the proximal devices and the remote devices D01-D05. As the linking servers Ser 01-Ser 03 have identical functions, they can back up with each other. The linking servers Ser 01-Ser 03 can be respectively arranged in different geographic locations. For example, the linking servers Ser 01-Ser 03 are respectively located in Shanghai, Tokyo and Los Angeles, whereby the

remote devices D01-D05 can register in the nearer linking servers. Similarly, remote devices D06-D09 are assigned to register in the linking servers Ser 04-Ser 05. Remote devices D11-D14 are assigned to register in the linking servers Ser 11-Ser 12 managed by Service Provider B. When the remote device D01 accesses the Internet to ask the administration server a linking server, the administration server can simultaneously provide the addresses of the linking servers Ser 01-Ser 05 for the remote device D01, whereby the remote device D01 can find a normal linking server anytime.

**[0043]** In the remote information communication system, the linking server groups back up with each other. Moreover, there are a plurality of linking servers in one linking server group, thus the present invention is formed in a multi-backup structure. Therefore, the present invention is very stable and still operates well even when there are few malfunctions occurring.

**[0044]** Refer to Fig.9 showing a flowchart of the operation of the linking servers and the administration server. When one or more linking servers access the Internet (Step S01) or when the IPs or ports of one or more linking servers are varied (Step S02), the linking server connects with the administration server via the Internet and transmits a piece of server-registering information to the administration server (Step S03). The administration server verifies the server-registering information and determines whether the linking server is legal in the server list (Step S04). If the linking server is determined to be legal in the server list, the administration server renews the server list according to the server-registering information (Step S05) and acknowledges the linking server that the register is done (Step S06). Thus, the linking server receives the acknowledge (Step S07). In order to guarantee that the administration server records the latest status of the linking server group, Step S03 is executed periodically (Step S09). If the register is unsuccessful in Step S04, it means that

linking server does not exist in the server list and is an illegal linking server. In such a case, the administration server acknowledges the linking server that register fails (Step S08), and the linking server receives the acknowledge (Step S07).

**[0045]** Refer to Fig.10 showing a flowchart of the process that a remote device accesses the Internet to ask the administration server to provide linking servers. Firstly, the remote device sends a request to the administration server for providing the address of a linking server (Step S11). Next, the administration server examines whether the request is valid (Step S12). If the request is valid, the administration server responds to the remote device the addresses of the linking servers (Step S13). If the request is invalid, the administration server responds to the remote device a refusal message (Step S14). Next, the remote device connects with the linking server provided by the administration server. The remote device sends a piece of device-registering information to the linking server (Step S15), and the linking server receives the device-registering information (Step S16). Next, the linking server sends a response to the remote device (Step S17). Thus, the linking server learns the IP and information necessary for communicating with the remote device. To guarantee that the linking server can access the remote device, the remote device returns to Step S11 periodically to resend the information thereof to the linking server (Step S18). The period may be preset to be 10 minutes. Thereby, the linking server can frequently learn the latest status of the remote device. By a longer period, the remote device periodically requests the administration server to provide the latest addresses and related information of the linking servers (Step S19). The longer period may be preset to be 24 hours.

**[0046]** Refer to Fig.11 showing a flowchart of the process that the user uses a proximal device to ask for connecting with a remote device. The user uses API of a proximal device to select a specified remote device. Then, the proximal device requests the administration sever

to find out the specified remote device via API (Step S21). The administration server responds to the proximal device with the address of a linking server that the remote device registers (Step S22). Thus, the proximal device learns the linking server whereby it can connects with the specified remote device. Next, the proximal device asks the linking server to establish a link between the proximal device and the remote device (Step S23). The linking server takes priority to perform a hole punching process on the proximal device and the remote device (Step S24). If the hole punching process is successful, the proximal device and the remote device undertake P2P transmission (Step S25). If the hole punching process fails, the linking server forwards data packets between the proximal device and the remote device (Step S26).

**[0047]** Via the technique set forth above, the remote device and the linking server needn't directly disclose the IPs and domain names thereof. Therefore, the present invention can reduce the risk of hacker invasion. Further, the proximal device can merely use the administration server to find out a linking server that a specified remote device registers, neither needing a fixed IP nor remembering the IP addresses or domain names of the linking servers. As long as a proximal device has an API supported by the administration server, the user can merely select a remote device to request the administration server to find out the linking address. The remaining procedures, such as interactions with the administration server and the linking server, are all automatically executed by API. Therefore, the present invention can greatly reduce complexity of operation. Furthermore, the present invention allows the manufacturers to vary the quantities, specifications and types of the remote devices and the linking servers as long as the manufacturers log in the administration server and update the device list and the server list. Therefore, the manufacturers can vary the quantities, specifications and types of the remote devices and the linking servers according to load of the apparatuses. In the present invention, the remote devices may be security apparatuses (such as surveillance cameras, anti-theft systems, and smoke/fire alarms) or home electric appliances

(such as refrigerators and air-conditioners). In the present invention, the proximal devices should be devices having AV playing functions, such as mobile phones, computers, and personal digital assistants, which are able to play AV information.

**[0048]** In one embodiment, a communication system for establishing a P2P connection, wherein the communication system comprises: a networked device or service device having an identification; at least one linking server for providing connecting information to enable a terminal device or client device to establish a P2P connections between the service device and the client device, wherein the identification of service device is registered in the at least one linking server, wherein the client device communicates with the at least one link server to establish a P2P connection to the service device according to the connecting information provided by the at least one linking server, wherein the client device has not been registered into the at least one linking server when the P2P is established.

**[0049]** Please note that the client device is not necessary to have an identification in the first place for establishing the P2P connection, which is different from the existing technology in which a client device must have an identification and have it registered in the server in order to establish the P2P connection.

**[0050]** In one embodiment, the functionalities of administration server and the linking server can be integrated into a single connecting server, a service device can register its UID (Unique Identification) into the connecting server, and then a client device can communicate with the connecting server to establish a P2P connection from the client device to the service device. As long as a client device has the information of the UID of the service device, the client device can contact the connecting server to make a P2P connection to the service node

and the client device itself is not necessary to have its own UID at all. The number of servers needed depends on the scale of the network for serving the client and service devices.

**[0051]** In one embodiment, in addition to the administration server group and the linking server group, a backend management server group can be added to report any failure of the administration servers and/or the linking servers and to perform load balancing among administration servers and/or the linking servers. For example, if one of the administration servers fails, the backend management server can detect such scenario and redirect all the requests destined to the failed administration server to another administration server. Likewise, if one of the administration servers or linking server is overloaded, the backend management server can detect such scenario and redirect a portion of the requests destined to an overloaded server to another server for load balancing.

**[0052]** In one embodiment, API modules can be integrated into many different platforms. Fig. 12 illustrates the architecture of the IOTC (Internet of Things Cross-platform) 1200 in accordance with one embodiment of present invention. An application layer requests P2P service through an API (application programming interface) 1201, 1202, 1203, 1204, 1205, 1206 for establishing P2P connections through IOTC platform 1210, thereby providing an uniform and integrated solution across platforms with different processors, such as ARM, X86, MIPS, etc., or operating systems, such as Windows, Linux, IOS, Android, etc. Furthermore, a networking layer is provided to communicate with another IOTC platform; and a sensing layer or a device layer for connecting to other devices such as IP cam, RFID, etc.

**[0053]** As integrated circuit technology advances rapidly, more and more design can be integrated into one IC. By doing so, it not only saves cost but also enables plug and play for connecting devices through P2P connections. Fig. 13A illustrates a block diagram of an integrated circuit 1300 in accordance with one embodiment of present invention. The

integrated circuit 1300, comprises: a CPU 1301 or a processor; and IOTC API modules 1303, for establishing a connection to a pre-specified remote device, wherein the IOTC API modules 1303 comprise instructions, when executed by the processor, to request an administration server to provide addressing information of a linking server in which the pre-specified remote device is registered, wherein the IOTC API modules 1303 request the linking server to establish a P2P connection between the integrated circuit and the pre-specified remote device, according to the addressing information of the linking server provided by the administration server.

**[0054]** In one embodiment, as shown in FIG. 13B, the integrated circuit 1350 has IOTC API modules 1303, an operating system module 1304 and a networking module 1305.

**[0055]** In one embodiment, as shown in FIG. 13C, the integrated circuit 1360 has a UID (Unique Identification) module 1302, IOTC API modules 1303, an operating system module 1304 and a networking module 1305. The UID module 1302 performs a registration process to register an electronic device encompassing the integrated circuit 1360 into administration and linking servers so that other devices can establish P2P connections with the electronic device.

**[0056]** In one embodiment, as shown in FIG. 13D, the integrated circuit 1370 has a browser or an application module 1306, IOTC API modules 1303, an operating system module 1304 and a networking module 1305. The browser or application module 1306 can establish P2P connections with a remote device through the API modules.

**[0057]** Please note that API modules, operating system module, networking module or CPU can be packaged in an electronic device such as an IP camera, a mobile phone or a

storage device. That is, the CPU and API modules can be packaged into two or more integrated circuits as well. The above description for the integrated circuit can be used for an electronic device as well; therefore it is not further described herein.

**[0058]** FIG. 14A illustrates a block diagram of two connected devices when a P2P connection is established by an administration server and a linking server, wherein one of the two connected devices is a client device 1400, and the other one is a remote service device 1410. The client device 1400 can be integrated into an integrated circuit (IC) or packaged into an electronic device; and the remote service device 1410 can be integrated into an integrated circuit (IC) or packaged into an electronic device. As shown in FIG. 14A, the remote service device 1410 has a CPU 1411, a UID (Unique Identification) module 1412, IOTC API modules 1413, an operating system module 1414 and a networking module 1415. The UID module 1412 performs a registration process to register the remote service device 1410 into administration and linking servers so that the client device 1400 can establish P2P connections with the remote service device 1410. The client device 1400 has a CPU 1401, a browser or an application module 1402, IOTC API modules 1403, an operating system module 1404 and a networking module 1405. The browser or application module 1402 can establish P2P connections with the remote service device 1410 through the API module.

**[0059]** As described in the US provisional application 61/812,262 to which the instant application claims the benefit, an image sensor can be used to generate an image of a pattern, such as a one dimensional Bar Code or a QR code, for inputting identification information for a terminal equipment, a client device, a networking equipment or an electronic device, so that the inputted identification information can be used to establish P2P connections. Please note that a proxy device such as a mobile phone can input identification

information for other terminal equipment or electronic devices through an input device of the proxy mobile phone, such as an image sensor, a keyboard, touch screen, etc.

**[0060]** In one embodiment, FIG. 14B illustrates a block diagram of two connected devices when a P2P connection is established by an administration server and a linking server, wherein one of the two connected devices is a client device 1400, and the other one is a service device 1410. As shown in FIG. 14B, the service device 1410 has a CPU 1411, a UID (Unique Identification) module 1412, IOTC API modules 1413, an operating system module 1414 and a networking module 1415. The UID module 1412 performs a registration process to register the service device 1410 into administration and linking servers, so that the client device 1400 can establish a P2P connection with the service device 1410. The UID module 1412 inputs an image of a pattern, such as a one dimensional Bar Code or a QR code, for inputting identification information of the service device 1410, so that the registration process can use the inputted identification information to register the service device 1410 into the administration and linking servers. The client device 1400 has a CPU 1401, a UID inputting module 1406 to input the identification information of a service device, IOTC API modules 1403, an operating system module 1404 and a networking module 1405. For example, the UID inputting module 1406 inputs the identification information of the service device 1410 in order to establish a P2P connection with the service device 1410 through the IOTC API modules 1403.

**[0061]** In one embodiment, the UID is embedded in a processor, wherein the UID can be stored in a non-volatile memory such as a flash memory or EEPROM. The UID will be programmed and tested after the processor is fabricated so that it can be readily used for P2P applications. As shown in Fig. 15, a processor 1500 is integrated with a UID which can be

programmed while the processor 1500 is under test after the processor 1500 is fabricated. The advantage of such processor 1500 is that it can reduce efforts for system house to program the UID in a board level or system level environment, because it requires a complicated setup in board level or system level design to program the UID. Furthermore, it does not require an extra flash or EEPOM to store the UID, which can save cost and board space. In addition, the a portion of pins of the processor 1500 can be shared for programming the identification into the processor 1500 so that once the identification is programmed into the processor 1500, those shared pins will be dedicated for other purposes. For example, the processor 1500 can have a multiplexer to direct those shared pins to the internal flash memory of the processor 1500 for programming the identification code to the processor 1500 and to another block of the processor 1500 for normal operations.

**[0062]** In one embodiment, as shown in Fig. 16, each processor 1600 has a CPU core 1602; a serial code 1603 to identify the processor 1600; and the identification code 1604 for establishing a P2P connection is associated with the serial code. In one embodiment, the serial code of the CPU comprises the identification code for establishing a P2P connection. In one embodiment, the serial code of the CPU is used as the identification code for establishing a P2P connection. In one embodiment, the serial code and the identification code are programmed into the CPU at the same time.

**[0063]** In one embodiment, the present invention pertains to the integration of an information concentrating center with P2P technology such that a remote client device can establish a P2P connection with the information concentrating center for obtaining the services provided by the information concentrating center.

**[0064]** Conventionally, when a remote client device tries to connect with an information concentrating center at home through the Internet, very complex procedures including DDNS (Dynamic DNS) and port mapping are used to set up the connection from the remote client device to the information concentrating center. Nowadays, UPnP Port forwarding technology can simplify the setup of the connection from the remote client device to the information concentrating center; however, the UPnP Port forwarding technology has security concerns and operating issues when multi-level routers are present in the path from the remote client device to the information concentrating center.

**[0065]** Conventionally, VoD (Video on demand) technology uses centralized servers for storing the contents, such as video/audio information, so that users can consume a variety of content through the Internet at different places. However, the VoD technology has some disadvantages such as bandwidth limitation associated with the servers and high costs for implementing the centralized servers. In addition, the operators of the VoD need to pay considerable license fees for the contents. By using a P2P connection between the remote client device and the information concentrating center, users can still watch varieties of content through the Internet at different places in a distributed manner to resolve bandwidth issues associated with the centralized servers. In addition, the bandwidth and the hardware requirements are significantly lower than the VoD technology, and the cost of the bandwidth and the hardware will be paid by each user.

**[0066]** In order to resolve the above-mentioned connection setup issues from remote client devices to the information concentrating center through the internet, the present invention discloses a way to set up the connection from the remote client device to the information concentrating center through the internet by establishing a P2P (point to point) connection from the remote client device to the information concentrating center. By using a P2P

connection between the remote client device and the information concentrating center, bidirectional communication can be established for not only accessing services such as streaming video conferences or inspecting statuses of appliances at home provided by the information concentrating center, but also for sending control information, such as switching TV channels, from the remote client device to the information concentrating center.

**[0067]** As shown in Fig 17, an Information Source 1701, connected to an information concentrating center 1702, can be any source that provides information. For example, the Information Source can be TV programs sent through satellite or a cable feed. A first local client device 1703, such as a TV, can be connected to the information concentrating center 1702. In addition, digital information, such as HDTV, can be transmitted from the information concentrating center 1702 though a router 1704 or a home network to a second local client device 1705, such as a TV, a mobile phone, tablet, notebook or PC. For example, a user can use a mobile phone to receive a TV program through router and wireless signals such as WIFI, even in a backyard of a home. In addition, a remote client device 1706, such as a mobile phone, can connect with the information concentrating center 1702 through the router 1704 and the Internet 1707 by using a P2P connection 1708 when the user is away from home, such as when the user is on vacation. In one embodiment, the information source 1701 includes at least one source that delivers the information to the information concentrating center 1702 without using the Internet, for example, a satellite feed or a cable feed for receiving TV programs or information. In one embodiment, the information concentrating center 1702 comprises a formatting module to format the information in a way suitable for viewing by the remote client device 1706.

**[0068]** In one embodiment, Fig 18 illustrates an example for connecting a plurality of devices to the information concentrating center such as a set top box 1730 which serves as a

service device for providing information to client devices such as a TV 1731, wherein information source such as satellite and/or cable feeds 1732 are connected to the set top box 1730. The remote client device 1706, such as a mobile phone, PAD, notebook or other electronic device, can connect to the set top box 1730 through the router 1704 and the Internet 1707 by using the P2P connection 1708. At home, some appliances 1733 can be connected to the set top box 1730 through router 1704 so that the remote client device 1706, such as a mobile phone, PAD, notebook or other electronic device, can check the status of the appliances 1733 or send commands to the set top box 1730 in order to control the appliances 1733. In addition, a local client device 1705, such as a mobile phone, PAD, notebook or other electronic device, can view the TV programs at home through the router 1704 using either wired or wireless transmission methods.

**[0069]** As described in U.S. patent application No. 13/293,506 and U.S. patent application No. 13/950,281, a home device such as the information concentrating center can register its UID (Unique Identification) into a linking server, and a remote client device can then communicate with the linking server to establish a P2P connection from the remote client device to the information concentrating center. As long as the remote client device has the information of the UID of the information concentrating center device, the remote client device can contact the linking server to make a P2P connection to the information concentrating center.

**[0070]** FIG. 19 illustrates a linking server 1750 connected to the Internet 1704 for establishing the P2P connection 1708 between the information concentrating center such as a set top box 1730 and the remote client device 1706. The set top box 1730 has a UID module 1760 which can communicate with the linking server 1750 directly or through an administration server to obtain the address of the linking server first so that the linking server

can be contacted by the set top box 1730 for registering a Unique Identification (UID) of the set top box 1730 in the linking server 1750. Afterwards, the remote client device 1706, such as a mobile phone, PAD, notebook or other electronic device, can communicate with the linking server directly or through the administration server to obtain the address of the linking server 1750 first so that the linking server 1750 can be contacted by the remote client device 1706 for establishing the P2P connection 1708 between the set top box 1730 and the remote client device 1706. The P2P connection 1708 can be set up quickly in this way without complex procedures. In addition, the bandwidth for carrying P2P connections is scalable due to the fact that each home user can establish a P2P connection to his/her own set top box separately without having bandwidth issues associated with video on demand (VoD) technology.

**[0071]** As described in U.S. patent application No. 13/293,506 and U.S. patent application No. 13/950,281, in one embodiment, an image sensor can be used to generate an image of a pattern, such as a one dimensional Bar Code or a QR code, for inputting the UID of the information concentrating center to establish a P2P connection from a remote client device to the information concentrating center.

**[0072]** Please note that all the descriptions, in U.S. patent application No. 13/293,506 and U.S. patent application No. 13/950,281, can be integrated in whole or in part with the information concentrating center for establishing a P2P connection with a remote client device, such as a mobile phone, notebook, PC PAD, or other suitable electronic devices.

**[0073]** In one embodiment, the information concentrating center has a first unique identification (UID) that is registered in at least one linking server, wherein the remote client

device contacts the at least one linking server for establishing the P2P connection according to the first unique identification (UID) of the information concentrating center .

**[0074]** In one embodiment, the remote client device is not registered in the at least one linking server with a second unique identification (UID) when the remote client device contacts the at least one linking server for establishing the P2P connection with the information concentrating center.

**[0075]** In one embodiment, the remote client does not have a unique identification (UID) to register to the linking server when the remote client device sends the first message to the linking server for establishing the P2P connection with the information concentrating center.

**[0076]** In one embodiment, the linking server transmits hole-punching messages to the information concentrating center and the remote client device to establish the P2P connection.

**[0077]** In one embodiment, a unique identification (UID) of the information concentrating center is embedded in the information concentrating center when the information concentrating center is manufactured, wherein the unique identification (UID) of the information concentrating center is created without using networking addressing information, such as an IP address. Likewise, the aforementioned second unique identification (UID) does not include networking addressing information, such as an IP address.

**[0078]** Please note that there are many ways to establish P2P connections between the information concentrating center and a remote client device through the Internet, and present invention is not limited to the ways of establishing the P2P connections, as long as a P2P

connection is used for connecting the information concentrating center and a remote client device.

**[0079]** The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustrations and description. They are not intended to be exclusive or to limit the invention to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to particular use contemplated. It is intended that the scope of the invention be defined by the claims appended hereto and their equivalents.

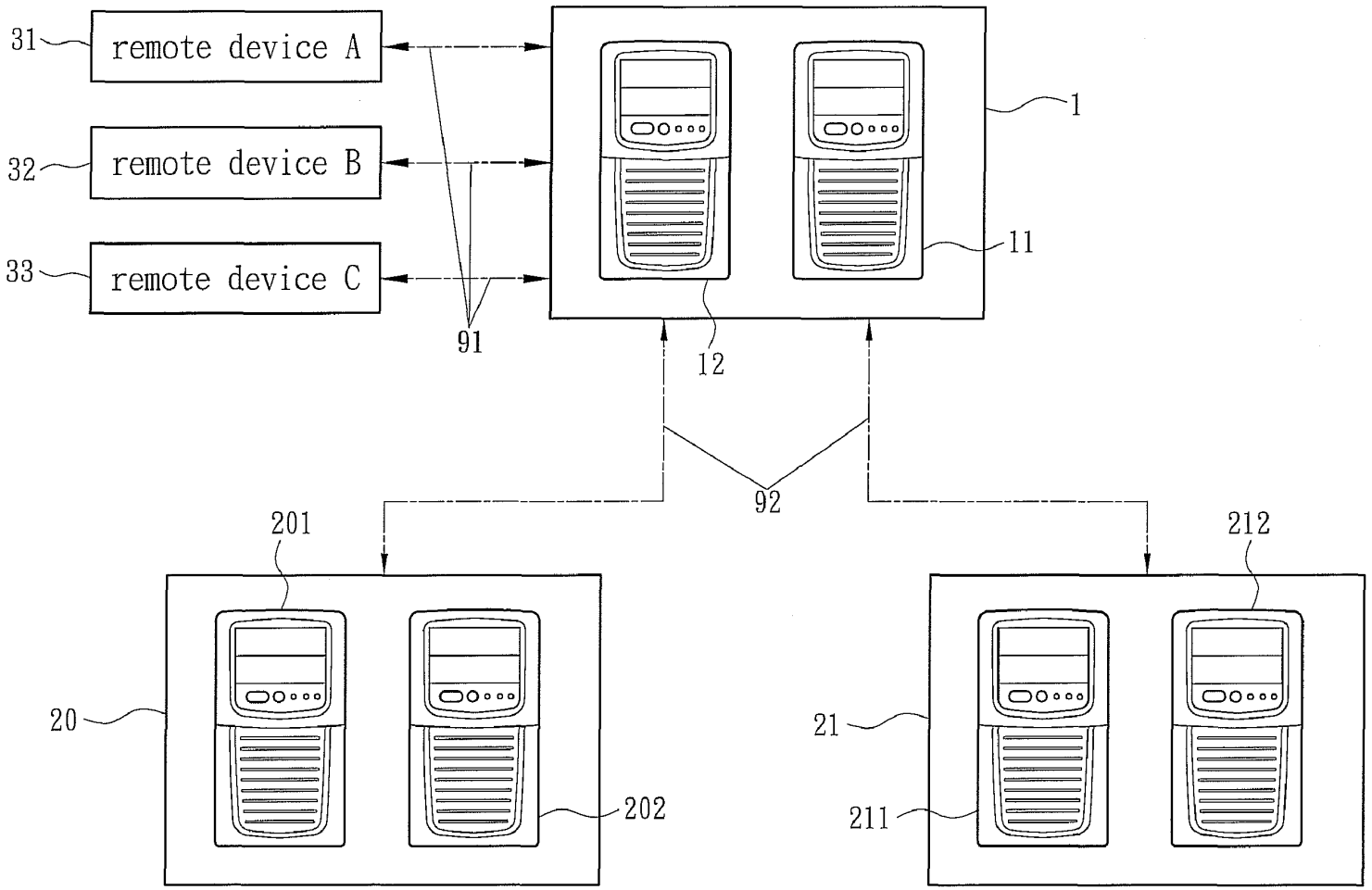

31
remote device A
32
remote device B
33
remote device C
91
1
11
12
92
201
212
20
21
202
211

Fig. 1

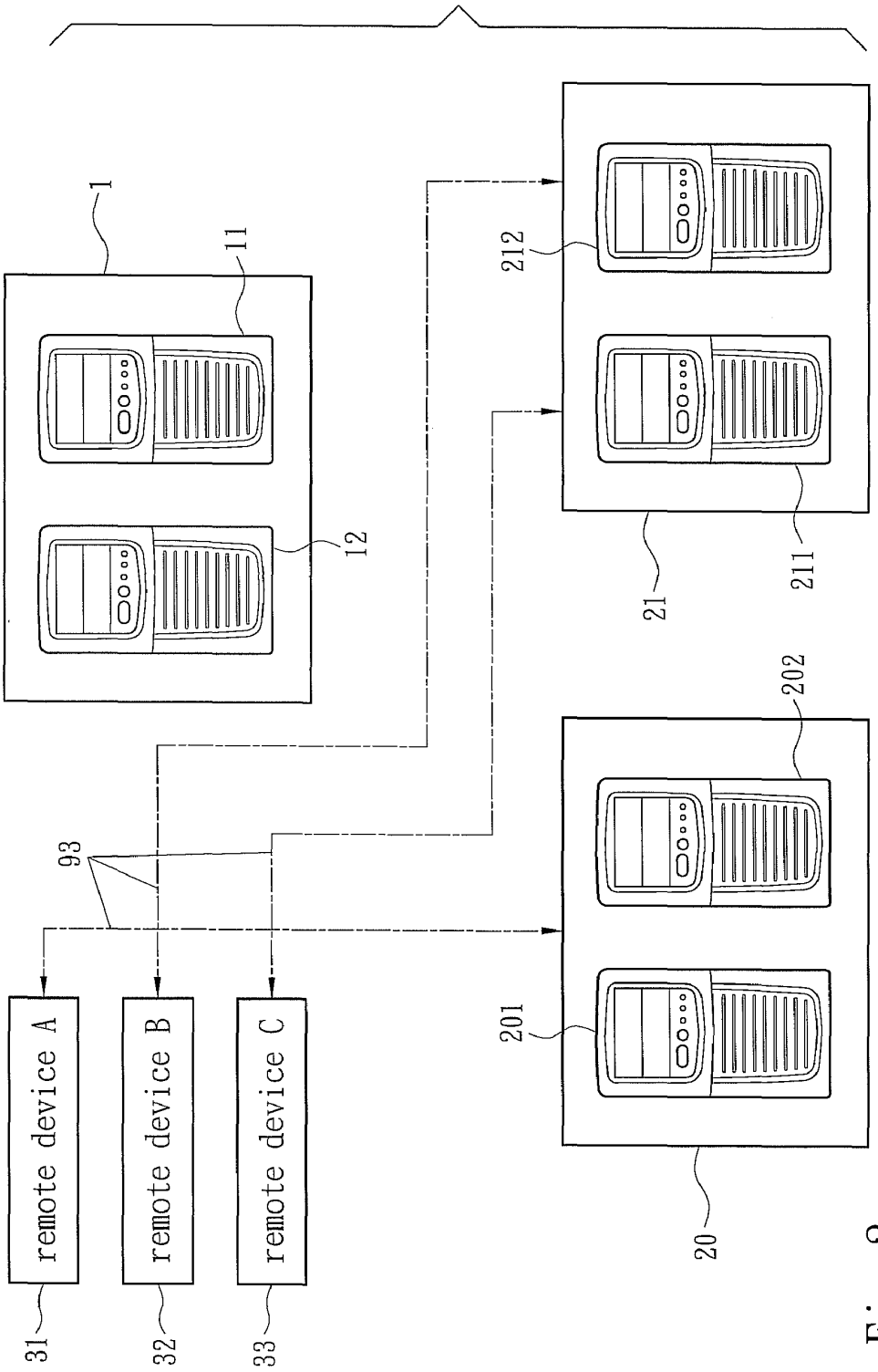

1
11
12
212
21
211
202
201
20
93
remote device A
remote device B
remote device C
31
32
33

Fig. 2

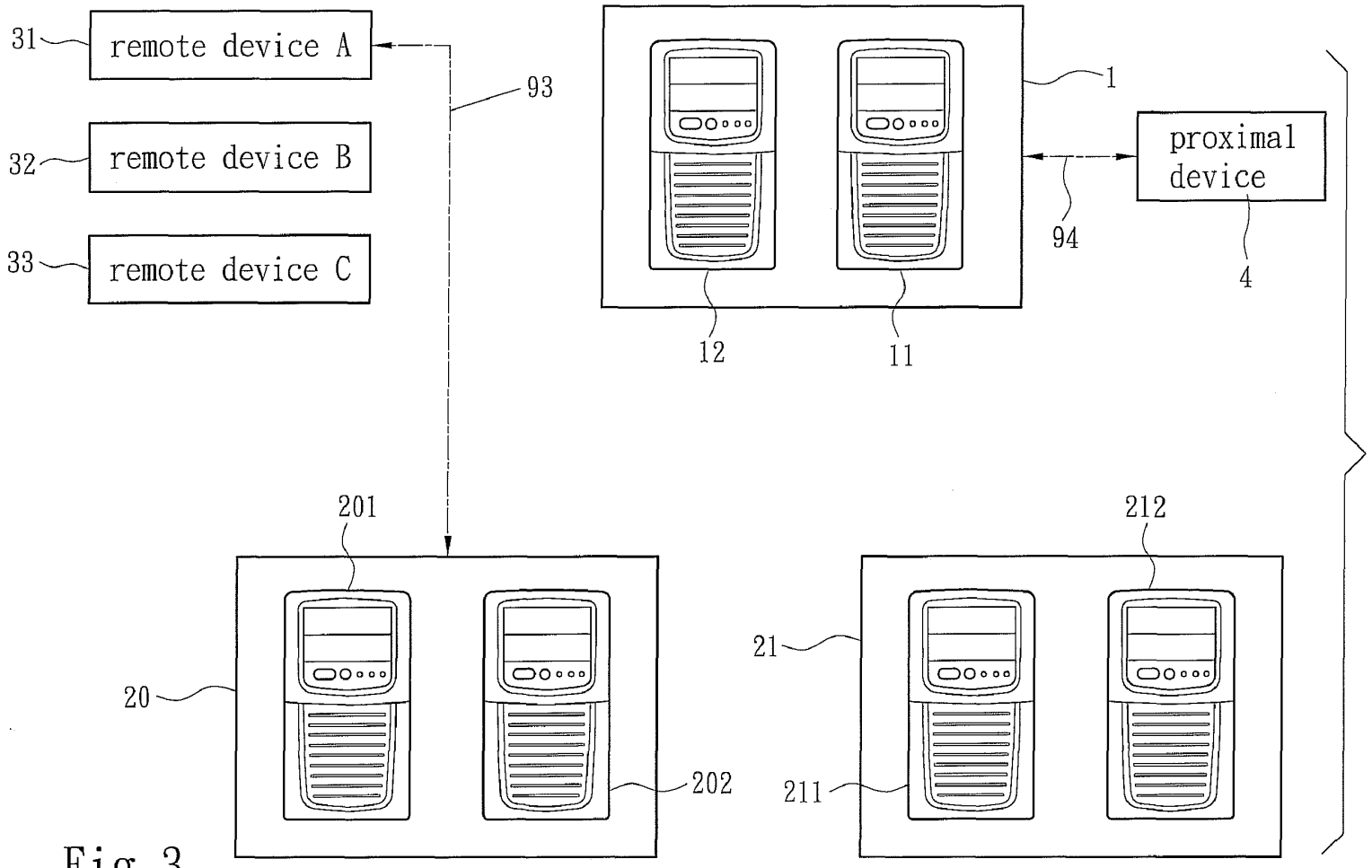

31
remote device A
32
remote device B
33
remote device C
93
1
proximal device
94
4
12
11
201
212
20
21
202
211

Fig. 3

309

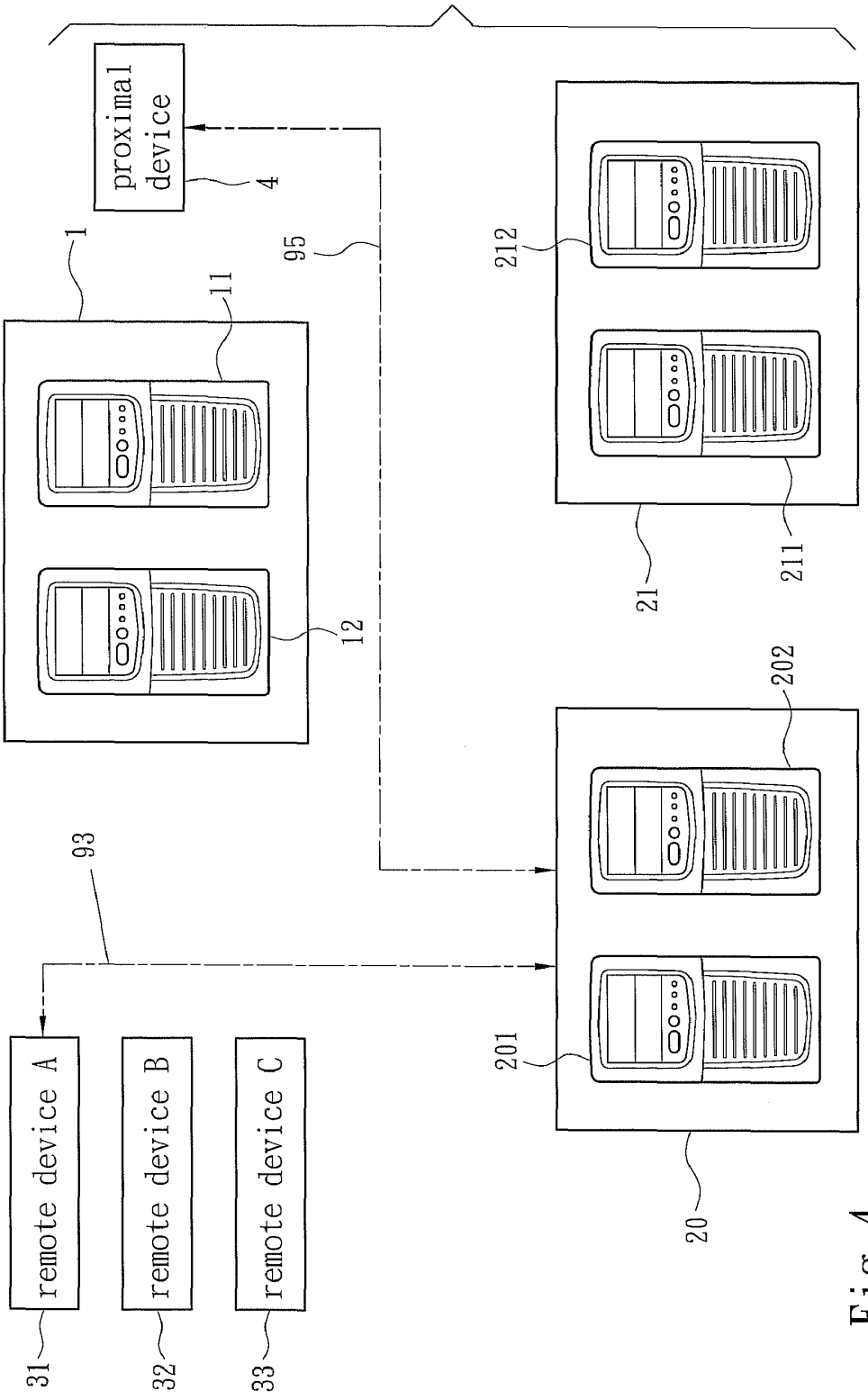

proximal device
4
95
1
11
12
212
21
211
202
201
20
93
remote device A
remote device B
remote device C
31
32
33

Fig. 4

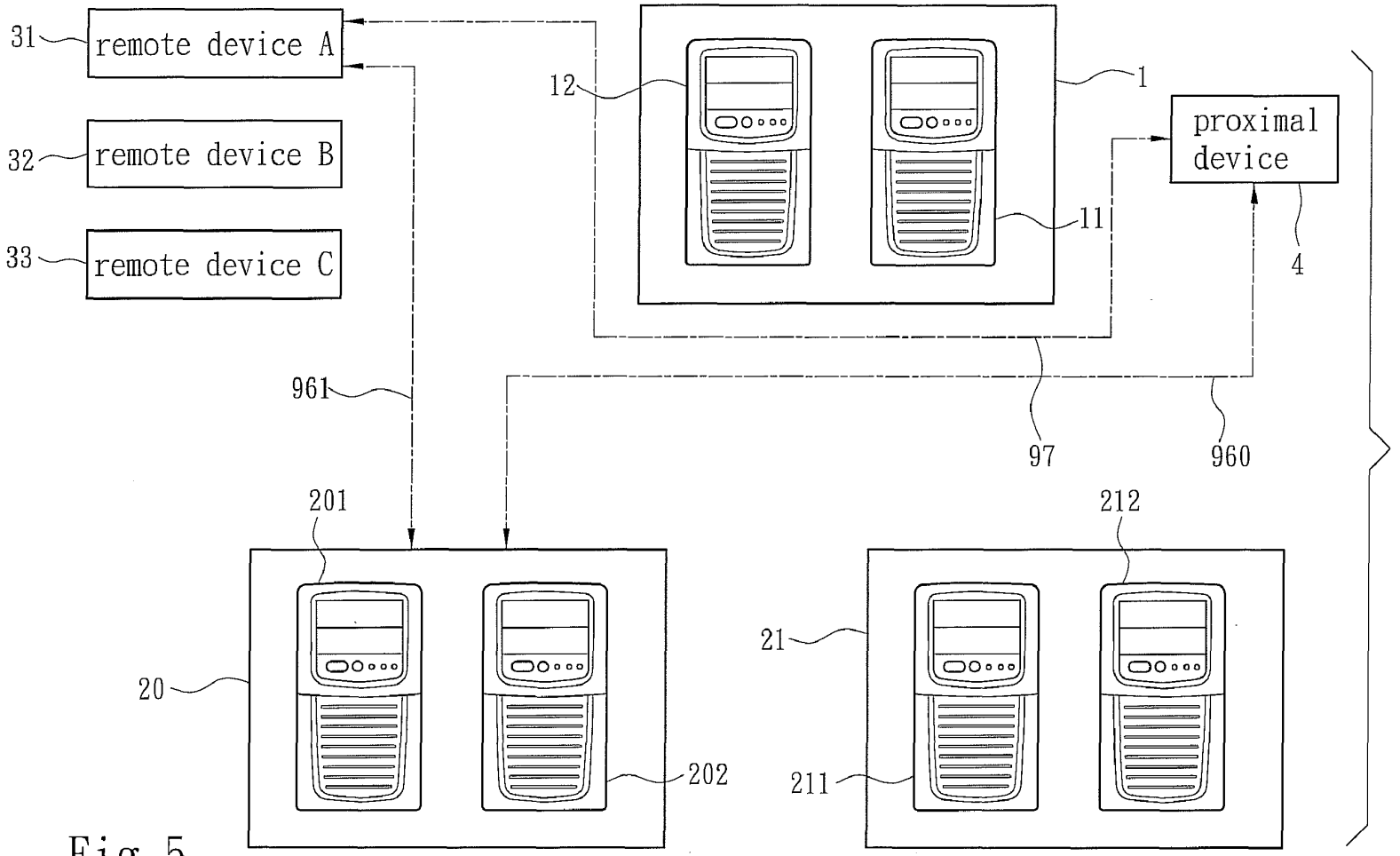

31
remote device A
32
remote device B
33
remote device C
12
1
11
proximal device
4
961
97
960
201
212
20
21
202
211

Fig. 5

311

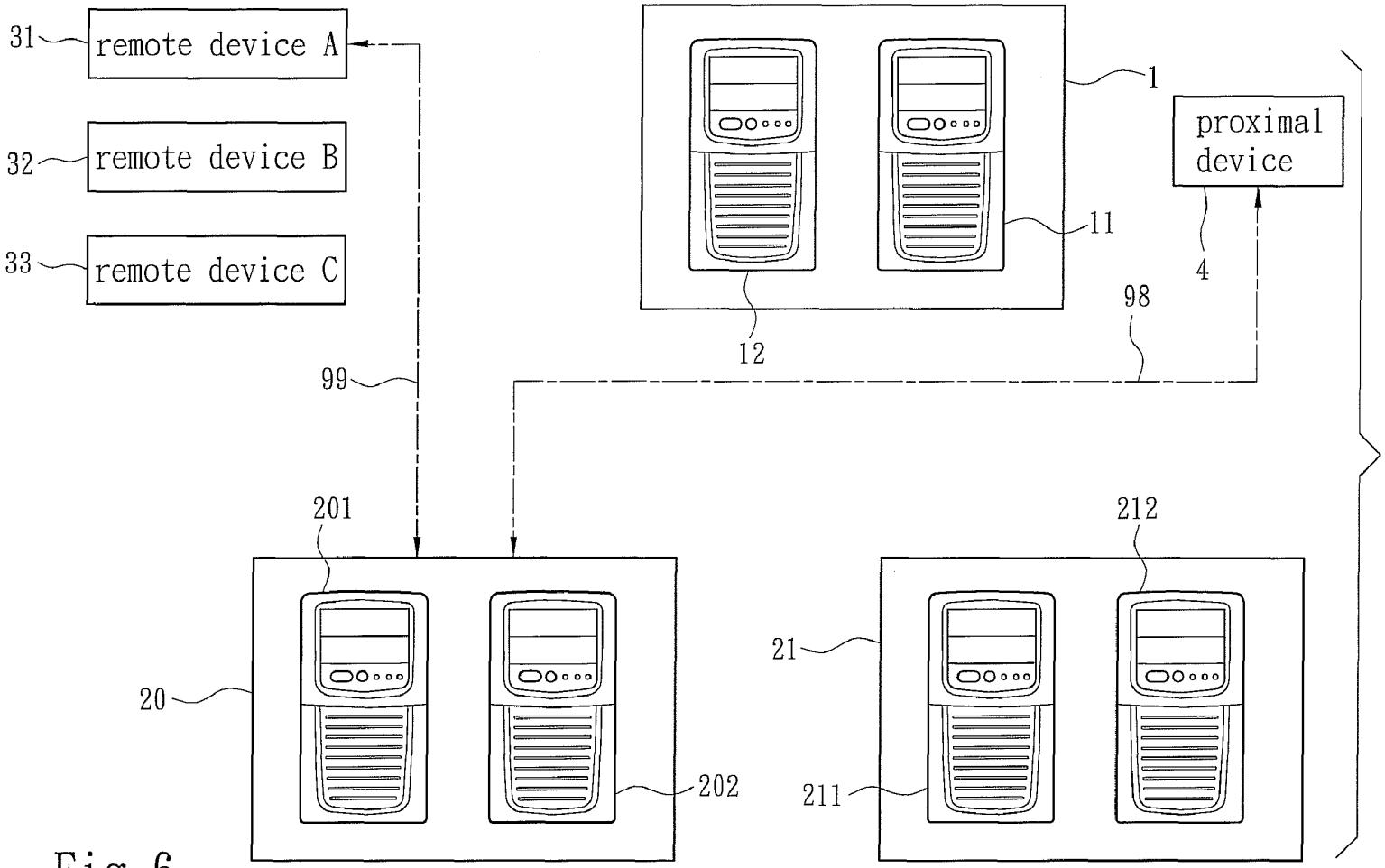

31
remote device A
32
remote device B
33
remote device C
99
1
11
12
proximal device
4
98
201
20
202
212
21
211

Fig. 6

312

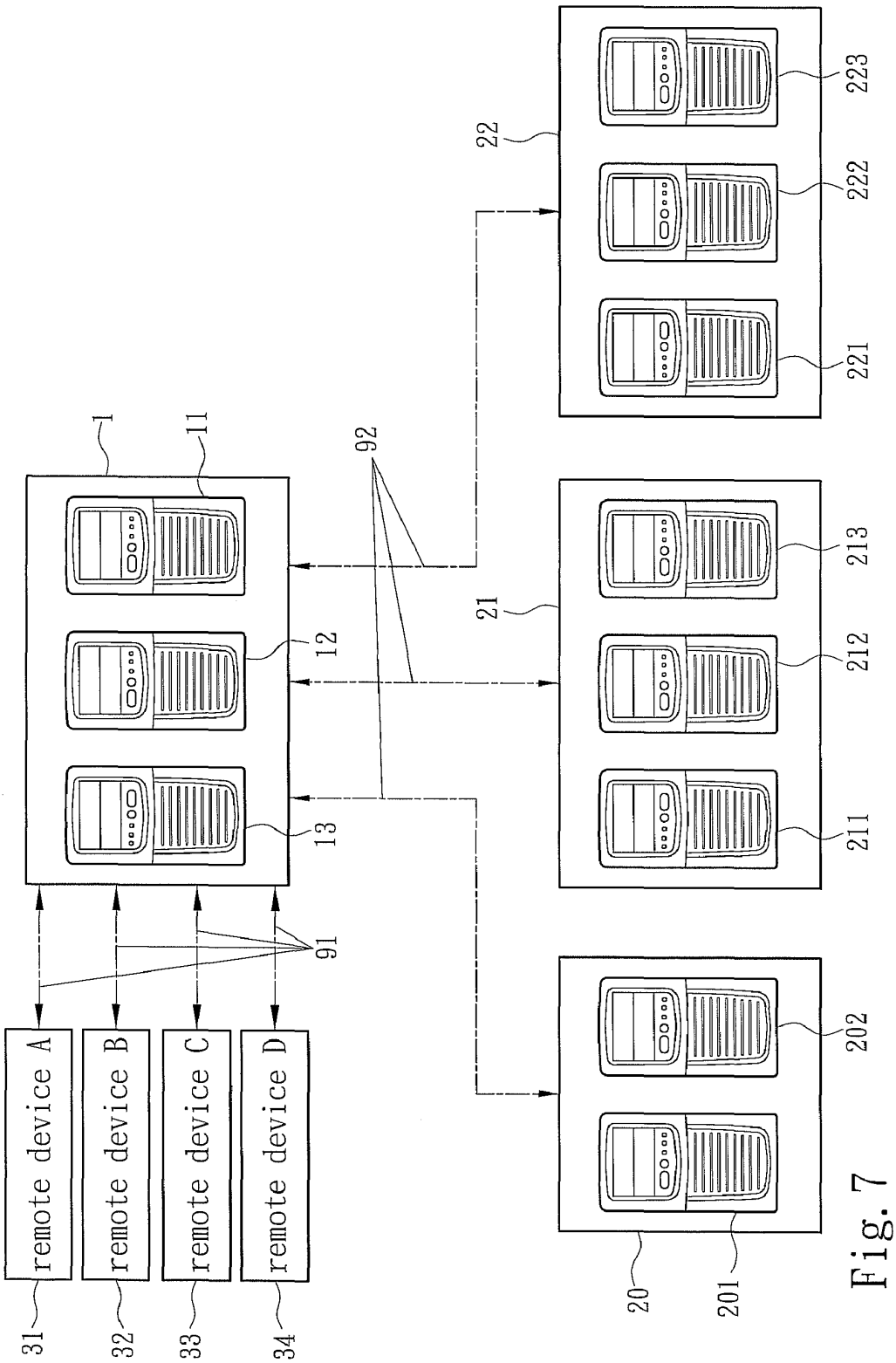

remote device A
remote device B
remote device C
remote device D
31
32
33
34
91
92
1
11
12
13
21
211
212
213
22
221
222
223
20
201
202

Fig. 7

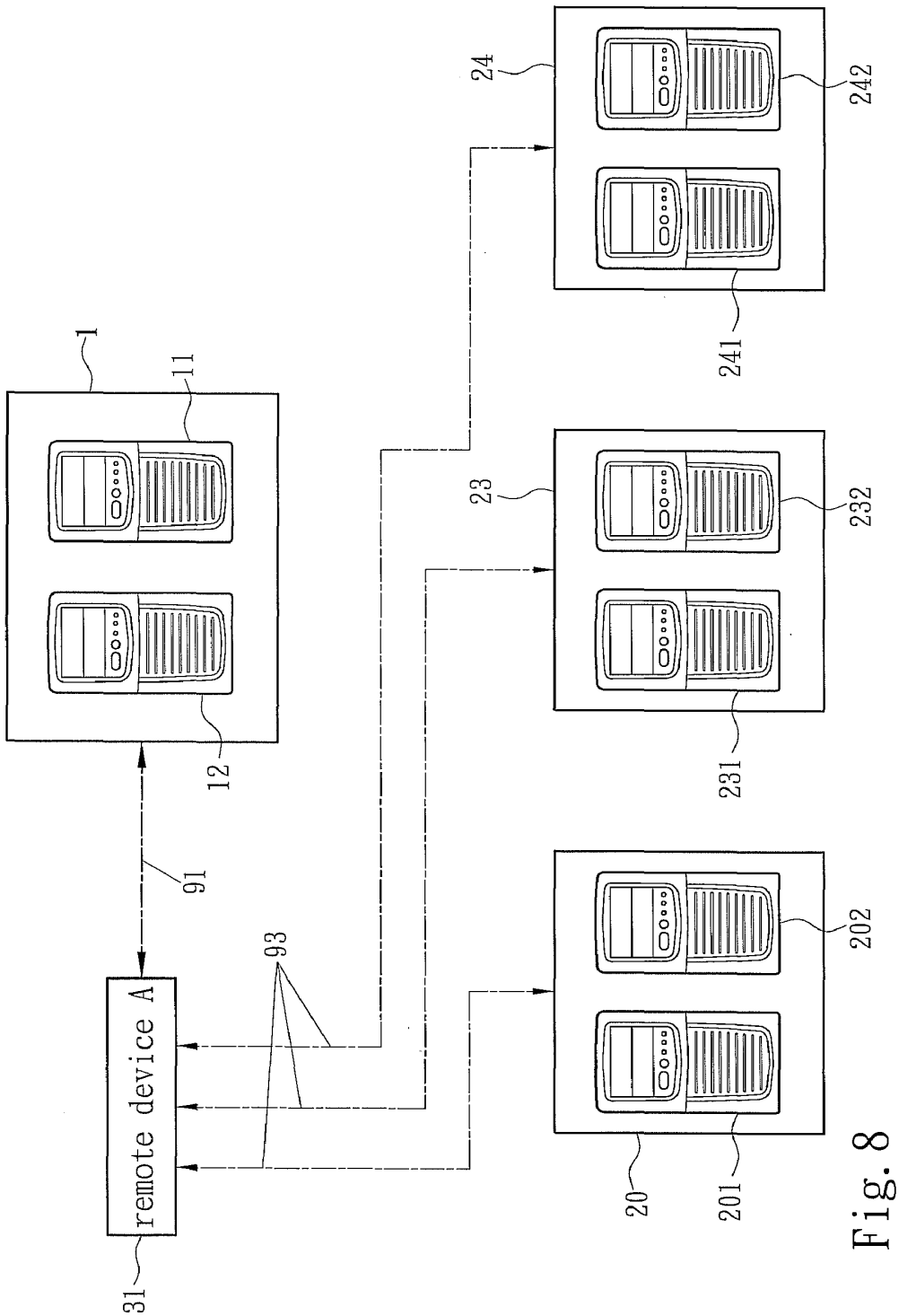



Fig. 8

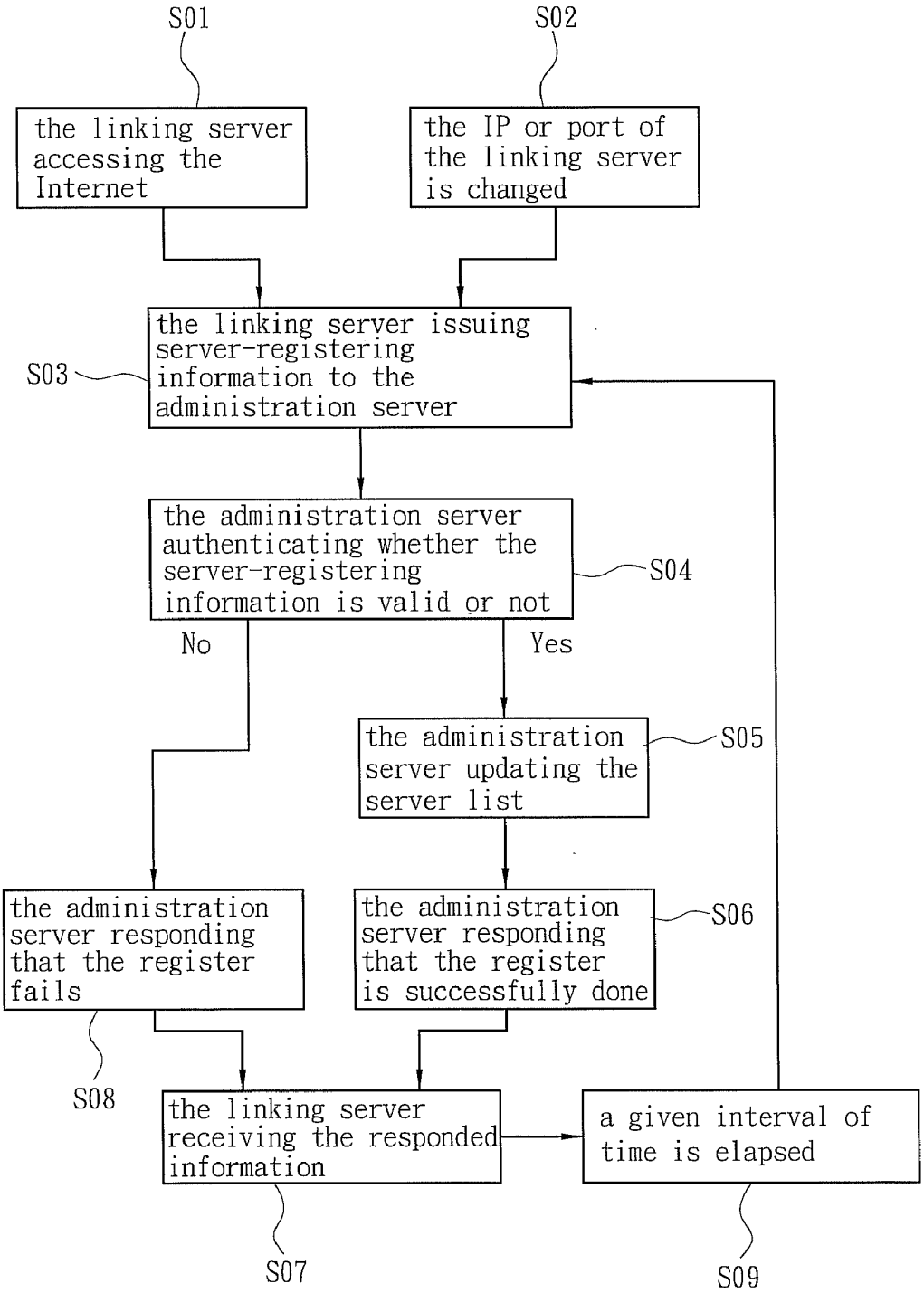

S01
S02
the linking server accessing the Internet
the IP or port of the linking server is changed
the linking server issuing server-registering information to the administration server
S03
the administration server authenticating whether the server-registering information is valid or not
S04
No
Yes
the administration server updating the server list
S05
the administration server responding that the register fails
the administration server responding that the register is successfully done
S06
S08
the linking server receiving the responded information
a given interval of time is elapsed
S07
S09

Fig. 9

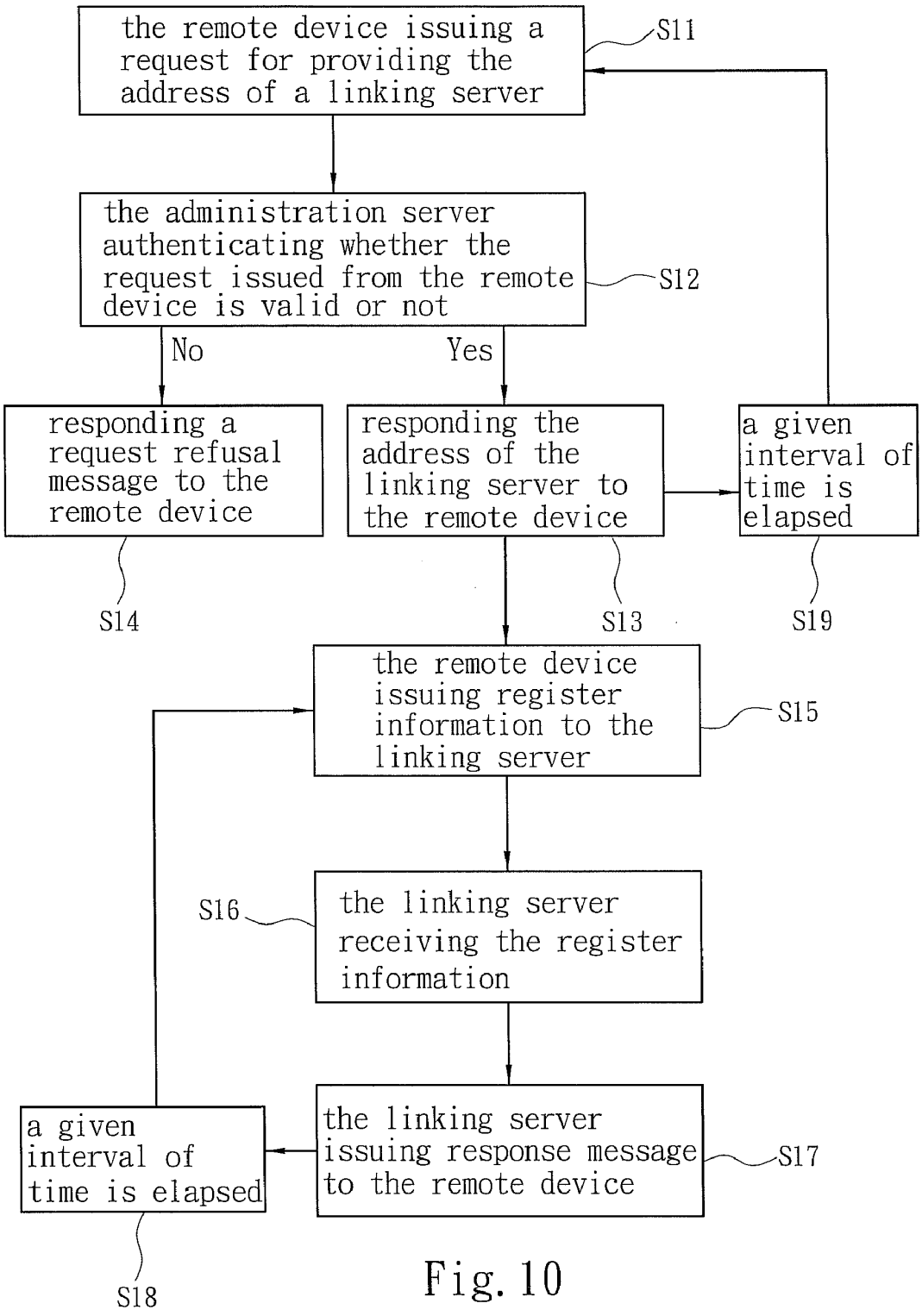

the remote device issuing a request for providing the address of a linking server
S11
the administration server authenticating whether the request issued from the remote device is valid or not
S12
No
Yes
responding a request refusal message to the remote device
responding the address of the linking server to the remote device
a given interval of time is elapsed
S14
S13
S19
the remote device issuing register information to the linking server
S15
S16
the linking server receiving the register information
a given interval of time is elapsed
the linking server issuing response message to the remote device
S17
S18

Fig. 10

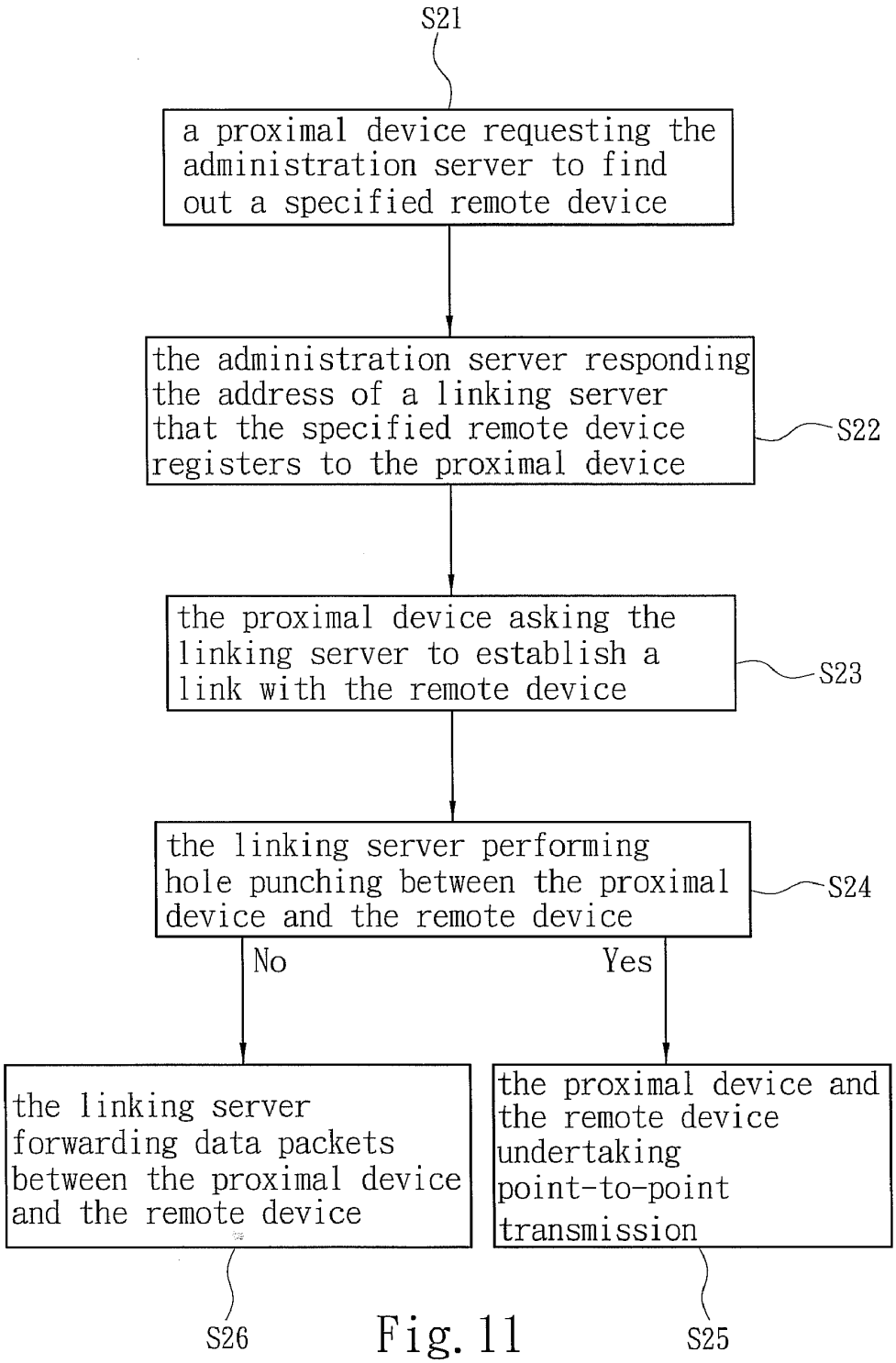

S21
a proximal device requesting the administration server to find out a specified remote device
the administration server responding the address of a linking server that the specified remote device registers to the proximal device
S22
the proximal device asking the linking server to establish a link with the remote device
S23
the linking server performing hole punching between the proximal device and the remote device
S24
No
Yes
the linking server forwarding data packets between the proximal device and the remote device
the proximal device and the remote device undertaking point-to-point transmission
S26
S25

Fig. 11

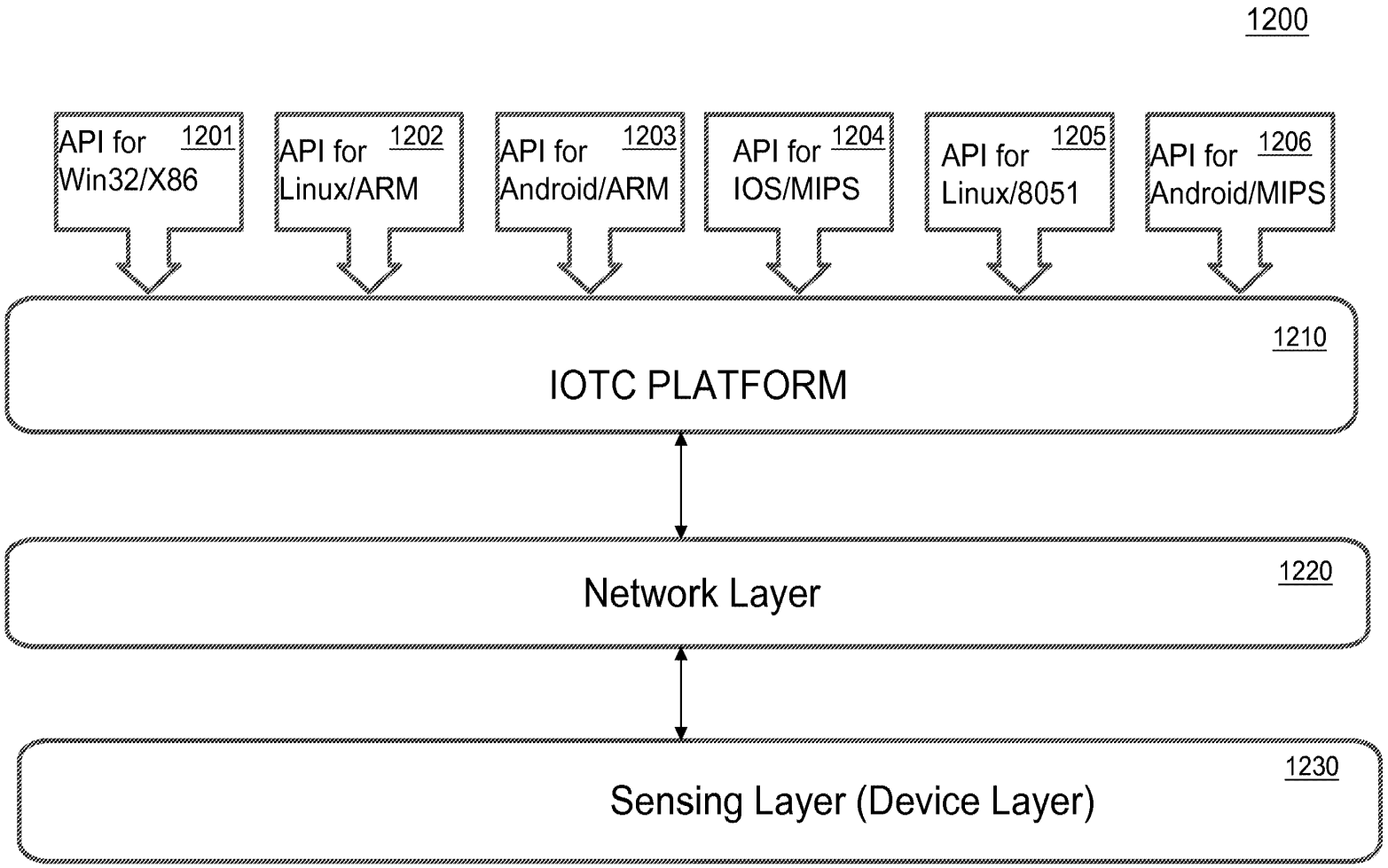

1200
API for Win32/X86
1201
API for Linux/ARM
1202
API for Android/ARM
1203
API for IOS/MIPS
1204
API for Linux/8051
1205
API for Android/MIPS
1206
1210
IOTC PLATFORM
1220
Network Layer
1230
Sensing Layer (Device Layer)

FIG. 12

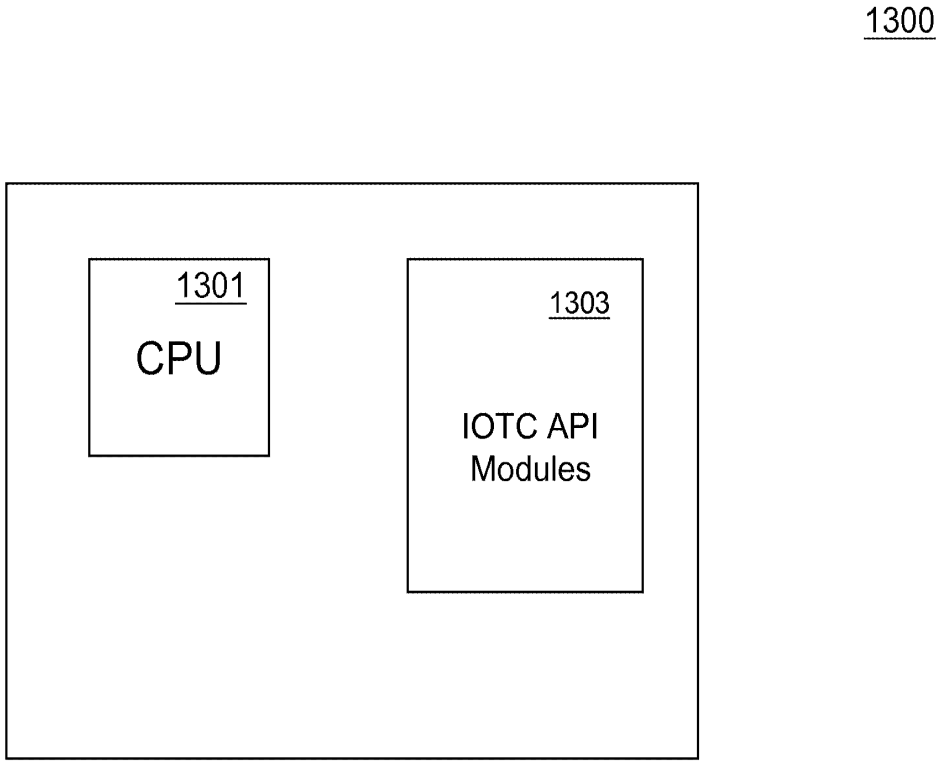



FIG. 13A

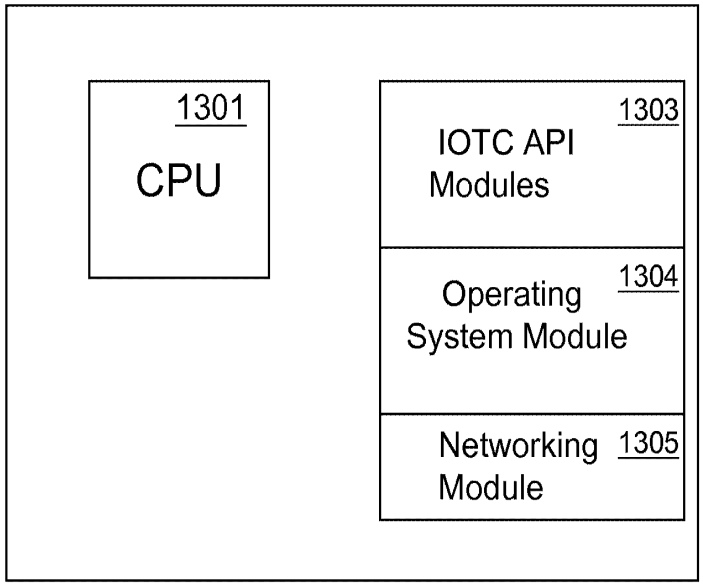

1350
1301
CPU
1303
IOTC API Modules
1304
Operating System Module
1305
Networking Module
320

FIG. 13B

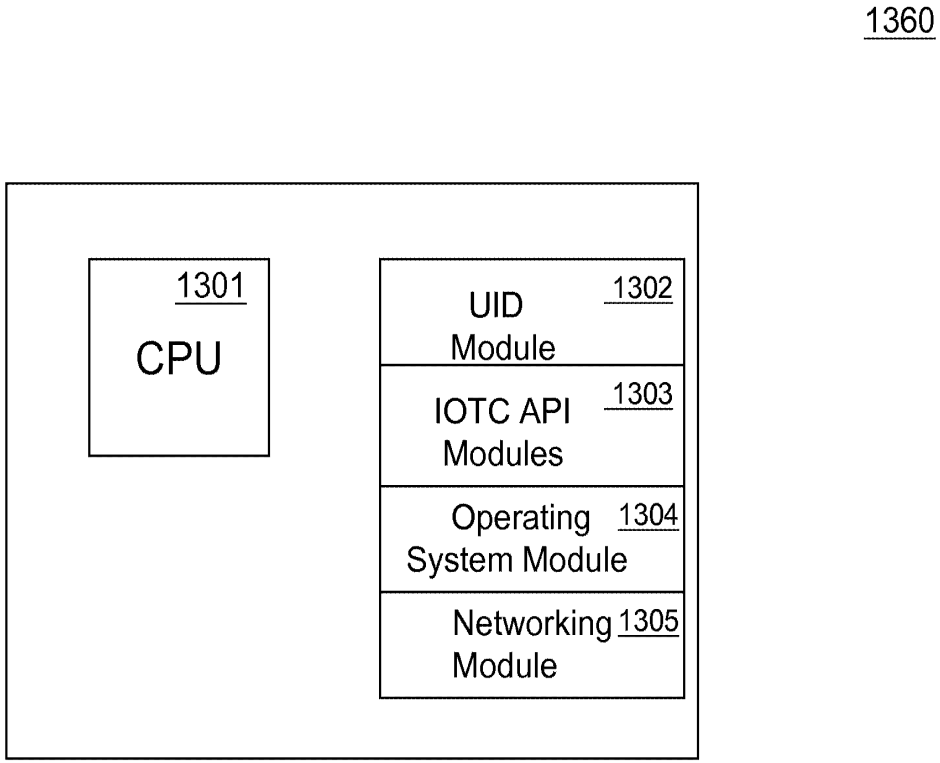

1360
1301
CPU
1302
UID Module
1303
IOTC API Modules
1304
Operating System Module
1305
Networking Module

FIG. 13C

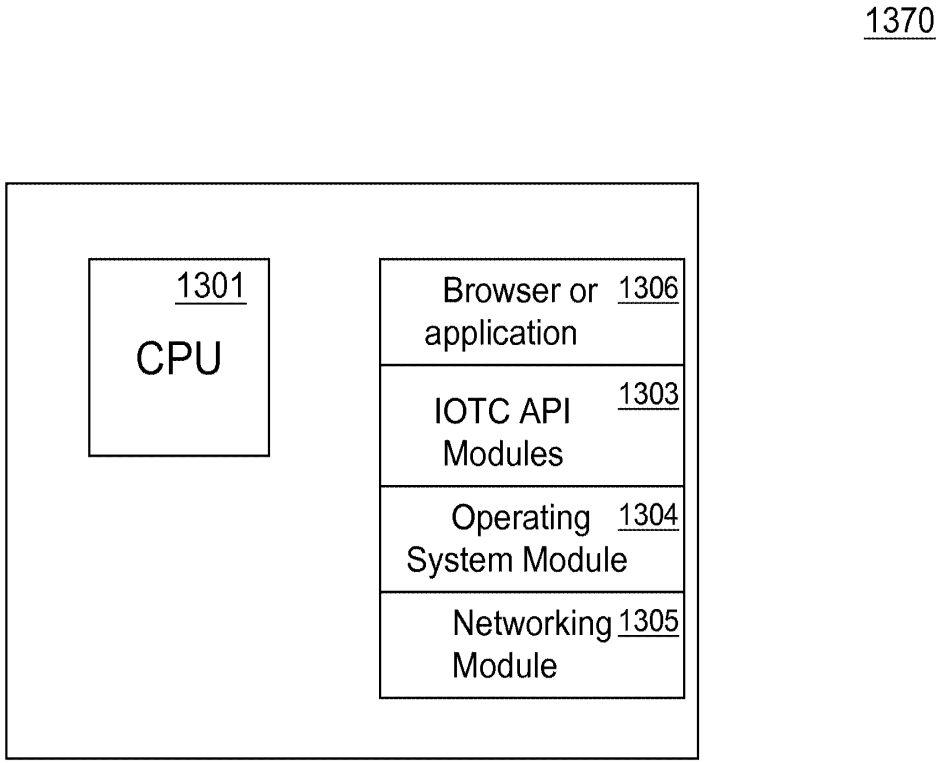

1370
1301
CPU
Browser or application
1306
IOTC API Modules
1303
Operating System Module
1304
Networking Module
1305

FIG. 13D

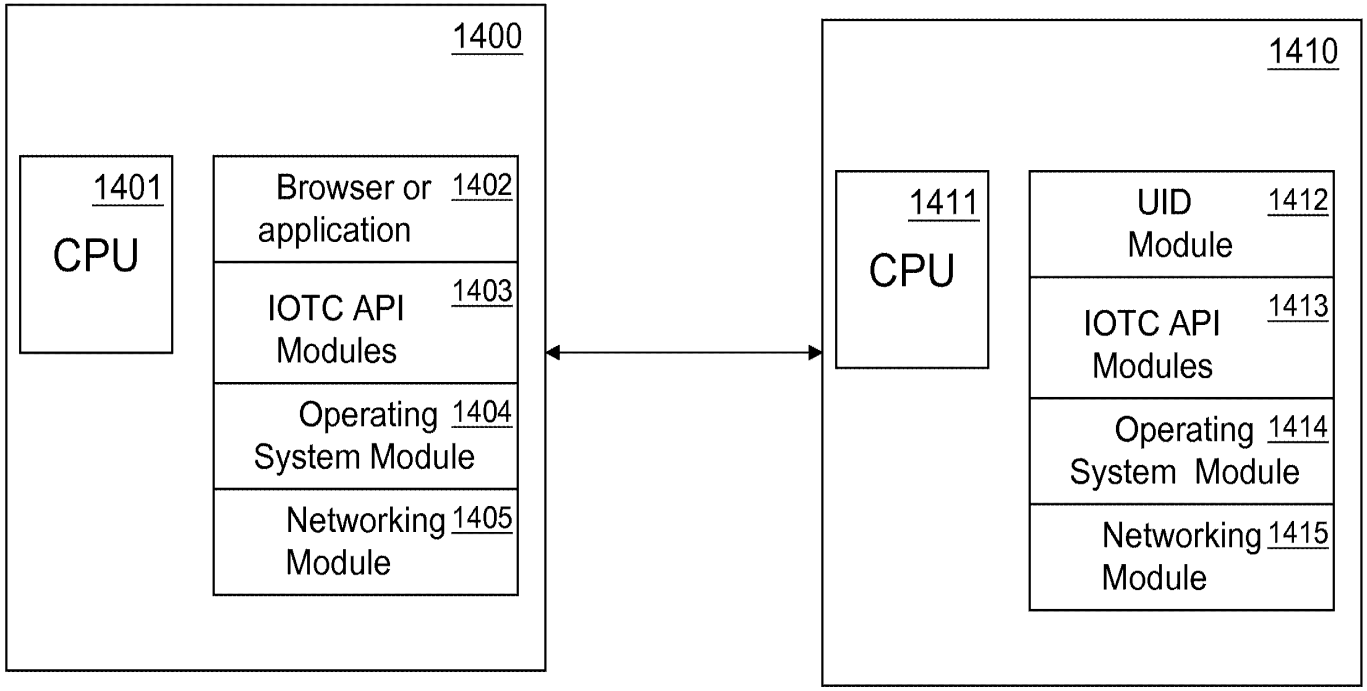

1400
1401
CPU
Browser or application 1402
IOTC API Modules 1403
Operating System Module 1404
Networking Module 1405
1410
1411
CPU
UID Module 1412
IOTC API Modules 1413
Operating System Module 1414
Networking Module 1415

FIG. 14A

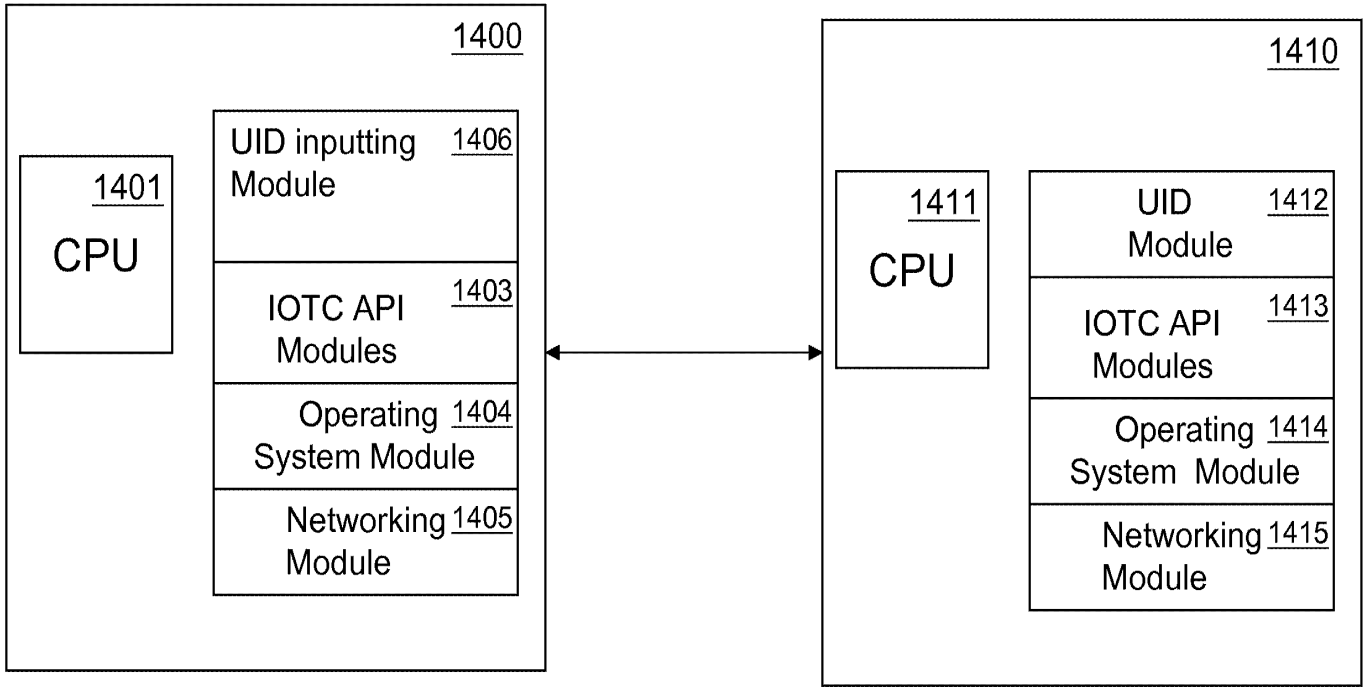
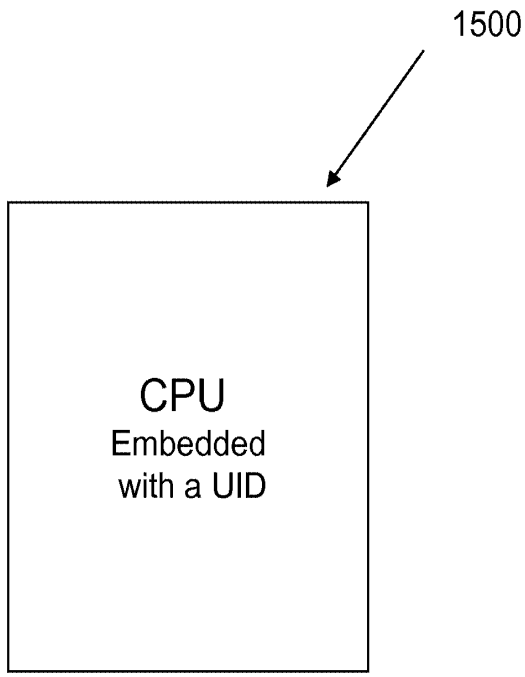

1400
1401
CPU
UID inputting Module
1406
IOTC API Modules
1403
Operating System Module
1404
Networking Module
1405
1410
1411
CPU
UID Module
1412
IOTC API Modules
1413
Operating System Module
1414
Networking Module
1415

FIG. 14B




325

FIG. 15

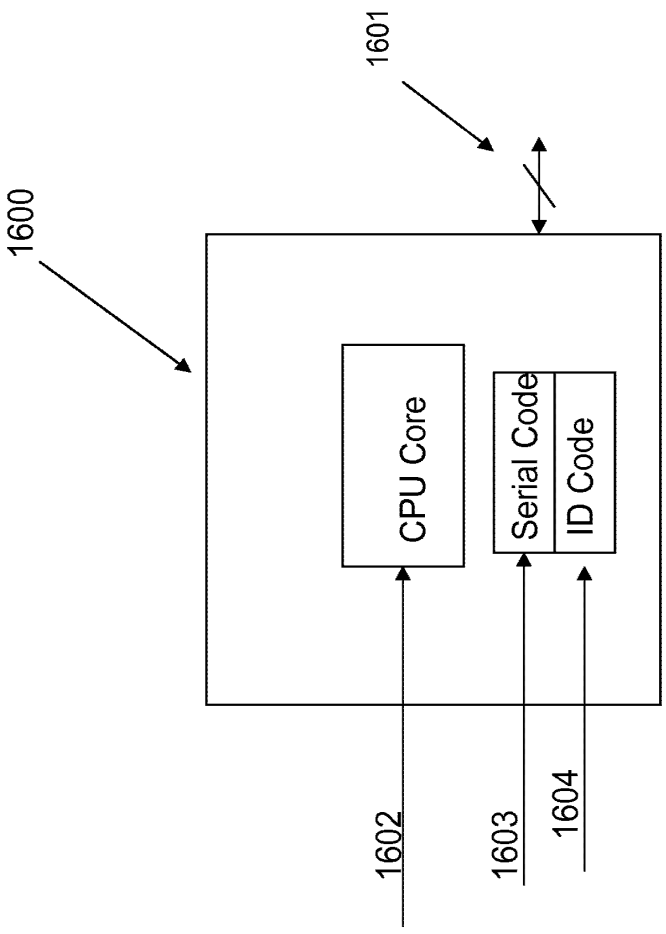



FIG. 16

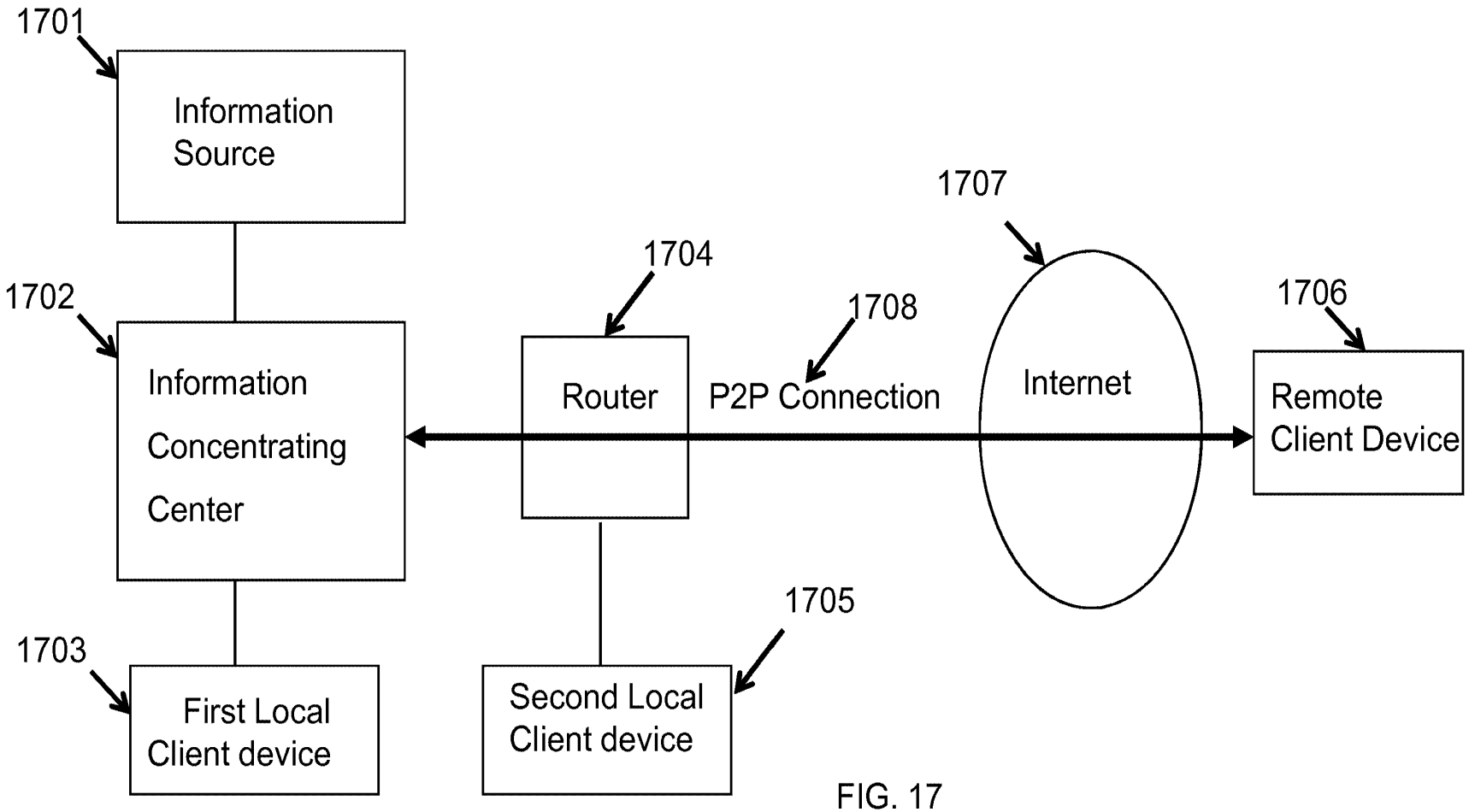

1701
Information Source
1702
Information Concentrating Center
1703
First Local Client device
1704
Router
1705
Second Local Client device
1706
Remote Client Device
1707
Internet
1708
P2P Connection

FIG. 17

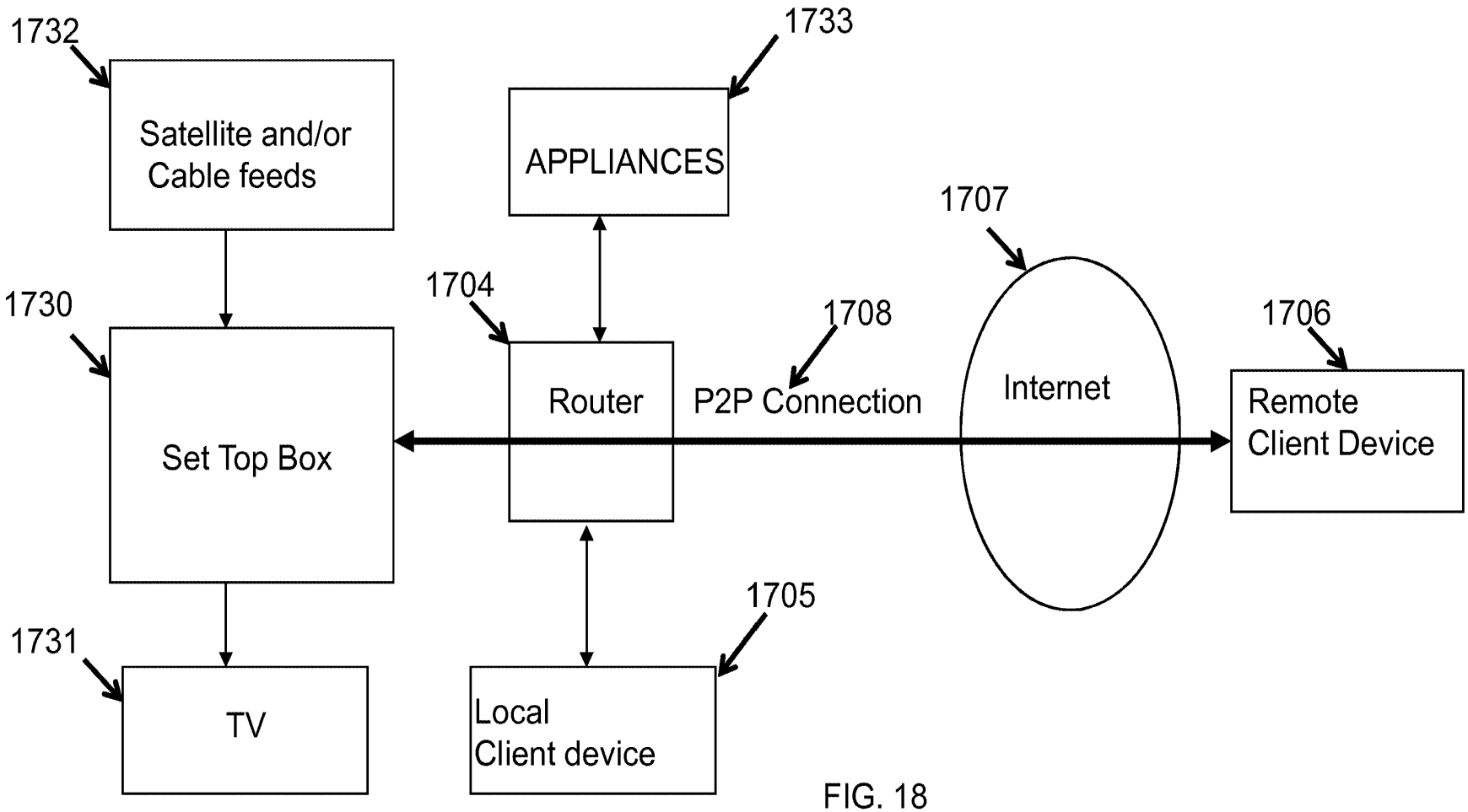

1732
Satellite and/or
Cable feeds
1733
APPLIANCES
1707
1704
1730
1708
1706
Router
P2P Connection
Internet
Remote
Client Device
Set Top Box
1705
1731
TV
Local
Client device

FIG. 18

328

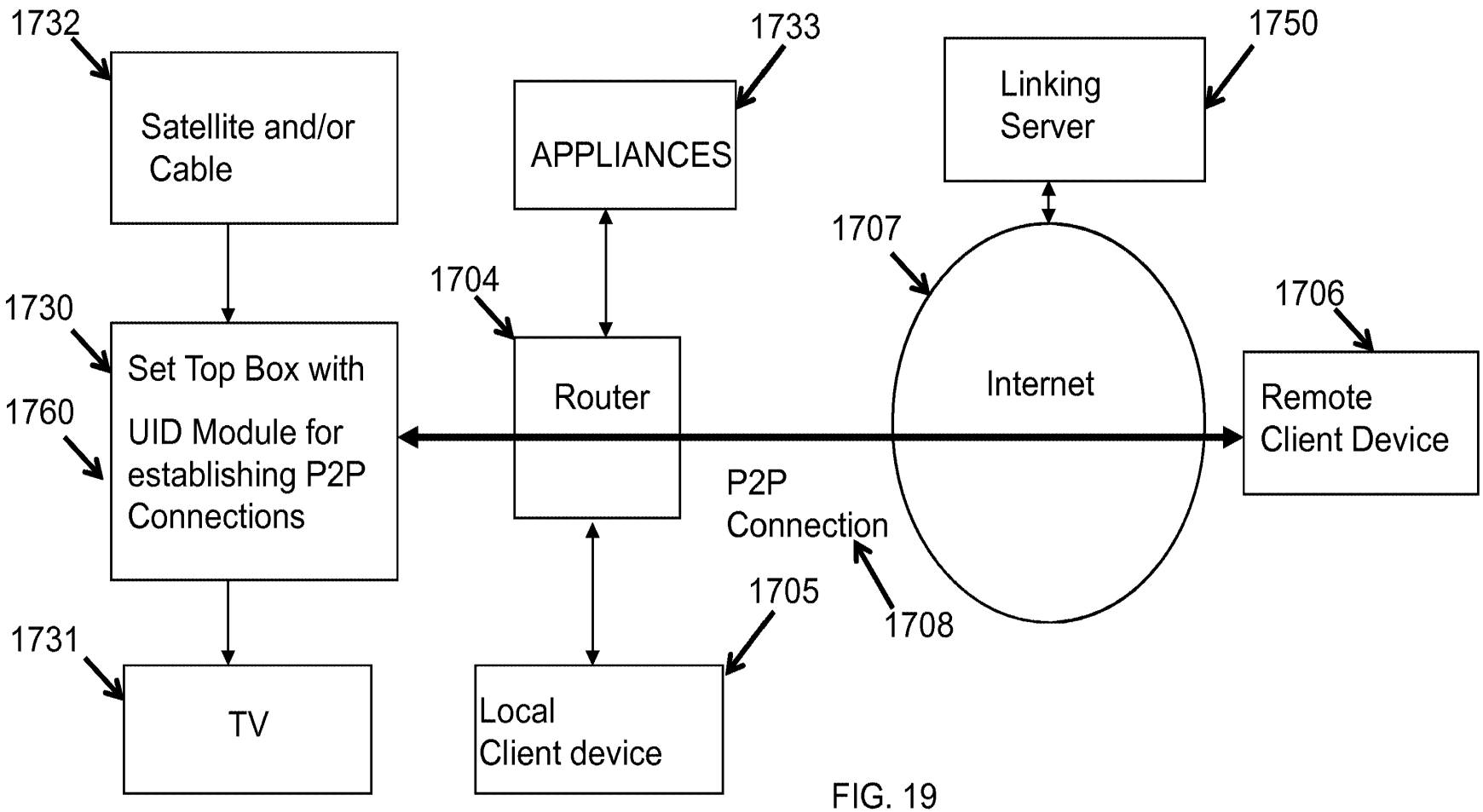

1732
Satellite and/or Cable
1733
APPLIANCES
1750
Linking Server
1707
1704
1730
Set Top Box with
1760
UID Module for establishing P2P Connections
Router
Internet
1706
Remote Client Device
P2P Connection
1705
1708
1731
TV
Local Client device

FIG. 19

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| Application Data Sheet 37 CFR 1.76 | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

## Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

## Inventor Information:

**Inventor 1** Remove

**Legal Name**

| Prefix | Given Name | Middle Name | Family Name | Suffix |
|---|---|---|---|---|
| | Chi-Ming | | Kuo | |

**Residence Information (Select One)** ○ US Residency ◉ Non US Residency ○ Active US Military Service

| City | Taipei | Country of Residence i | TW |
|---|---|---|---|

**Mailing Address of Inventor:**

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|---|---|
| **Address 1** | 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist. |
| **Address 2** | |

| City | Taipei | State/Province | |
|---|---|---|---|
| **Postal Code** | | **Country** i | TW |

**Inventor 2** Remove

**Legal Name**

| Prefix | Given Name | Middle Name | Family Name | Suffix |
|---|---|---|---|---|
| | Yu-Li | | Kao | |

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| City | Taipei | Country of Residence i | TW |
|---|---|---|---|

**Mailing Address of Inventor:**

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|---|---|
| **Address 1** | 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist. |
| **Address 2** | |

| City | Taipei | State/Province | |
|---|---|---|---|
| **Postal Code** | | **Country** i | TW |

**Inventor 3** Remove

**Legal Name**

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| Application Data Sheet 37 CFR 1.76 | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

| Prefix | Given Name | Middle Name | Family Name | Suffix |
|---|---|---|---|---|
| | Bai-Jian | | Xiao | |

**Residence Information (Select One)** ○ US Residency ◉ Non US Residency ○ Active US Military Service

| City | Taipei | Country of Residence | TW |
|---|---|---|---|

**Mailing Address of Inventor:**

| | | | |
|---|---|---|---|
| **Address 1** | 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist. | | |
| **Address 2** | | | |
| **City** | Taipei | **State/Province** | |
| **Postal Code** | | **Country** | TW |

**Inventor 4** Remove

**Legal Name**

| Prefix | Given Name | Middle Name | Family Name | Suffix |
|---|---|---|---|---|
| | Cheng-Wei | | Li | |

**Residence Information (Select One)** ○ US Residency ◉ Non US Residency ○ Active US Military Service

| City | Taipei | Country of Residence | TW |
|---|---|---|---|

**Mailing Address of Inventor:**

| | | | |
|---|---|---|---|
| **Address 1** | 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist. | | |
| **Address 2** | | | |
| **City** | Taipei | **State/Province** | |
| **Postal Code** | | **Country** | TW |

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**For further information see 37 CFR 1.33(a).**

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| | | | |
|---|---|---|---|
| **Customer Number** | 11336 | | |
| **Email Address** | miketeng@litron-intl.com | Add Email | Remove Email |
| **Email Address** | janiceshih@litron-intl.com | Add Email | Remove Email |

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| Application Data Sheet 37 CFR 1.76 | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

## Application Information:

| | | | |
|---|---|---|---|
| **Title of the Invention** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | | |
| **Attorney Docket Number** | 6121.007US | **Small Entity Status Claimed** | ☒ |
| **Application Type** | Nonprovisional | | |
| **Subject Matter** | Utility | | |
| **Suggested Class (if any)** | | **Sub Class (if any)** | |
| **Suggested Technology Center (if any)** | | | |
| **Total Number of Drawing Sheets (if any)** | | **Suggested Figure for Publication (if any)** | |

## Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
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|---|---|---|---|
| Please Select One: | ◉ Customer Number | ○ US Patent Practitioner | ○ Limited Recognition (37 CFR 11.9) |
| Customer Number | 11336 | | |

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This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

| | | | |
|---|---|---|---|
| Prior Application Status | Pending | | Remove |
| Application Number | Continuity Type | Prior Application Number | Filing Date (YYYY-MM-DD) |
| | Continuation in part of | 13950282 | 2013-07-25 |
| Prior Application Status | | | Remove |
| Application Number | Continuity Type | Prior Application Number | Filing Date (YYYY-MM-DD) |
| 13950282 | Continuation in part of | 13293506 | 2011-11-08 |
| Prior Application Status | | | Remove |

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| Application Data Sheet 37 CFR 1.76 | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

| Application Number | Continuity Type | Prior Application Number | Filing Date (YYYY-MM-DD) |
|---|---|---|---|
| | non provisional of | 61924240 | 2014-01-07 |

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

## Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

| Application Number | Country i | Filing Date (YYYY-MM-DD) | Priority Claimed |
|---|---|---|---|
| | | | ◯ Yes ◯ No |

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

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☒ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

## Applicant Information:

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| **Application Data Sheet 37 CFR 1.76** | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

**Applicant 1** Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

| | | |
|---|---|---|
| ◉ Assignee | ○ Legal Representative under 35 U.S.C. 117 | ○ Joint Inventor |
| ○ Person to whom the inventor is obligated to assign. | ○ Person who shows sufficient proprietary interest | |

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

| | |
|---|---|
| Name of the Deceased or Legally Incapacitated Inventor : | |

If the Applicant is an Organization check here. ☒

| | |
|---|---|
| Organization Name | ThroughTek Technology (ShenZhen) Co., Ltd. |

**Mailing Address Information:**

| | | | |
|---|---|---|---|
| **Address 1** | Room 201, Chaohui Building, No.173 Baohua Rd., | | |
| Address 2 | Longhua Street, Longhua New District, | | |
| **City** | Shenzhen | **State/Province** | |
| **Country** [i] | CN | Postal Code | |
| Phone Number | | Fax Number | |
| Email Address | | | |

Additional Applicant Data may be generated within this form by selecting the Add button. Add

**Applicant 2** Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

| | | |
|---|---|---|
| ◉ Assignee | ○ Legal Representative under 35 U.S.C. 117 | ○ Joint Inventor |
| ○ Person to whom the inventor is obligated to assign. | ○ Person who shows sufficient proprietary interest | |

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

| | |
|---|---|
| Name of the Deceased or Legally Incapacitated Inventor : | |

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| **Application Data Sheet 37 CFR 1.76** | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

| If the Applicant is an Organization check here. ☒ | | | |
|---|---|---|---|
| Organization Name | ThroughTek Co., Ltd. | | |
| **Mailing Address Information:** | | | |
| **Address 1** | 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist., | | |
| Address 2 | | | |
| **City** | Taipei | **State/Province** | |
| **Country** i | TW | Postal Code | |
| Phone Number | | Fax Number | |
| Email Address | | | |

Additional Applicant Data may be generated within this form by selecting the Add button. Add

## Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

**Assignee 1**

Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).

Remove

If the Assignee is an Organization check here. ☐

| Prefix | **Given Name** | Middle Name | **Family Name** | Suffix |
|---|---|---|---|---|
| | | | | |

| **Mailing Address Information:** | | | |
|---|---|---|---|
| **Address 1** | | | |
| Address 2 | | | |
| **City** | | **State/Province** | |
| **Country** i | | Postal Code | |
| Phone Number | | Fax Number | |
| Email Address | | | |

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| **Application Data Sheet 37 CFR 1.76** | Attorney Docket Number | 6121.007US |
|---|---|---|
| | Application Number | |
| Title of Invention | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES | |

## Signature:

Remove

| NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications | | | | | |
|---|---|---|---|---|---|
| **Signature** | /Min-Lee Teng/ | | | Date (YYYY-MM-DD) | 2015-01-07 |
| First Name | Min-Lee | Last Name | Teng | Registration Number | 65623 |
| Additional Signature may be generated within this form by selecting the Add button. Add | | | | | |

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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 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.

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# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

| | |
|---|---|
| **Title of Invention** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |

As the below named inventor, I hereby declare that:

This declaration is directed to:

☑ The attached application, or

☐ United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

## WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Chi-Ming Kuo Date (Optional) : 2015.01.02

Signature: /Chi-Ming Kuo/

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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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# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

| | |
|---|---|
| **Title of Invention** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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LEGAL NAME OF INVENTOR

Inventor: Yu-Li Kao Date (Optional): 2015.01.02

Signature: /Yu-Li Kao/

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.**

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

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# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

| **Title of Invention** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
|---|---|

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

  filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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LEGAL NAME OF INVENTOR

Inventor: Bai-Jian Xiao  Date (Optional): 2015.01.02

Signature: /Bai-Jian Xiao/

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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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# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

| | |
|---|---|
| **Title of Invention** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

## WARNING:

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LEGAL NAME OF INVENTOR

Inventor: Cheng-Wei Li Date (Optional): 2015.01.02

Signature: /Cheng-Wei Li/

Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/SB/AIA01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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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# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | |
| **Filing Date:** | |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Filer:** | Min-Lee Teng |
| **Attorney Docket Number:** | 6121.007US |

Filed as Small Entity

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

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| Utility filing Fee (Electronic filing) | 4011 | 1 | 70 | 70 |
| Utility Search Fee | 2111 | 1 | 300 | 300 |
| Utility Examination Fee | 2311 | 1 | 360 | 360 |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |
| **Miscellaneous:** | | | | |
| | | **Total in USD ($)** | | **730** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 21137941 |
| **Application Number:** | 14591008 |
| **International Application Number:** | |
| **Confirmation Number:** | 9077 |
| **Title of Invention:** | INFORMATION CONCENTRATING CENTER CAPABLE OF MAKING P2P CONNECTIONS WITH REMOTE CLIENT DEVICES |
| **First Named Inventor/Applicant Name:** | Chi-Ming Kuo |
| **Customer Number:** | 11336 |
| **Filer:** | Min-Lee Teng |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | 6121.007US |
| **Receipt Date:** | 07-JAN-2015 |
| **Filing Date:** | |
| **Time Stamp:** | 03:43:05 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | Credit Card |
| Payment was successfully received in RAM | $730 |
| RAM confirmation Number | 6366 |
| 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 | Abstract | 6121_007US_ABSTRACT.pdf | 90473<br>7f2209150da94a8e8f4920c5f3ed485d24f2a863 | no | 1 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Claims | 6121_007US_CLAIMS.pdf | 124128<br>a2029235aacf410570018acb5196054f66e6093f | no | 4 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Specification | 6121_007US_SPEC.pdf | 462364<br>be8f8521b3bee7fa01c66633543b3e5ad47616e3 | no | 27 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 4 | Drawings-only black and white line drawings | 6121_007US_DRAWINGS.pdf | 358902<br>02f4ec2a7e57f52f284c20e114333ac03fc71ba5 | no | 23 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 5 | Application Data Sheet | 6121_007US_ADS.pdf | 1433373<br>ad14cf9e36fdd994a1cb24aae9c71be28bce793d | no | 8 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 6 | Oath or Declaration filed | 6121_007US_DECLARATIONS.pdf | 187543<br>5798b54beb71c57609d90c62f48a2edc54505de9 | no | 4 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 7 | Fee Worksheet (SB06) | fee-info.pdf | 35042<br>ecd69fa78748967da42bbe9ad8aa1ef01acdad55 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 2691825 | | |

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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.**