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.
13/293,506	12/22/2015	9219615	23437621	1121

34283 7590 12/02/2015

QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

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 302 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 CIty, TAIWAN;
Yu-Li Kao, Taipei CIty, TAIWAN;
Chien-Chih Yang, Taipei CIty, TAIWAN;
Sheng-Fu Chang, Taipei CIty, 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.

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.
13/293,506	11/10/2011	Chi-Ming KUO	23437621	1121

34283 7590 11/19/2015

QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

EXAMINER	
ABEDIN, NORMIN	

ART UNIT	PAPER NUMBER
2449	

NOTIFICATION DATE	DELIVERY MODE
11/19/2015	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):

naquintero@quinterolaw.com
mailroom@QUINTEROLAW.COM

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	13/293,506	KUO ET AL.	
	Examiner	Art Unit	
	NORMIN ABEDIN	2449	

All participants (applicant, applicant's representative, PTO personnel):

(1) *NORMIN ABEDIN*. (3)_____.

(2) *Nelson A. Quintero*. (4)_____.

Date of Interview: *29 October 2015*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The applicant called the Examiner about the Typo mistake in the PTO-37 form. The Examiner reviewed the form and agreed to fix the error in the PTO-37 form.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/NORMIN ABEDIN/ Examiner, Art Unit 2449	/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Corrected Notice of Allowability	**Application No.** 13/293,506	**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 *06/26/2015*.
   ☐ 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 *1-9,12-24 and 26-28*. 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/ Examiner, Art Unit 2449	/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	13/293,506	KUO ET AL.	
	Examiner	Art Unit	
	NORMIN ABEDIN	2449	

All participants (applicant, applicant's representative, PTO personnel):

(1) *NORMIN ABEDIN*. (3)_____.

(2) *Nelson A. Quintero*. (4)_____.

Date of Interview: *29 October 2015*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: _____.

Identification of prior art discussed: _____.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The applicant called the Examiner about the Typo mistake in the PTO-37 form. The Examiner reviewed the form and agreed to fix the error in the PTO-37 form.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/NORMIN ABEDIN/ Examiner, Art Unit 2449	/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

PTO/SB/08a (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.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	NEW
Filing Date	11/10/2011
First Named Inventor	KUO, Chi-Ming
Art Unit	
Examiner Name	
Attorney Docket Number	2450/2455PUS1

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 6,373,851 B1	04-16-2002	~~F R ALEMAN & ASSOCIATES, INC.~~	Dadario
		US- 2009/0100309 A1	04-16-2009	ZHENG	
		US- 2005/0047379 A1	03-03-2005	BOYDEN et al.	
		US- 2004/0186908 A1	09-23-2004	AMDAHL et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

Change(s) applied to document, /N.D.W./ 9/28/2015

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
		GB-2475279	05-18-2011	THROUGHTEK CO LTD		
		CN-100389602C	05-21-2008	CHINESE MOBILE COMM		✓

Examiner Signature	/Normin Abedin/	Date Considered	10/17/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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 (1-800-786-9199) and select option 2.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.A./

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)

34283 7590 09/25/2015
QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

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.
13/293,506	11/10/2011	Chi-Ming KUO	23437621	1121

TITLE OF INVENTION: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

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	12/28/2015

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: Throughtek Co., Ltd.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Taipei City, TW

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 502447 (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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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

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.

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 11/12/2015
Typed or printed name Nelson A. Quintero Registration No. 52, 143

PTOL-85 Part B (10-12) Approved for use through 10/31/2013 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Attorney Docket No. **23437621** ***PATENT***

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	**Chi-Ming KUO, Yu-Li KAO, Chien-Chih YANG, Sheng-Fu CHANG**	Filed:	**11/10/2011**
Appl. No.:	**13/293,506**	Examiner:	**ABEDIN, NORMAN**
Conf. No.:	**1121**	Art Unit:	**2449**
Title:	**REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF**		

Date: **November 12, 2015**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

FEE(S) TRANSMITTAL AND EXAMINER INTERVIEW SUMMARY

Attached please find Form PTOL-85.

Examiner Interview Summary

Applicant contacted the Examiner on October 14, 2015 and noted that claim 28 was not listed as an allowed claim in the Notice of Allowability mailed on September 25, 2015. It was agreed that this is a typographical error and the allowed claims are 1-9, 12-24, and 26-28.

It is respectfully requested that the patent issue with all of the allowed claims 1-9, 12-24, and 26-28.

The Office is authorized to charge any additional fees or underpayment of fees as may be required to deposit account **502447**.

P175361NAQ

Respectfully submitted,

/Nelson A. Quintero/

Nelson A. Quintero
Attorney for Applicant
Reg. No. 52,143
Customer No. 34,283

Telephone: (310) 909-8535

Electronic Patent Application Fee Transmittal

Application Number:	13293506
Filing Date:	10-Nov-2011
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Filer:	Nelson Alejandro Quintero
Attorney Docket Number:	23437621

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:	24068607
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	34283
Filer:	Nelson Alejandro Quintero
Filer Authorized By:	
Attorney Docket Number:	23437621
Receipt Date:	12-NOV-2015
Filing Date:	10-NOV-2011
Time Stamp:	21:00:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$480
RAM confirmation Number	9647
Deposit Account	502447
Authorized User	QUINTERO, NELSON A
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

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)	23437621-ptol85b-151112.pdf	148882 42dd621baaba1018d0e090175b5244340f46dd5d	no	1
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	23437621_P175361NAQ_IF_151112.pdf	57130 fa443b4b0af85b494ed4dffa2e067ecf0df9e992	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30643 fce302a1d08e9788d3a7e96b1542cd9789b7c83e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	236655		

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.

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

34283 7590 09/25/2015

QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

EXAMINER
ABEDIN, NORMIN

ART UNIT	PAPER NUMBER
2449	

DATE MAILED: 09/25/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/293,506	11/10/2011	Chi-Ming KUO	23437621	1121

TITLE OF INVENTION: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

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	12/28/2015

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)

34283 7590 09/25/2015
QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

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.
13/293,506	11/10/2011	Chi-Ming KUO	23437621	1121

TITLE OF INVENTION: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

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	12/28/2015

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.
13/293,506	11/10/2011	Chi-Ming KUO	23437621	1121

34283 7590 09/25/2015

QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

EXAMINER	
ABEDIN, NORMIN	

ART UNIT	PAPER NUMBER
2449	

DATE MAILED: 09/25/2015

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. 13/293,506	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 *06/26/2015*.
   ☐ 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 *1-9,12-24,26 and 27*. 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/ Examiner, Art Unit 2449	/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449

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

DETAILED ACTION

REASONS FOR ALLAOWACE

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

Independent claims 1, 17 among other things teach a linking method of an information communication system, comprising steps of: by an administration server, receiving a first request of a remote device via an Internet; by the administration server, in response to the first request of the remote device, assigning at least one linking server from a plurality of linking servers and providing the remote device with an address of the assigned linking server via the Internet, wherein the remote device links to and registers information of the remote device in the assigned linking server according to the address provided by the administration server, and wherein the remote device periodically requests the administration server to re-execute the assigning step and the providing step; by the administration server, responding to a second request of a proximal device for connecting to the remote device, providing the proximal device with the address of one of the assigned linking servers to which the remote device is registered via the Internet, wherein the proximal device sends a third request to the assigned linking server according to the address provided by the administration server; and by the assigned linking server, in response to the third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device.

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

/VIVEK SRIVASTAVA/

Supervisory Patent Examiner, Art Unit 2449

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	27	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:54
L2	27	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:55
L3	27	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:55
L4	25	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:55
L5	25	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service and provider	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:56
L6	25	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service and provider$2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:56
L7	25	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:56
L8	25	@ad<="20110127" and	US-PGPUB;	OR	ON	2015/09/17

		hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2 and link$4	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			19:57
L9	3	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2 and link$4 and tag	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:57
L10	3	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2 and link$4 and bar$2code	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:58
L11	5	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2 and link$4 and pin	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:59
L12	5	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2 and pin	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:59
L13	89	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint and direct$4 near3 connect$4 and client	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 20:00
L14	16	("20040186908" | "6373857" | "7089027" | "20050018620" | "20110125925" | "20110219121" | "20100274859" | "8180891" | "20100185771" | "20080247381" | "6373851" | "20110302324" | "20120158161" | "20050047379" | "20090100309" | "20030105854").PN.	US-PGPUB; USPAT	OR	OFF	2015/09/17 20:02
L15	2	("20040186908" | "6373857" | "7089027" | "20050018620" | "20110125925" | "20110219121" | "20100274859" | "8180891" | "20100185771" | "20080247381" | "6373851" | "20110302324" | "20120158161" | "20050047379" | "20090100309" | "20030105854").PN. and hole	US-PGPUB; USPAT	OR	OFF	2015/09/17 20:02
L23	33	@ad<="20110127" and ((remote or client or terminal or user) naer3	US-PGPUB; USPAT;	OR	ON	2015/09/17 20:06

		device) same register same server same (authent$4 or verificat$4) and (home near3 network) and appliance	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
L26	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	2015/09/17 20:07
L27	89	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint and direct$4 near3 connect$4 and client	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 20:08
S1	1	"13293506"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 16:07
S2	2	((CHI-MING) near2 (KUO)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/10 16:08
S3	3	((YU-LI) near2 (KAO)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/10 16:09
S4	1	((CHIEN-CHIH) near2 (YANG)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/10 16:09
S5	2	((SHENG-FU) near2 (CHANG)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/10 16:10
S6	8	("20040186908" | "20050047379" | "20090100309" | "6373851").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 16:12
S7	865597	surveillance near1 camera or anti$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	US-PGPUB;	OR	ON	2013/10/10

		((surveillance near1 camera) or anti$theft or smoke or fire or appliance)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:31
S10	1001838	@ad<="20110127" and ((surveillance near1 camera) and anti$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 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;	OR	ON	2013/10/10 17:34

			IBM_TDB			
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$4) and security	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 18:20
S25	200	@ad<="20110127" and (surveillance or anti$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	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2013/10/10 18:21

		and "ADT"	JPO; DERWENT; IBM_TDB			
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$4) and alarm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 18:25
S32	0	2012/0203917	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 18:38
S33	2	"20120203917"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 18:38
S34	0	@ad<="20110127" and ((surveillance near3 video)or anti$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;	OR	ON	2013/10/10 18:49

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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; 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	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2013/10/11 13:12

		monitor)	DERWENT; IBM_TDB			
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
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	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/11 14:14

		verifica$4) and (multiple near3 server) and (install near3 software)	FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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	US-PGPUB;	OR	ON	2013/10/11

		with (home near3 appliance)) same server same (cell or mobile or laptop)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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; 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;	OR	ON	2013/10/11 18:33

			IBM_TDB			
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; 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;	OR	ON	2013/10/13 14:56

			JPO; DERWENT; IBM_TDB			
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; 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	US-PGPUB; USPAT;	OR	ON	2013/10/14 04:42

		server same (cell or mobile or laptop) and (device near3 list) and back$up	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S97	1	((Home near2 monitor$4) near system) with server and pointtopoint	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 pointtopoint	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; 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;	OR	ON	2013/10/16 18:30

			DERWENT; IBM_TDB			
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
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;	OR	ON	2013/10/26 23:50

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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	US-PGPUB;	OR	ON	2013/10/27

		systems) and (service near2 provider) amd set$top	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			00:34
S132	50	(device near1 management near1 systems) and (service near2 provider) and set$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; 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;	OR	ON	2013/10/27 01:33

			IBM_TDB			
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" | "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;	OR	ON	2013/10/27 15:34

			JPO; DERWENT; IBM_TDB			
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; 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;	OR	ON	2014/04/24 17:32

			IBM_TDB			
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
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;	OR	ON	2014/04/24 18:03

			JPO; DERWENT; IBM_TDB			
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; 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	pointtopoint and (service near3 provider) and (device near4	US-PGPUB; USPAT;	OR	ON	2014/04/24 19:34

		register$4)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S176	133	pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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$4) near3 device @ad<="20110127" and register and server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:20
S188	1066	(ad$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$4) near3 device and @ad<="20110127" and register and server and pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:21
S190	204	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint 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 pointtopoint 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 pointtopoint and direct$4 near3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/04/24 20:22

		connect$4 and client	DERWENT; IBM_TDB			
S193	2418	hole$punch$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:22
S194	7	hole$punch$4 and pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:23
S195	4	hole$punch$4 and pointtopoint and peertopeer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:23
S196	51	hole$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	2	"20080247381"	US-PGPUB; USPAT; USOCR;	OR	ON	2015/03/09 01:23

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S202	6	"20050018620"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:24
S203	32	"6373857"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:25
S204	20	"7089027"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:26
S205	26	"7420964"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:21
S206	0	@ad<="20110127" and (home near1 network) and (home near5 applaince)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:29
S207	5451	@ad<="20110127" and (home near1 network) and (home near5 appliance)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:29
S208	1997	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:30
S209	95	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:30
S210	51	@ad<="20110127" and (home near1	US-PGPUB;	OR	ON	2015/03/09

		network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			04:31
S211	33	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and register	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:31
S212	0	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and register and (linking near1 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:32
S213	15	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and (register near3 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:32
S214	3	"20070255848"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 05:12
S215	6	"8346976"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 05:44
S216	0	"8346976" and hole	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 05:44
S217	2	"12692541"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 06:18
S218	81	hole$punch$4 and (pointtopoint or peertopeer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/03/09 10:13

			IBM_TDB			
S219	51	@ad<="20110127" and hole$punch$4 and (pointtopoint or peertopeer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:15
S220	4	@ad<="20110127" and hole$punch$4 and (pointtopoint)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:15
S221	2	"20110219121"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:33
S222	7	((Chi-Ming) near2 (KUO)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/17 19:05
S223	6	((Yu-Li) near2 (Kao)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/17 19:05
S224	1	((Chien-Chih) near2 (Yang)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/17 19:05
S225	4	((Sheng-Fu) near2 (Chang)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/17 19:05
S226	1	((Sheng-Fu) near2 (Chang)).INV. and link$4	US-PGPUB; USPAT; USOCR	OR	OFF	2015/09/17 19:27
S227	16	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and (register near3 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:28
S228	2880	@ad<="20110127" and (linking near3 server)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:29
S229	1041	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:29
S230	119	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:30
S231	103	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and point$4point	US-PGPUB; USPAT	OR	ON	2015/09/17 19:30
S232	33	@ad<="20110127" and (linking near3 server) and ((control$4 or	US-PGPUB; USPAT	OR	ON	2015/09/17 19:31

		monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register				
S233	49	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4	US-PGPUB; USPAT	OR	ON	2015/09/17 19:31
S234	47	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4 and service	US-PGPUB; USPAT	OR	ON	2015/09/17 19:31
S235	30	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4 and (service near3 provider)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:31
S236	0	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4 and (service near3 provider) and (hole near4 punch)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:32
S237	0	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4 and (hole near4 punch)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:32
S238	0	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and (hole near4 punch)	US-PGPUB; USPAT	OR	ON	2015/09/17 19:32
S239	53	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:33
S240	0	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and (linking near3 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:33
S241	0	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and (link$4 near3 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:33
S242	15	(device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2015/09/17 19:50

		connect$4)	JPO; DERWENT; IBM_TDB			
S243	6	hole$punch$4 and (pointtopoint or peertopeer) and tag	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:51
S244	0	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and (device near3 tag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:52
S245	35	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and register	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:52
S246	35	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and register and device	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/09/17 19:52

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L16	35	@ad<="20110127" and hole$punch$4 and (point$4point or P2P or peer$4peer) and register and device	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:04
L17	89	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint and direct$4 near3 connect$4 and client	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:04
L18	89	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint and direct$4 near3 connect$4 and client	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:04
L19	3	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2 and link$4 and bar$2code	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:05
L20	25	@ad<="20110127" and hole$3punch$4 and (point$4point or P2P or peer$4peer) and register$4 and ((monitor$4 or control$4) near3 device) and server and service$2 and provider$2	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:05

L21	0	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4 and (hole near4 punch)	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:05
L22	50	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:05
L24	34	@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; UPAD	OR	ON	2015/09/17 20:06
L25	31	@ad<="20110127" and pointtopoint and (service near3 provider) and ((control$4 or monitor$4 or manag$4) near4 (home near3 appliance)) and register	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:06
L28	30	@ad<="20110127" and (linking near3 server) and ((control$4 or monitor$4) near3 device) and (p2p or point$4point or peer$3peer) and register$4 and (service near3 provider)	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 20:15
S247	16	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and (register near3 server)	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 19:28
S248	2917	@ad<="20110127" and (linking near3 server)	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 19:28
S249	15	(device near1 management near1 systems) and (service near2 provider) and set$top and register and server and (direct near3 connect$4)	US-PGPUB; USPAT; UPAD	OR	ON	2015/09/17 19:51

9/17/2015 8:18:21 PM
C:\Users\nabedin\Documents\EAST\Workspaces\13293506.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	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	10/11/2013	04/23/2014	03/09/2015	09/17/2015					
1	1	✓	✓	✓	=					
2	2	✓	✓	✓	=					
3	3	✓	✓	✓	=					
4	4	✓	✓	✓	=					
5	5	✓	✓	✓	=					
6	6	✓	✓	✓	=					
7	7	✓	✓	✓	=					
8	8	✓	✓	✓	=					
9	9	✓	✓	✓	=					
	10	✓	-	-	-					
	11	✓	-	-	-					
10	12	✓	✓	✓	=					
11	13	✓	✓	✓	=					
12	14	✓	✓	✓	=					
13	15	✓	✓	✓	=					
14	16	✓	✓	✓	=					
15	17	✓	✓	✓	=					
16	18	✓	✓	✓	=					
17	19	✓	✓	✓	=					
18	20	✓	✓	✓	=					
19	21	✓	✓	✓	=					
20	22	✓	✓	✓	=					
21	23	✓	✓	✓	=					
22	24	✓	✓	✓	=					
	25	✓	-	-	-					
23	26	✓	✓	✓	=					
24	27	✓	✓	✓	=					
25	28	✓	✓	✓	=					

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	KUO ET AL.
	Examiner	**Art Unit**
	NORMIN ABEDIN	2449

CPC							
Symbol						**Type**	**Version**
H04L		12	/	2818		F	2013-01-01
H04L		61	/	256		A	2013-01-01
H04L		61	/	2539		A	2013-01-01
H04L		61	/	2076		A	2013-01-01
H04L		41	/	00		I	2013-01-01
			/				
			/				
			/				
			/				
			/				
			/				
			/				
			/				
			/				
			/				

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

/NORMIN ABEDIN/ Examiner.Art Unit 2449	09/17/2015	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	25	
/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449	9/18/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	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)											

/NORMIN ABEDIN/ Examiner.Art Unit 2449 (Assistant Examiner)	09/17/2015 (Date)	**Total Claims Allowed:** 25	
/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449 (Primary Examiner)	9/18/2015 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	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	15	17												
2	2	16	18												
3	3	17	19												
4	4	18	20												
5	5	19	21												
6	6	20	22												
7	7	21	23												
8	8	22	24												
9	9		25												
	10	23	26												
	11	24	27												
10	12	25	28												
11	13														
12	14														
13	15														
14	16														

/NORMIN ABEDIN/ Examiner.Art Unit 2449	09/17/2015	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	25	
/VIVEK SRIVASTAVA/ Supervisory Patent Examiner, Art Unit 2449	9/18/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	KUO ET AL.
	Examiner	Art Unit
	NORMIN ABEDIN	2449

CPC- SEARCHED		
Symbol	Date	Examiner
G06F15/173	4/23/2014	NA
H04L61/2539	4/23/2014	NA
H04L61/256	4/23/2014	NA
H04L61/2076	4/23/2014	NA

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	203, 206, 223, 224, 225	10/16/2013	NA
709	203, 206, 223, 224, 225	4/23/2014	NA
709	203, 206, 223	3/9/2015	NA
709	203, 206, 223, 224	9/17/2015	NA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	10/16/2013	NA
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	4/23/2014	NA
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	3/9/2015	NA
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	9/17/2015	NA

INTERFERENCE SEARCH

/NORMIN ABEDIN/ Examiner.Art Unit 2449	

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	Pub search and UnPub search	9/17/2015	NA

/NORMIN ABEDIN/ Examiner.Art Unit 2449	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	**Chi-Ming KUO, Yu-Li KAO, Chien-Chih YANG, Sheng-Fu CHANG**	Filed:	**11/10/2011**
Appl. No.:	**13/293,506**	Examiner:	**ABEDIN, NORMAN**
Conf. No.:	**1121**	Art Unit:	**2449**
Title:	**REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF**		

Date: **June 26, 2015**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Sir:

The Office Action mailed on **March 27, 2015** has been carefully considered. In response thereto, the Applicant respectfully requests entry of the amendments and consideration of the remarks as set forth herein below:

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

All amendments and remarks made herein are without prejudice.

AMENDMENTS TO THE CLAIMS

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

Listing of Claims

1. (Currently amended) A linking method of an information communication system, comprising steps of:

~~providing~~ by an administration server, receiving a first request of a remote device via an Internet;

by the administration server, in response to [[a]]the first request of [[a]]the remote device, assigning at least one linking server from a plurality of linking servers and ~~informing~~ providing the remote device with an address of the assigned linking server [[for]] via the Internet, wherein the remote device links to and registers information of the remote device in ~~to register at~~ the assigned linking server according to the address provided by the administration server, and wherein ~~when~~ the remote device periodically requests ~~sends a new first request to~~ the administration server to re-execute the assigning step and the providing step ~~after a predetermined time, the administration server re-determines whether to assign another linking server from the plurality of linking servers to the remote device to register~~;

by the administration server, responding to a second request of a proximal device for connecting to the remote device, ~~informing~~ providing the proximal device with the address of one of the assigned linking ~~server~~ servers to which the remote device [[being]] is registered [[to]] via the Internet, wherein the proximal device sends a third request to the assigned linking server according to the address provided by the administration server; and

by the assigned linking server, in response to [[a]]the third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device.

2. (Previously presented) The linking method according to claim 1, wherein the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices.

3. (Currently amended) The linking method according to claim 1, wherein the administration server assigns more than one linking servers to the remote device in response to the first request, and the remote device registers ~~register~~ to these more than one linking servers.

4. (Previously presented) The linking method according to claim 3, wherein the administration server, in response to the second request of the proximal device for connecting to the remote device, selects one linking server from the more than two linking servers that the remote device registers in and informs said one linking server to the proximal device.

5. (Previously presented) The linking method according to claim 1, wherein the administration server provides different addresses for the remote devices at different geographic locations to register in the different linking servers.

6. (Previously presented) The linking method according to claim 1, wherein the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

7. (Previously presented) The linking method according to claim 1, wherein the administration server updates a server list and a device list to increase or change the linking servers or the remote devices.

8. (Previously presented) The linking method according to claim 1, wherein the proximal device includes an application programming interface for sending the second request and the third request.

9. (Previously presented) The linking method according to claim 1, wherein the P2P connection between the proximal device and the remote device is established by hole punching performed by the linking server.

10. (Canceled)

11. (Canceled)

12. (Previously presented) The linking method according to claim 1, wherein the remote device periodically updates and registers the information thereof in the linking server that is assigned by the administration server.

13. (Currently amended) The linking method according to claim 1, wherein when the remote device again requests the administration server to provide the address of at least one linking server supporting the remote device, ~~and wherein~~ the remote device again links and registers the information thereof in the linking server according to the address provided again.

14. (Previously presented) The linking method according to claim 1, wherein the remote device is a security alarm device.

15. (Previously presented) The linking method according to claim 1, wherein the remote device is a home electric appliance.

16. (Previously presented) The linking method according to claim 1, wherein the proximal device is equipped with an audio/video playing function.

17. (Currently amended) An information communication system, comprising:

an administration server; and

a plurality of linking servers connected to the administration server, for establishing point-to-point (P2P) connections, wherein the administration server, in response to a request of a remote device, assigns ~~associates~~ at least one linking server from the plurality of linking servers to a remote device and provides the remote device with an address of the assigned linking server via an Internet, and the remote device links and registers information of the remote device in the assigned linking server according to the address provided by the administration server;

wherein a proximal device requests the administration server to ~~inform one~~ provide the address of one of the assigned linking server corresponding to the remote device via the Internet, and the proximal device communicates with the assigned linking server according to the address provided by the administration server to establish a P2P connection between the proximal device and the remote device, and wherein the remote device~~, after a predetermined~~

~~time,~~ periodically requests the administration server to re-provide the address ~~re-determine whether to assign another linking server~~ for the remote device to register.

18. (Previously presented) The information communication system according to claim 17, wherein the administration server is one of a plurality of administration servers that constitute an administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more service devices.

19. (Previously presented) The information communication system according to claim 17, wherein the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

20. (Previously presented) The information communication system according to claim 19, wherein the linking servers are managed by different service providers.

21. (Previously presented) The information communication system according to claim 19, wherein the linking servers support different remote devices with different product types.

22. (Previously presented) The information communication system according to claim 19, wherein the linking servers are located at different geographic locations.

23. (Previously presented) The information communication system according to claim 17, wherein the proximal device includes an application programming interface for a user to address a request of finding out the linking server of the remote device.

24. (Previously presented) The information communication system according to claim 17, wherein the P2P connection between the proximal device and the remote device is established by hole punching performed by the linking server.

25. (Canceled)

26. (Previously presented) The information communication system according to claim 17, wherein the remote device is a security alarm device.

27. (Previously presented) The information communication system according to claim 17, wherein the remote device is a home electric appliance.

28. (Previously presented) The information communication system according to claim 17, wherein the proximal device is equipped with an audio/video playing function.

REMARKS

Applicant respectfully requests amendment of the above-identified application in the manner identified above and that the patent be granted in view of the arguments presented. No new matter has been added by this amendment.

Present Status of Application

Claims 1-9, 12-24, and 26-28 are pending in the application. The specification is objected to under 35 U.S.C. 132(a). Claims 1 and 17 are rejected under pre-AIA 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 1, 3-5, 7-9, 12-17, 20-24, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouthemy et al (US 20110125925, hereinafter "Bouthemy") in view of Thorsteinsson et al (US 20030105854, hereinafter "Thorsteinsson") and Gurun et al (US 20100185771, hereinafter "Gurun"). Claims 2, 6, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouthemy in view of Thorsteinsson and Gurun and in further view of Ananthanarayanan et al (US 20100185771, hereinafter "Ananthanarayanan").

In this paper, claims 1, 3, 13, and 17 are amended. Support for the amendments can be found, for example, in pars. 0029 and 0037 of the published application.

Reconsideration of this application is respectfully requested in light of the amendments and the remarks contained below.

Objection/Rejections Under 35 U.S.C. 112

In this paper, Applicant has canceled the limitation "wherein when the remote device sends a new first request to the administration server after a predetermined time, the administration server re-determines whether to assign another linking server from the plurality of linking servers to the remote device to register" without prejudice. Withdrawal of the objection and rejections under pre-AIA 35 U.S.C. 112, second paragraph, is respectfully requested.

Rejections Under 35 U.S.C. 103

To the extent that the rejections apply to the claims now pending in the application, they are respectfully traversed.

"All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). MPEP 2143.03.

As amended, claim 1 recites a linking method of an information communication system, comprising steps of:

> by an administration server, receiving a first request of a remote device via an Internet;
>
> by the administration server, in response to the first request of the remote device, assigning at least one linking server from a plurality of linking servers and providing the remote device with an address of the assigned linking server via the Internet, wherein the remote device links to and registers information of the remote device in the assigned linking server according to the address provided by the administration server, and wherein the remote device periodically requests the administration server to re-execute the assigning step and the providing step;
>
> by the administration server, responding to a second request of a proximal device for connecting to the remote device, providing the proximal device with the address of one of the assigned linking servers to which the remote device is registered via the Internet, wherein the proximal device sends a third request to the assigned linking server according to the address provided by the administration server; and
>
> by the assigned linking server, in response to the third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device.

Thus, the method of claim 1 operates in connection with an administration server, a plurality of linking servers, a remote device and a proximal device.

In response to a first request, the administration server assigns at least one linking server of the plurality of linking servers and provides the remote device with an address of the assigned linking server via the Internet, wherein the remote device links to and registers information of the remote device in the assigned linking server according to the address provided by the administration server.

In response to a second request of a proximal device for connecting to the remote device, the administration server provides the proximal device with the address of one of the assigned linking server to which the remote device is registered via the Internet, wherein the proximal device sends a third request to the assigned linking server according to the address provided by the administration server, and the assigned linking server, in response to the third request, facilitates establishment of a point-to-point (P2P) connection between the proximal device and the remote device.

Applicant respectfully submits that Bouthemy in view of Thorsteinsson and Gurun fails to teach or suggest at least the above features of claim 1 for the reasons as follow.

1) In the rejections, the home router 102 of Bouthemy is identified as the alleged “administration server” of claim 1. As understood by Applicant, service provider network 106 and devices 114 are respectively identified as the alleged “remote device” and “proximal device.” See page 4 of the Office Action. However, the rejection does not appear to include any indication of what elements in Bouthemy are the alleged “linking server” of claim 1.

In particular, the home router 102 (i.e., the alleged “administration server”) does not appear to assign “at least one linking server from a plurality of linking servers” to service provider network 106 (i.e., the alleged “remote device”) in response to a request therefrom. Moreover, service provider network 106 does not receive “an address of the assigned linking server via the Internet” from home router 102, and does not link to and register information of the remote device in “the assigned linking server” according to the address provided by the administration server. In addition, the home router 102 does not provide one of the devices 114 (i.e., the alleged ”proximal device”) with the address an “assigned linking server” to which the to service provider network 106 is registered.

On the other hand, Thorsteinsson discloses (par. 0032):

> … a portal that connects on one side to devices and appliances within houses (typically homes or cottages), buildings (including multifamily dwellings and commercial buildings), boats and cars--collectively referred to as Client Sites--and on the other side to service providers and general content, in both cases via a wide-area network (typically the Internet). The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation.

However, while Thorsteinsson recites a portal having the capability of connecting a device to a service provider, this teaching does not address the steps related to the "linking server" noted above. In this regard, the portal of Thorsteinsson referred to in the Office action is not assigned from a plurality of linking servers by an "administration server" in response to a request by a remote device, as required by claim 1. Moreover, an administration server does not provide a proximal device with the address of the portal in response to a second request of the proximal device for connecting to a remote device, as further required by claim 1.

Similarly, at page 6 of the Office Action, the rejection asserts that Gurun teaches "the linking server, in response to the third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device."

However, even under this interpretation of Gurun (which will be addressed in detail below), this teaching does not address the steps related to the "linking server" noted above. In this regard, communication server 116 of Gurun referred to in the Office action is not assigned from a plurality of linking servers by an "administration server" in response to a request by a remote device, as required by claim 1. Moreover, an administration server does not provide a proximal device with the address of communication server 116 in response to a second request of the proximal device for connecting to a remote device, as further required by claim 1.

Thus, Applicant respectfully submits that the combined teaching of Bouthemy in view of Thorsteinsson and Gurun does not teach or suggest the steps related to the "linking server" recited in claim.

2) Claim 1 requires a step of "by the assigned linking server, in response to the third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device."

In pars. 0017, 0019 and 0027-0028, Bouthemy teaches [emphasis added]:

> Described herein are techniques for registering a device with a service provider……. The device and router may comprise a local or personal network (hereinafter, "home network"). By receiving and transmitting the registration on behalf of the device, the router serves as a registrar for the device. In response to registering with the service provider, the device receives in response one or more public identifiers, such as phone numbers, which the device uses in voice and data communication …
>
> … ***the home router 102 serves as a gateway to the service provider network 106 for other devices 114 of the home network 104***. …… the home router 102 is configured to receive remote management 110 from the service provider network 106, ***to enable remote management 110 of a device 114 of the home network 104, and to act as a registrar for devices 114 of the home network 104, providing registration requests to the service provider network 106 on behalf of devices 114 of the home network 104*** …
>
> … the IMS network includes SBC 116. SBC 116 is further configured to act as a VPN server to provide a secure connection between the home network 104 and the service provider network 106. In some embodiments, the SBC 116 sits at the edge of the border of the service provider network 106 and the networking fabric 126 and controls the flow of data and signaling between the networking fabric 126 and the service provider network 106.

> The RMS 118 is configured to remotely manage 110 the home router 102 and/or other devices of the home network 104 and may include a proxy VPN server to establish the network tunnel 108.

Thus, in Bouthemy, SBC 116 and RMS 118 are in the Internet network (service provider network 106), the devices 114, the home router 102, the SBC 116 and the RMS 118 are connected in sequence, and the RMS 118 sends remote management 110 to the devices 114 of the home network 104. See, for example, Fig. 1 of Bouthemy.

More particularly, in Bouthemy, the network tunnel between the home network 104 and the service provider network 106 is the connection between the home router 102 and the SBC 116, so the home router 102 is a gateway of the home network 104 and the SBC 116 is a gateway of the service provider network 106. Therefore, all devices 114A, 114B, 114C, 114D inside the home network 104 must use the home router 102 and the SBC 116 to communicates with another device outside the home network 104, such as each service 118, 120, 122 and 124.

Even if a device 114D, which is in a network other than the home network 104 and the service provider network 106, wants to communicates with the device (114C) inside the home network 104, it need first communicate with the SBC 116, then communicate with the home router 102 via the SBC 116, and finally communicate with the device 114C via the SBC 116 and the home router 102. Thus, in Bouthemy, the devices 114A, 114B, 114C, 114D inside the home network 104 cannot directly connect to the device/service 118, 120, 122 and 124 outside the home network 104.

At page 6 of the Office Action, the Examiner asserts Gurun cures this deficiency. However, Gurun discloses (par. 0008):

> … 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 and the non-initiating endpoint will collaborate with the initiating endpoint during the process of establishing the direct connection. The communication server 116

> can also select and inform both of the endpoints simultaneously as the initiator of the direct connection, and both initiating endpoints will collaborate during the process of establishing the direct connection. Once their IP addresses have been exchanged, the two endpoints 102 and 110 collaborate with each other to establish a direct connection between them via TCP hole-punching to be discussed in details later.

Thus, while Gurun teaches a P2P connection between the client A 102 and the client B 110 formed by the intermediation of a communication server 116, there is no disclosure regarding the steps of an interaction between an administration server and a linking server recited in claim 1.

For example, there is no disclosure in Gurun regarding how the client A 102 and the client B 110 obtain the address of the communication server 116. To the contrary, claim 1 requires that:

a) in response to a first request, the administration server assigns at least one linking server and provides the remote device with an address of the assigned linking server via the Internet, wherein the remote device links to and registers information of the remote device in the assigned linking server according to the address provided by the administration server, and

b) in response to a second request of a proximal device for connecting to the remote device, the administration server provides the proximal device with the address of one of the assigned linking server to which the remote device is registered via the Internet, wherein the proximal device sends a third request to the assigned linking server according to the address provided by the administration server, and the assigned linking server.

Only then does the step of “by the assigned linking server, in response to the third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device” occur.

3. Claim 1 further requires that “the remote device periodically requests the administration server to re-execute the assigning step and the providing step.”

At pages 4-5 of the Office Action, par. 0094 of Bouthemy is relied upon to teach a previous iteration of this feature. However, par. 0094 of Bouthemy teaches:

> … after determining 602 that the secure connection has failed, the home router 102 determines whether a condition has been met before reestablishing the secure connection. As illustrated in FIG. 6, determining whether a condition has been met includes either determining 604 a time since the secure connection failed and comparing the determined time to a threshold or monitoring 606 network conditions.

Thus, the home router 102 in Bouthemy compares the determined time to a threshold for determining the time for reestablishing the secure connection. There is no teaching or suggestion of a step of periodically requesting an administration server to re-execute the assigning step and the providing step related to a "linking server."

Claim 17 contains limitations corresponding to those discussed above in connection with claim 1, and is therefore believed to distinguish over Bouthemy in view of Thorsteinsson and Gurun for corresponding reasons.

Finally, Ananthanarayanan does not contain any teaching to cure the deficiencies in Bouthemy in view of Thorsteinsson and Gurun.

Applicant therefore respectfully submits that the combined teaching of Bouthemy, Thorsteinsson, Gurun and Ananthanarayanan fails to teach or suggest all of the limitations of claims 1 and 17. For at least this reason, Applicant respectfully submits that a *prima facie* case of obviousness cannot be established in connection with these claims. Furthermore, as it is Applicant's belief that a *prima facie* case of obviousness is not established for claims 1 and 17, the Examiner's arguments in regard to the dependent claims will not be addressed here. Allowance of claims 1-9, 12-24, and 26-28 is respectfully requested.

Conclusion

The Applicant believes that the application is now in condition for allowance and respectfully requests so. The Commissioner is authorized to charge any additional fees that may be required or credit overpayment to Deposit Account No. **502447**.

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the present application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

/Nelson A. Quintero/

Nelson A. Quintero
Reg. No. 52,143
Customer No. 34,283
Telephone: (310) 909-8535

P173495NAQ

Electronic Acknowledgement Receipt	
EFS ID:	22752416
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	34283
Filer:	Nelson Alejandro Quintero
Filer Authorized By:	
Attorney Docket Number:	23437621
Receipt Date:	26-JUN-2015
Filing Date:	10-NOV-2011
Time Stamp:	12:42:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		23437621_P173495NAQ_AMEND_150626.pdf	160655 fd9a7a88db9ebfd81ac333867e8925fcb0cfdf4c	yes	15

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	15
Warnings:			
Information:			
	Total Files Size (in bytes):	160655	

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 Substitute for Form PTO-875	Application or Docket Number 13/293,506	Filing Date 11/10/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)
☒ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	**190**
☐ 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	**190**

APPLICATION AS AMENDED – PART II

AMENDMENT		(Column 1)		(Column 2)	(Column 3)		
	06/26/2015	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 25	Minus	** 28	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 2	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)		
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	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
/GLORIA J. TRAMMELL/

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.

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.
13/293,506	11/10/2011	Chi-Ming KUO	23437621	1121

34283 7590 03/27/2015

QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

EXAMINER	
ABEDIN, NORMIN	

ART UNIT	PAPER NUMBER
2449	

NOTIFICATION DATE	DELIVERY MODE
03/27/2015	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):

naquintero@quinterolaw.com
mailroom@QUINTEROLAW.COM

Office Action Summary	Application No. 13/293,506	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 *07/22/2014*.

☐ 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) *1-9,12-24 and 26-28* 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) *1-9,12-24 and 26-28* 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 *11/10/2011* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☒ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

Status of Claims:

1. Claims 1-9, 12-24, 26-28 are pending in this Office Action.

2. Claims 1-5, 8, 9, 12-18, 21, 23, 24, 26-28 are amended.

3. Claims 10, 11, 25 are canceled.

4. Claims 1-9, 12-24, 26-28 are rejected.

Claim Objections

Specification

The amendment filed 10/11/2013 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "wherein when the remote device sends a new first request to the administration server after a predetermined time, the administration server re-determines whether to assign another linking server from the plurality of linking servers to the remote device to register" in claim 1. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

IN GENERAL.—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 or joint inventor of carrying out the invention.
The following is a quotation of the first paragraph of pre-AIA 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.

The following is a quotation of 35 U.S.C. 112(b):

(B) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

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.

Claim 1, 17 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), 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 or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant adds the limitation "wherein when the remote device sends a new first request to the administration server after a predetermined time, the administration server re-determines whether to assign another linking server from the plurality of linking servers to the remote device to register", which suggests the claimed invention includes a step for determining predetermined time. Examiner does not believe the functionality of a broader scope is supported by the specification. If Applicant points to a disclosure in the specification Examiner will withdraw this rejection.

Response to arguments

Applicant's arguments filed in the amendment filed 07/22/2014have 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, 3-5, 7-9, 12-17, 20-24, 26-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Bouthemy et al., "hereinafter Bouthemy", (US Patent Publication: 20110125925) in view of Thorsteinsson et al., "hereinafter Thorsteinsson", (US Patent Publication: 20030105854) and further in view of Gurun et al. "hereinafter Gurun", (US Patent Publication: 20100185771).

As per claim 1, Berndt discloses a linking method of an information communication system, comprising steps of:

providing an administration server **(Bouthemy, Para.8, FIG. 4a illustrates an internetworking block of a home router of the home network, the internetworking block enabling the home router to act as a registrar of home network devices);**

the administration server, in response to a first request of a remote device, assigning at least one linking server from a plurality of linking servers and informing the remote device with the assigned linking server for the remote device to register at the assigned linking server **(Bouthemy, Para.19, the home router 102 is configured to receive remote management 110 from the service provider network 106, to enable remote management 110 of a device 114 of the home network 104, and to act as a registrar for devices 114 of the home network 104, providing registration requests to the service provider network 106 on behalf of devices 114 of the home network 104, Para.21, the home router 102 servers as a router and gateway for the communications of the home network 104, receiving communications over home network 104 from the other devices 114 of the home network 104 and providing communications over the home network 104 to the other devices. As also mentioned above, the devices of the home network 104 include computing systems such as a telecommunication device 114a, a PDA 114b, a PC 114c, and a tablet computer 114d. Each of these devices 114 is configured to be remotely managed 110 and/or to register 112 with the service provider network 106.),** wherein when the remote device sends a new first request to the administration server after a predetermined time, the administration server re-determines whether to assign another linking server from the plurality of linking servers to the remote device to register

(Bouthemy, Para.94, To determine 604 the time since the secure connection failed, the home router 102 ascertains a time at which the one or more monitoring modules indicated that the secure connection had failed, a current system time, and a difference between those times. That determined 604 time is then compared by the home router 102 to the threshold. In some embodiments, the threshold corresponds to a pre-determined time that the home router 102 is configured to wait before attempting 608 to reestablish the secure connection. The pre-determined time may be set by the service provider and provided to the home router 102 in an update, for example. Also, the pre-determined time may be experimentally determined.);

However Bouthemy does not discloses the administration server, responding to a second request of a proximal device for connecting to the remote device, informing the proximal device the assigned linking server the remote device being registered to and the assigned linking server, in response to a third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device;

Thorsteinsson discloses the administration server, responding to a second request of a proximal device for connecting to the remote device, informing the proximal device the assigned linking server the remote device being registered to **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services.)**;

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Berndt and in view of Thorsteinsson by implementing the administration server, responding to a second request of a proximal device for connecting to the remote device, informing the proximal device the assigned linking server the remote device being registered to in order to allows homeowners to configure and control their home devices, appliances and services from one central point **(Thorsteinsson, Para.32, Aspects of the present invention include a portal that connects on one**

side to devices and appliances within houses (typically homes or cottages), buildings (including multifamily dwellings and commercial buildings), boats and cars--collectively referred to as Client Sites--and on the other side to service providers and general content, in both cases via a wide-area network (typically the Internet). The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation.).

However Bouthemy and in view of Thorsteinsson does not discloses the linking server, in response to a third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device;

Gurun discloses the linking server, in response to a third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device **(Gurun, Para.32, 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 and the non-initiating endpoint will collaborate with the initiating endpoint during the process of establishing the direct connection. The communication server 116 can also select and inform both of the endpoints simultaneously as the initiator of the direct connection, and both initiating endpoints will collaborate during the process of establishing 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 the modified Bouthemy and in view of Gurun by implementing linking server, in response to a third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device in order to save time **(Gurun, Para.9, When a direct endpoint to endpoint connection is not available (due to, for a non-limiting example, customer network configurations), the approach preserves the advantages of connecting through the intermediate communication server, wherein such advantages include but are not limited to,**

secured centralized management, firewall-friendly, simple host installation, ease-of-use (plug-and-play) experience, potentially faster initial connection times, etc.).

As per claim 3, the modified Bouthemy discloses the linking method according to claim 1, wherein the administration server assigns more than one linking servers to the remote device in response to the first request, and the remote device register to these more than one linking servers **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services.).**

As per claim 4, the modified Bouthemy discloses the linking method according to claim 3, wherein the administration server, in response to the second request of the proximal device for connecting to the remote device, selects one linking server from the more than two linking servers that the remote device registers in and informs said one linking server to the proximal device **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services. There is no simple way for the homeowner to see an overall schedule of events, assign priorities and authorization, etc. He or she also needs to configure the home network's Internet gateway to allow routing of control information to and from each service provider, or in other words, punch holes in the home's Internet firewall.).**

As per claim 5, the modified Bouthemy discloses the linking method according to claim 1, wherein the administration server provides different addresses for the remote devices at different geographic locations to register in the different linking servers **(Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network.).**

As per claim 7, the modified Bouthemy discloses the linking method according to claim 1, wherein the administration server updates a server list and a device list to increase or change the linking servers or the remote devices **(Thorsteinsson, Para.57, Service providers link their systems to the central portal, using any of a plurality of communications protocols. In embodiments of this invention, these protocols may include Hypertext Transfer Protocol (HTTP) and Simple Object Access Protocol (SOAP). Through the communications link, they can issue queries and commands to the portal (block 108). These queries and commands may apply to single Client Sites or to sets of such sites.).**

As per claim 8, the modified Bouthemy discloses the linking method according to claim 1, wherein the proximal device includes an application programming interface for sending the second request and the third request **(Bouthemy, Para.28, The RMS 118 also provides a graphic user interface (GUI) to an administrative user of the service provider network 106 or communicates with another server device to enable that device to provide a GUI.).**

As per claim 9, the modified Bouthemy discloses the linking method according to claim 1, wherein the P2P connection between the proximal device and the remote device is established by hole punching performed by the linking server **(Gurun, Para.17, Once their IP addresses have been exchanged, the two endpoints 102 and 110 collaborate with each other to establish a direct connection between them via TCP hole-punching to be discussed in details later.).**

As per claim 12, the modified Bouthemy discloses the linking method according to claim 1, wherein the remote device periodically updates and registers the information thereof in the linking server that is assigned by the administration server **(Bouthemy, Para.97, the threshold corresponds to a pre-determined time that the home router 102 is configured to wait before attempting 608 to reestablish the secure connection. The pre-determined time may be set by the service provider and provided to the home router 102 in an update, for example.).**

As per claim 13, the modified Bouthemy discloses the linking method according to claim 1, wherein the remote device again requests the administration server to provide the address of at least one linking server supporting the remote device, and wherein the remote device again registers information thereof in the linking server **(Bouthemy, Para.17, Described herein are techniques for registering a device with a service provider. The device is a telecommunication or computing device capable of voice or data communication facilitated by a service provider. Before engaging in communication, the device registers itself with a service provider network associated with the service provider.).**

As per claim 14, the modified Bouthemy discloses the linking method according to claim 1, wherein the remote device is a security alarm device **(Thorsteinsson, Para.80, The Conflict Resolution mechanism also allows higher-priority services, such as fire or burglar alarms, to seize control of the resources they need, even when lower-priority services are already using those resources.).**

As per claim 15, the modified Bouthemy discloses the linking method according to claim 1, wherein the remote device is a home electric appliance **(Thorsteinsson, Para.111, the invention can be practiced with other computer system configurations, including Internet appliances, hand-held devices, wearable computers, cellular or mobile phones, multi-processor systems,**

microprocessor-based or programmable consumer electronics, set-top boxes, network PCs, mini-computers, mainframe computers and the like.).

As per claim 16, the modified Bouthemy discloses the linking method according to claim 1, wherein the proximal device is equipped with an audio/video playing function **(Thorsteinsson, Para.111, the invention can be practiced with other computer system configurations, including Internet appliances, hand-held devices, wearable computers, cellular or mobile phones, multi-processor systems, microprocessor-based or programmable consumer electronics, set-top boxes, network PCs, mini-computers, mainframe computers and the like.).**

As per claim 17, Bouthemy discloses information communication system, comprising:
an administration server **(Bouthemy, Para.8, FIG. 4a illustrates an internetworking block of a home router of the home network, the internetworking block enabling the home router to act as a registrar of home network devices);**
and a plurality of linking servers connected to the administration server, wherein the administration server associates at least one linking server from the plurality of linking servers to a remote device and the remote device registers in the assigned a linking servers **(Bouthemy, Para.19, the home router 102 is configured to receive remote management 110 from the service provider network 106, to enable remote management 110 of a device 114 of the home network 104, and to act as a registrar for devices 114 of the home network 104, providing registration requests to the service provider network 106 on behalf of devices 114 of the home network 104, Para.21, the home router 102 servers as a router and gateway for the communications of the home network 104, receiving communications over home network 104 from the other devices 114 of the home network 104 and providing communications over the home network 104 to the other devices. As also mentioned above, the devices of the home network 104 include computing systems such as a telecommunication device 114a, a PDA 114b, a PC 114c, and a tablet computer 114d. Each of these devices 114 is configured to be remotely managed 110 and/or to register 112 with the**

service provider network 106.); wherein the remote device, after a predetermined time, requests the administration server to re-determine whether to assign another linking server for the remote device to register **(Bouthemy, Para.94, To determine 604 the time since the secure connection failed, the home router 102 ascertains a time at which the one or more monitoring modules indicated that the secure connection had failed, a current system time, and a difference between those times. That determined 604 time is then compared by the home router 102 to the threshold. In some embodiments, the threshold corresponds to a pre-determined time that the home router 102 is configured to wait before attempting 608 to reestablish the secure connection. The pre-determined time may be set by the service provider and provided to the home router 102 in an update, for example. Also, the pre-determined time may be experimentally determined.);**

However Bouthemy does not disclose proximal device requests the administration server to inform one assigned a linking server corresponding to the remote device and the proximal device communicates with the assigned linking server to establish a P2P connection between the proximal device and the remote device, and

Thorsteinsson discloses proximal device requests the administration server to inform one assigned a linking server corresponding to the remote device and the proximal device communicates with the assigned linking server **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services.)**;

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Berndt and in view of Thorsteinsson by implementing proximal device requests the administration server to inform one assigned a linking server corresponding to the remote device and the proximal device communicates with the assigned linking server in order to allows homeowners to configure and control their home devices, appliances and services from one central point **(Thorsteinsson, Para.32, Aspects of the present invention include a portal that connects on one**

side to devices and appliances within houses (typically homes or cottages), buildings (including multifamily dwellings and commercial buildings), boats and cars--collectively referred to as Client Sites--and on the other side to service providers and general content, in both cases via a wide-area network (typically the Internet). The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation.).

However Bouthemy and in view of Thorsteinsson does not discloses the assigned linking server to establish a P2P connection between the proximal device and the remote device.

Gurun discloses the linking server, the assigned linking server to establish a P2P connection between the proximal device and the remote device **(Gurun, Para.32, 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 and the non-initiating endpoint will collaborate with the initiating endpoint during the process of establishing the direct connection. The communication server 116 can also select and inform both of the endpoints simultaneously as the initiator of the direct connection, and both initiating endpoints will collaborate during the process of establishing 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 the modified Bouthemy and in view of Gurun by implementing linking server, in response to a third request of the proximal device, facilitating establishment of a point-to-point (P2P) connection between the proximal device and the remote device in order to save time **(Gurun, Para.9, When a direct endpoint to endpoint connection is not available (due to, for a non-limiting example, customer network configurations), the approach preserves the advantages of connecting through the intermediate communication server, wherein such advantages include but are not limited to,**

secured centralized management, firewall-friendly, simple host installation, ease-of-use (plug-and-play) experience, potentially faster initial connection times, etc.).

As per claim 20, the modified Bouthemy discloses the information communication system according to claim 19, wherein the linking servers are managed by different service providers **(Thorsteinsson, Para.8, Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services.).**

As per claim 21, the modified Bouthemy discloses the information communication system according to claim 19, wherein the linking servers support different remote devices with different product types **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e.
they can be based on different device models and protocols.).**

As per claim 22, the modified Bouthemy discloses the information communication system according to claim 19, wherein the linking servers are located at different geographic locations **(Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network.).**

As per claim 23, the modified Bouthemy discloses the information communication system according to claim 17, wherein the proximal device includes an application programming interface for a

user to address a request of finding out the linking server of the remote device **(Thorsteinsson, Para.57, Service providers link their systems to the central portal, using any of a plurality of communications protocols. In embodiments of this invention, these protocols may include Hypertext Transfer Protocol (HTTP) and Simple Object Access Protocol (SOAP). Through the communications link, they can issue queries and commands to the portal (block 108). These queries and commands may apply to single Client Sites or to sets of such sites.).**

As per claim 24, the modified Bouthemy discloses the information communication system according to claim 17, wherein the P2P connection between the proximal device and the remote device is established by hole punching performed by the linking server **(Gurun, Para.17, Once their IP addresses have been exchanged, the two endpoints 102 and 110 collaborate with each other to establish a direct connection between them via TCP hole-punching to be discussed in details later.).**

As per claim 26, the modified Bouthemy discloses the information communication system according to claim 17, wherein the remote device is a security alarm device**(Thorsteinsson, Para.80, The Conflict Resolution mechanism also allows higher-priority services, such as fire or burglar alarms, to seize control of the resources they need, even when lower-priority services are already using those resources.).**

As per claim 27, the modified Bouthemy discloses the information communication system according to claim 17, wherein the remote device is a home electric appliance **(Thorsteinsson, Para.111, the invention can be practiced with other computer system configurations, including Internet appliances, hand-held devices, wearable computers, cellular or mobile phones, multi-processor systems, microprocessor-based or programmable consumer electronics, set-top boxes, network PCs, mini-computers, mainframe computers and the like.).**

As per claim 28, the modified Bouthemy discloses the information communication system according to claim 17, wherein the proximal device is equipped with an audio/video playing function **(Thorsteinsson, Para.111, the invention can be practiced with other computer system configurations, including Internet appliances, hand-held devices, wearable computers, cellular or mobile phones, multi-processor systems, microprocessor-based or programmable consumer electronics, set-top boxes, network PCs, mini-computers, mainframe computers and the like.).**

Claims 2, 6, 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouthemy et al., "hereinafter Bouthemy", (US Patent Publication: 20110125925) in view of Thorsteinsson et al., "hereinafter Thorsteinsson", (US Patent Publication: 20030105854) in view of Gurun et al. "hereinafter Gurun", (US Patent Publication: 20100185771) and further in view of Ananthanarayanan et al, "hereinafter Ananthanarayanan" (US Patent Publication US 20110219121).

As per claim 2, the modified Bouthemy discloses the linking method according to claim 1,

However the modified Bouthemy does not discloses the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices.

Ananthanarayanan discloses the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices **(Ananthanarayanan, Para.4, Embodiments are directed to a managing primary/backup and failover/failback relationships in a networked environment, where each user and/or resource is assigned to a primary cluster and at least one backup cluster.**

According to some embodiments, a distributed handover mechanism enables global knowledge of primary/backup relationships between clusters and their assigned users or resources.).

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 Bouthemy and in view of Ananthanarayanan by the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices in order to introduce modern communication systems **(Ananthanarayanan, Para.18, for managing routing of communication sessions through a primary/backup cluster architecture. A unified communication system is an example of modern communication systems with a wide range of capabilities and services that can be provided to subscribers. A unified communication system is a real-time communications system facilitating instant messaging, presence, audio-video conferencing, web conferencing, and similar functionalities.)**

As per claim 6, the modified Bouthemy discloses linking method according to claim 1,

However the modified Bouthemy does not discloses the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

Ananthanarayanan discloses the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other. **(Ananthanarayanan, Para.4, Embodiments are directed to a managing primary/backup and failover/failback relationships in a networked environment, where each user and/or resource is assigned to a primary cluster and at least one backup cluster. According to some embodiments, a distributed handover mechanism enables global knowledge of primary/backup relationships between clusters and their assigned users or resources.).**

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 Bouthemy and in view of Ananthanarayanan by implementing the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other in order to introduce modern communication systems **(Ananthanarayanan, Para.18, for managing routing of communication sessions through a primary/backup cluster architecture. A unified communication system is an example of modern communication systems with a wide range of capabilities and services that can be provided to subscribers. A unified communication system is a real-time communications system facilitating instant messaging, presence, audio-video conferencing, web conferencing, and similar functionalities.)**

As per claim 18, the modified Bouthemy discloses information communication system according to claim 17, However the modified Bouthemy does not discloses the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices.

Ananthanarayanan discloses the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices **(Ananthanarayanan, Para.4, Embodiments are directed to a managing primary/backup and failover/failback relationships in a networked environment, where each user and/or resource is assigned to a primary cluster and at least one backup cluster. According to some embodiments, a distributed handover mechanism enables global knowledge of primary/backup relationships between clusters and their assigned users or resources.).**

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 Bouthemy and in view of Ananthanarayanan by the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stores a server list for recording information of one or more linking servers and a device list for recording information of one or more remote devices in order to introduce modern communication systems **(Ananthanarayanan, Para.18, for managing routing of communication sessions through a primary/backup cluster architecture. A unified communication system is an example of modern communication systems with a wide range of capabilities and services that can be provided to subscribers. A unified communication system is a real-time communications system facilitating instant messaging, presence, audio-video conferencing, web conferencing, and similar functionalities.)**

As per claim 19, the modified Bouthemy discloses information communication system according to claim 17,

However the modified Bouthemy does not discloses the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

Ananthanarayanan discloses the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other. **(Ananthanarayanan, Para.4, Embodiments are directed to a managing primary/backup and failover/failback relationships in a networked environment, where each user and/or resource is assigned to a primary cluster and at least one backup cluster. According to some embodiments, a distributed handover mechanism enables global knowledge of primary/backup relationships between clusters and their assigned users or resources.).**

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 Bouthemy and in view of Ananthanarayanan by implementing the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other in order to introduce modern communication systems **(Ananthanarayanan, Para.18, for managing routing of communication sessions through a primary/backup cluster architecture. A unified communication system is an example of modern communication systems with a wide range of capabilities and services that can be provided to subscribers. A unified communication system is a real-time communications system facilitating instant messaging, presence, audio-video conferencing, web conferencing, and similar functionalities.)**

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. 13/293,506	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-2011/0219121	09-2011	Ananthanarayanan et al.	709/227
*	B	US-2010/0185771	07-2010	Gurun et al.	709/227
*	C	US-2011/0125925	05-2011	Bouthemy et al.	709/250
*	D	US-2003/0105854	06-2003	Thorsteinsson et al.	709/223
	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
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

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

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

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"20080247381"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:23
L2	6	"20050018620"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:24
L3	32	"6373857"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:25
L4	20	"7089027"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 01:26
L14	26	"7420964"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:21
L16	0	@ad<="20110127" and (home near1 network) and (home near5 applaince)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:29
L17	5451	@ad<="20110127" and (home near1 network) and (home near5 appliance)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:29
L18	1997	@ad<="20110127" and (home	US-PGPUB;	OR	ON	2015/03/09

		near1 network) and ((control$4 or monitor$4) near4(home near5 appliance))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			04:30
L19	95	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:30
L20	51	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:31
L21	33	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and register	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:31
L22	0	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and register and (linking near1 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:32
L23	15	@ad<="20110127" and (home near1 network) and ((control$4 or monitor$4) near4(home near5 appliance)) and (assign$4 near3 servers) and providers and (register near3 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 04:32
L24	3	"20070255848"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 05:12
L25	6	"8346976"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 05:44
L26	0	"8346976" and hole	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/03/09 05:44

			IBM_TDB			
L27	2	"12692541"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 06:18
L31	81	hole$punch$4 and (pointtopoint or peertopeer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:13
L32	51	@ad<="20110127" and hole$punch$4 and (pointtopoint or peertopeer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:15
L33	4	@ad<="20110127" and hole$punch$4 and (pointtopoint)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:15
L34	2	"20110219121"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/03/09 10:33
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;	OR	ON	2013/10/10 16:12

			DERWENT; IBM_TDB			
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; 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;	OR	ON	2013/10/10 17:33

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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	US-PGPUB;	OR	ON	2013/10/10

		(surveillance or anti$theft) and server and prox$4 and "709"/$.ccls. and (monitor$4 or control$4) and security	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:20
S25	200	@ad<="20110127" and (surveillance or anti$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 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;	OR	ON	2013/10/10 18:38

			IBM_TDB			
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
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;	OR	ON	2013/10/10 19:07

			JPO; DERWENT; IBM_TDB			
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; 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	US-PGPUB; USPAT;	OR	ON	2013/10/11 13:11

		terminal or user) near5 device) and (smoke or fire or surveillance or electronic)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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 (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 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;	OR	ON	2013/10/11 15:26

			DERWENT; IBM_TDB			
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; 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	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/11 16:51

		709/223.ccls.	FPRS; EPO; JPO; DERWENT; IBM_TDB			
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 (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	US-PGPUB;	OR	ON	2013/10/11

		client or terminal or user) naer3 device) same register same server	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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 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;	OR	ON	2013/10/14 04:32

			IBM_TDB			
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 pointtopoint	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 pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2013/10/15 01:27

			JPO; DERWENT; IBM_TDB			
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; 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)	US-PGPUB; USPAT;	OR	ON	2013/10/16 18:24

		with (remote near3 device)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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 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; 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;	OR	ON	2013/10/27 00:33

			DERWENT; IBM_TDB			
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; 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	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/27 00:42

		and (direct near3 connect$4) and "709"/$.ccls.	FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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	US-PGPUB;	OR	ON	2013/10/27

		(control$4 or manag$4 or monitor$4) near3 device and "709"/$.ccls. and (direct$4 near3 connect$4) and set$top	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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; 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;	OR	ON	2014/04/23 20:18

			IBM_TDB			
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; 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; 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;	OR	ON	2014/04/24 18:34

			DERWENT; IBM_TDB			
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	pointtopoint 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	pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint and (service near3 provider) and ((control$4 or	US-PGPUB; USPAT; USOCR;	OR	ON	2014/04/24 20:05

		monitor$4 or manag$4) near4 (home near3 appliance)) and register	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S182	36	2002/0009078	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:11
S183	6	"20020009078"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:11
S184	2	"13950282"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:17
S185	19825	ad$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$4) near3 device @ad<="20110127" and register and server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:20
S188	1066	(ad$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$4) near3 device and @ad<="20110127" and register and server and pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:21
S190	204	(ad$hoc near3 network) and	US-PGPUB;	OR	ON	2014/04/24

		(control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint and direct$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			20:22
S191	100	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint 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 pointtopoint 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$4 and pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:23
S195	4	hole$punch$4 and pointtopoint and peertopeer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:23
S196	51	hole$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;	OR	ON	2014/04/25 14:27

			IBM_TDB			
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

EAST Search History (Interference)

<This search history is empty>

3/9/2015 10:49:16 AM
C:\Users\nabedin\Documents\EAST\Workspaces\13293506.wsp

INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*				*Complete if Known*	
				Application Number	**13/293,506**
				Filing Date	**November 10, 2011**
				First Named Inventor	**Chi-Ming KUO**
				Art Unit	**2449**
				Examiner Name	**ABEDIN, NORMAN**
Sheet	**1**	of	**1**	Attorney Docket Number	**23437621**

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number (Number – kind code)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Passages or Relevant Figures Appear
	A1	2008/0247381	10-09-2008	Bohm et al.	
	A2	2005/0018620	01-27-2005	Berndt et al.	
	A3	6,373,857	04-16-2002	Ma	
	A4	7,089,027	08-08-2006	Welch et al.	
	A5				
	A6				
	A7				

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Document Number (Number – kind code)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Passages or Relevant Figures Appear	T
	B1					
	B2					
	B3					
	B4					

OTHER ART			
Examiner Initials	Cite No.	Include name of author (in CAPS),'title of article" (when appropriate), *title of the item* (book, magazine, symposium, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	C1		
	C5		

03/09/2015

/Normin Abedin/

Form PTO-1449 (modified) (v08/25/2002) P170610NAQ

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.A./

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	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	10/11/2013	04/23/2014	03/09/2015						
1	1	✓	✓	✓						
2	2	✓	✓	✓						
3	3	✓	✓	✓						
4	4	✓	✓	✓						
5	5	✓	✓	✓						
6	6	✓	✓	✓						
7	7	✓	✓	✓						
8	8	✓	✓	✓						
9	9	✓	✓	✓						
	10	✓	-	-						
	11	✓	-	-						
10	12	✓	✓	✓						
11	13	✓	✓	✓						
12	14	✓	✓	✓						
13	15	✓	✓	✓						
14	16	✓	✓	✓						
15	17	✓	✓	✓						
16	18	✓	✓	✓						
17	19	✓	✓	✓						
18	20	✓	✓	✓						
19	21	✓	✓	✓						
20	22	✓	✓	✓						
21	23	✓	✓	✓						
22	24	✓	✓	✓						
	25	✓	-	-						
23	26	✓	✓	✓						
24	27	✓	✓	✓						
25	28	✓	✓	✓						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	KUO ET AL.
	Examiner	Art Unit
	NORMIN ABEDIN	2449

CPC- SEARCHED		
Symbol	Date	Examiner
G06F15/173	4/23/2014	NA
H04L61/2539	4/23/2014	NA
H04L61/256	4/23/2014	NA
H04L61/2076	4/23/2014	NA

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	203, 206, 223, 224, 225	10/16/2013	NA
709	203, 206, 223, 224, 225	4/23/2014	NA
709	203, 206, 223	3/9/2015	NA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	10/16/2013	NA
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	4/23/2014	NA
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	3/9/2015	NA

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

/NORMIN ABEDIN/ Examiner.Art Unit 2449	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*				***Complete if Known***	
				Application Number	**13/293,506**
				Filing Date	**November 10, 2011**
				First Named Inventor	**Chi-Ming KUO**
				Art Unit	**2449**
				Examiner Name	**ABEDIN, NORMAN**
Sheet	**1**	of	**1**	Attorney Docket Number	**23437621**

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document Number (Number – kind code)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Passages or Relevant Figures Appear
	A1	2008/0247381	10-09-2008	Bohm et al.	
	A2	2005/0018620	01-27-2005	Berndt et al.	
	A3	6,373,857	04-16-2002	Ma	
	A4	7,089,027	08-08-2006	Welch et al.	
	A5				
	A6				
	A7				

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Document Number (Number – kind code)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Passages or Relevant Figures Appear	T
	B1					
	B2					
	B3					
	B4					

OTHER ART			
Examiner Initials	Cite No.	Include name of author (in CAPS),'title of article" (when appropriate), *title of the item* (book, magazine, symposium, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	C1		
	C5		

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

Electronic Acknowledgement Receipt	
EFS ID:	20618666
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	34283
Filer:	Nelson Alejandro Quintero
Filer Authorized By:	
Attorney Docket Number:	23437621
Receipt Date:	05-NOV-2014
Filing Date:	10-NOV-2011
Time Stamp:	18:31:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		23437621_P170609NAQ_IDS_GEN01_141105.pdf	134071 bd6c6cc97fa27042b16d91f6c20303ccb9ab0058	yes	3

	Multipart Description/PDF files in .zip description				
	Document Description	**Start**	**End**		
	Transmittal Letter	1	2		
	Information Disclosure Statement (IDS) Form (SB08)	3	3		
Warnings:					
Information:					
2	Other Reference-Patent/App/Search documents	23437621-IDS-DEOA-141104.pdf	326959 3a16dd1b6e5117aee078c0b8680d1119f7aa1503	no	18
Warnings:					
Information:					
		Total Files Size (in bytes):	461030		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	**Chi-Ming KUO, Yu-Li KAO, Chien-Chih YANG, Sheng-Fu CHANG**	Filed:	**11/10/2011**
Appl. No.:	**13/293,506**	Examiner:	**ABEDIN, NORMAN**
Conf. No.:	**1121**	Art Unit:	**2449**
Title:	**REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF**		

Date: **November 5, 2014**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §1.56, the materials listed on the attached form PTO-1449 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application.

A copy of the foreign office communication in which the reference(s) were cited is filed herewith.

Citation of these documents should not be construed as a representation that the documents are in fact material or are in fact prior art with respect to the instant invention. The examiner should not make any inference relating to the relative pertinence of cited references based upon the order in which the art is presented. Citation of these documents should not be construed as a representation that an exhaustive search has been made or that more pertinent art may not be in existence.

It is respectfully requested that the Examiner return a copy of the attached form PTO-1449 with

initials or other appropriate marks indicating consideration of the cited materials.

Please charge any required additional fee or underpayment of fee to deposit account No. **502447.**

Respectfully submitted,

/Nelson A. Quintero/

Nelson A. Quintero
Reg. No. 52,143
Customer No. 34,283

P170609NAQ

Telephone: (310) 909-8535

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/293,506	11/10/2011	Chi-Ming KUO	6121.003US

CONFIRMATION NO. 1121

34283
QUINTERO LAW OFFICE, PC
615 Hampton Dr, Suite A202
Venice, CA 90291

POA ACCEPTANCE LETTER

OC000000070472404

Date Mailed: 09/02/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/26/2014.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/mbeyene/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/293,506	11/10/2011	Chi-Ming KUO	6121.003US

CONFIRMATION NO. 1121

11336
Min-Lee Teng
Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

POWER OF ATTORNEY NOTICE

OC000000070472381

Date Mailed: 09/02/2014

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/26/2014.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/mbeyene/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Print Form

PTO/SB/81 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
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.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	[illegible]
Filing Date	Nov 10, 2011
First Named Inventor	Chi-Ming Kuo
Title	REMOTE INFORMATION COMMUNICATION SYSTEM AND [illegible]
Art Unit	
Examiner Name	
Attorney Docket Number	

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: 34283

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☒ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name	
Address	
City / State / Zip	
Country	
Telephone / Email	

I am the:

☐ Applicant/Inventor.

OR

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____

SIGNATURE of Applicant or Assignee of Record

Signature	Kuo Chi-Ming	Date	8/8/2012
Name	KUO, CHI-MING	Telephone	+886-2-2603-5111
Title and Company	Representative, TRICOM-TEK CO., LTD.		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 3 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.

Electronic Acknowledgement Receipt

EFS ID:	19966205
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	11336
Filer:	Nelson Alejandro Quintero
Filer Authorized By:	
Attorney Docket Number:	6121.003US
Receipt Date:	26-AUG-2014
Filing Date:	10-NOV-2011
Time Stamp:	13:29:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		24337621_poa_140826.pdf	325254 45f24d94ff3fd171f1e97ab6378970dc6209c5ef	yes	2

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Assignee showing of ownership per 37 CFR 3.73.	1	1
	Power of Attorney	2	2
Warnings:			
Information:			
	Total Files Size (in bytes):	325254	

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/96 (02-09)
Approved for use through 03/31/2009. 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 displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Chi-Ming KUO, Yu-Li Kao, Chien-Chih Yang, Sheng-Fu Chang

Application No./Patent No.: 13/293,506 Filed/Issue Date: Nov 10, 2011

Titled: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

THROUGHTEK CO., LTD., a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 027269, Frame 0570, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature — 8.18.2012 Date

KUO, CHI-MING — Representative
Printed or Typed Name — Title

This collection of information is required by 37 CFR 3.73(b). 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. 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.

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	13/293,506	Filing Date	2011-11-10	Docket Number (if applicable)	6121.003US	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)	2014-07-21
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

In re Application of:	)	Examiner: ABEDIN, NORMIN
	)	
Chi-Ming KUO	)	Art Unit: 2449
	)	
Application No. 13/293,506	)	Confirmation No.: 1121
	)	
Filed: November 10, 2011	)	Atty Docket : 6121.003US
	)	
For: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF	)	
	)	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CONTINUED EXAMINATION AND RESPONSE TO OFFICE ACTION

Dear Sir:

Applicant now responds to the Office Action dated May 7, 2014. Applicant respectfully requests entry and consideration of the following amendments and remarks.

Amendments to the Claims

1. (Currently amended) A linking method of an information communication system, comprising steps of:

~~(a)~~ providing an administration server ~~and a plurality of linking servers connected to the administration server, for establishing point-to-point (P2P) connections between service devices and client devices through Internet~~;

~~(b)~~ the administration server, in response to a first request of a remote device, ~~associating a~~ assigning at least one linking server from a plurality of linking servers and informing the remote device with the assigned linking server ~~of the plurality of linking server to each of the service devices according to requests of the service device, respectively,~~ for the remote device ~~wherein each of the service device respectively~~ to registers ~~in a corresponding linking server according to an address of the corresponding linking server provided by the administration server~~ at the assigned linking server, wherein when the remote device sends a new first request to the administration server after a predetermined time, the administration server re-determines whether to assign another linking server from the plurality of linking servers to the remote device to register;

~~(c) a client device asking the administration server to locate a linking server of the plurality of linking server in which a specified service device is registered;~~

~~(d)~~ the administration server, responding to a second request of a proximal device for connecting to the remote device, informing the proximal device the assigned linking server the remote device being registered to ~~the client device with the address of the linking server in which the specified service device is registered~~; and

~~(e)~~ the assigned linking server, in response to a third request of the proximal device, facilitating ~~the client device requesting the linking server to~~ establishment of a point-to-point (P2P) connection between the ~~client~~ proximal device and the ~~specified service~~ remote device ~~according to the address of the linking server; and~~

~~(f) the linking server establishing a P2P connection between the client device and the specified service device according to the request of the client device, wherein the administration server is not part of the P2P connection.~~

2. (Currently amended) The linking method according to claim 1, wherein the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up to each other, and each administration server stor~~es~~ing a server list for ~~memorizing~~ recording information of one or more linking servers and a device list for ~~memorizing~~ recording information of one or more remote devices.

3. (Currently amended) The linking method according to claim 1, wherein the administration server assigns more than one linking servers to the remote device in response to the first request, and the remote device register to these more than one linking servers ~~provides different addresses for the service devices supported by different service providers to register in the different linking servers~~.

4. (Currently amended) The linking method according to claim 3~~1~~, wherein the administration server, in response to the second request of the proximal device for connecting to the remote device, selects one linking server from the more than two linking servers that the remote device registers in and informs said one linking server to the proximal device ~~provides different addresses for the service devices with different product types to register in the different linking servers~~.

5. (Currently amended) The linking method according to claim 1, wherein the administration server provides different addresses for the ~~service~~ remote devices at different geographic locations to register in the different linking servers.

6. (Previously presented) The linking method according to claim 1, wherein the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

7. (Previously presented) The linking method according to claim 1, wherein the administration server updates a server list and a device list to increase or change the linking servers or the ~~service~~ remote devices.

8. (Currently amended) The linking method according to claim 1, wherein the ~~client~~ proximal device includes an application programming interface for ~~a user to address~~ sending ~~a~~ the second request and the third request ~~of finding out one of the service devices~~.

9. (Currently amended) The linking method according to claim 1, wherein the P2P connection between the ~~client~~ proximal device and the ~~specified service~~ remote device is established by hole punching performed by the linking server.

10. (Canceled)

11. (Canceled)

12. (Currently amended) The linking method according to claim 1, wherein the ~~service~~ remote device periodically updates and registers the information thereof in the linking server that is assigned by the administration server.

13. (Currently amended) The linking method according to claim 1, wherein the ~~service~~ remote device again requests the administration server to provide the address of at least one linking server supporting the ~~service~~ remote device, and wherein the ~~s service~~ remote device again registers information thereof in the linking server.

14. (Currently amended) The linking method according to claim 1, wherein the ~~service~~ remote device is a security alarm device.

15. (Currently amended) The linking method according to claim 1, wherein the ~~service~~ remote device is a home electric appliance.

16. (Currently amended) The linking method according to claim 1, wherein the proximal ~~client~~ device is equipped with an audio/video playing function.

17. (Currently amended) An information communication system, comprising:

~~a plurality of service devices;~~

an administration server; and

a plurality of linking servers connected to the administration server, for establishing point-to-point (P2P) connections ~~through Internet~~, wherein the administration server associates ~~a~~ at least one linking server ~~of~~ from the plurality of linking servers to a remote device ~~each of the plurality of service devices, wherein each of the service~~ and the remote device registers in the assigned ~~a corresponding~~ linking server~~, respectively~~;

wherein a ~~client~~ proximal device requests the administration server to inform one assigned ~~locate a~~ linking server corresponding to the remote device ~~of the plurality of linking servers in which a specified service device is registered~~, and ~~wherein~~ the proximal ~~client~~ device communicates with the assigned linking server to establish a P2P connection between the ~~client~~ proximal device and the ~~specified service~~ remote device, and wherein the remote device, after a predetermined time, requests the administration server to re-determine whether to assign another linking server for the remote device to register ~~, wherein the administration server is not part of the P2P connection~~.

18. (Currently amended) The information communication system according to claim 17, wherein the administration server is one of a plurality of administration servers that constitute an administration server group, and

wherein the administration servers in the identical administration server group back up to each other, and each administration server stores ~~ing~~ a server list for ~~memorizing~~ recording information of one or more linking servers and a device list for ~~memorizing~~ recording information of one or more service devices.

19. (Previously presented) The information communication system according to claim 17, wherein the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

20. (Previously presented) The information communication system according to claim 19, wherein the linking servers are managed by different service providers.

21. (Currently amended) The information communication system according to claim 19, wherein the linking servers support different remote devices with different product types.

22. (Previously presented) The information communication system according to claim 19, wherein the linking servers are located at different geographic locations.

23. (Currently amended) The information communication system according to claim 17, wherein the ~~client~~ proximal device includes an application programming interface for a user to address a request of finding out the linking server of the ~~specified service~~ remote device.

24. (Currently amended) The information communication system according to claim 17, wherein the P2P connection between the ~~client~~ proximal device and the ~~specified service~~ remote device is established by hole punching performed by the linking server.

25. (Canceled)

26. (Currently amended) The information communication system according to claim 17, wherein the ~~service~~ remote device is a security alarm device.

27. (Currently amended) The information communication system according to claim 17, wherein the ~~service~~ remote device is a home electric appliance.

28. (Currently amended) The information communication system according to claim 17, wherein the ~~client~~ proximal device is equipped with an audio/video playing function.

REMARKS

In the Office Action of May 7, 2014 (hereinafter as 'the Office Action'), all pending claims are rejected under 35 U.S.C. §103 (pre-AIA). Responding to the Office Action, Applicant requests for continued examination (RCE) and amends the pending claims. Reconsideration is respectfully requested based on the amended claims and the following reasons.

Amendments to the Claims

In this Amendment, Claims 1-5, 8, 12-16-18, 21, 23, 24 and 26-28 are amended. Claims 6, 7, 19, 20 and 22 are previously presented. Claims 10, 11 and 25 are canceled previously. After this Amendment is entered, Claims 1-9, 12-24, 26-28 are pending. Amendments are explained as follows.

Regarding amendment applying to Claim 1, not to limit the scope, the terms "service device" and "client device" are replaced with "remote device" and "proximal device", which appear in original claims and the Specification to keep the terms being consistent. In addition, Claim 1 is amended by adding the feature that the remote device will request again to the administration server to re-determine whether to change another linking server for the remote device to register, which support at least can be found Line 24 of Page 10 to Line 2 of Page 11, Line 21 of Page 15 to Lin 16 of Page 16 of the Specification.

Regarding amendment applying to Claim 2, only some wording is adjusted to more accurately define the scope.

Regarding amendment applying to Claim 3 and 4, the features of assigning more than one linking servers for a remote device to register and selecting one from the linking servers that the remote device registers in at least can find support in Line 15 of Page 11 to Line 1 of Page 14 and Fig. 1.

Regarding amendment applying to Claims 5, 8, 9, 12-16, the terms "remote device" and "proximal device" in original claims are recovered to replace the terms "service device" and "client device" appeared in previous amendment and in addition, some wording is adjusted to more clearly define the claim scopes.

Regarding amendment to Claim 17, features similar to Claim 1 as mentioned above are added.

Regarding Claim 18, 21, 23, 24, 26-28, the terms "remote device" and "proximal device" in original claims are recovered to replace the terms "service device" and "client device" appeared in previous amendment and in addition, some wording is adjusted to more clearly define the claim scopes.

Therefore, no new matter is added and Applicant respectfully requests the Examiner to continue the examination based on the amended claims.

Rejections under 35 U.S.C. §103 (pre-AIA)

In the Office Action, all pending Claims are rejected as being regarded unpatentable over U.S. Patent Publication No. 2003/0105854 of Thorsteinsson et al. (hereinafter as *Thorsteinsson*) and in view of U.S. Patent Publication No. 2010/0185771 of Gurun et al. (hereinafter as *Gurun*), and further in view of U.S. Patent Publication No. 2010/00274859 of Bucuk (hereinafter as *Bucuk*).

Applicant has carefully studied the reasons indicated in the Office Action as well as all the contents of the cited prior art, i.e. *Thorsteinsson, Gurun* and *Bucuk*. There are at least following features not taught by these cited references, even they are combined.

First, *Thorsteinsson* teaches an architecture in which a central portal server is used for interfacing clients, service providers and client site devices, which is clearly illustrated in Fig. 1 of *Thorsteinsson* (attached below for convenience of explanation).

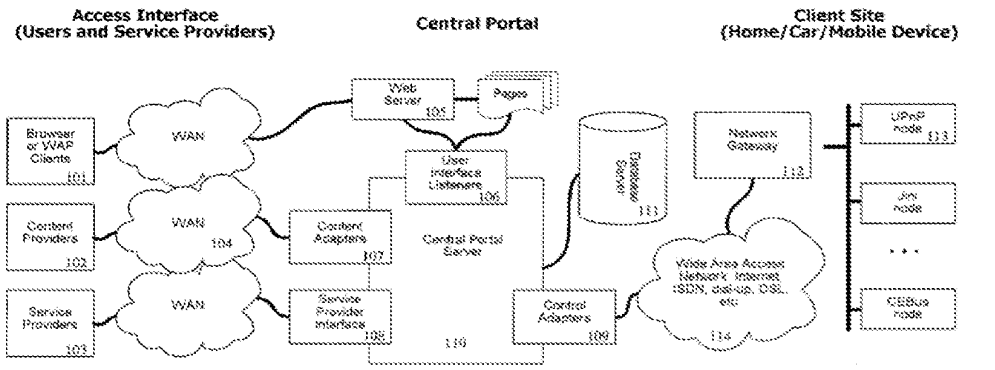


Figure 1: An embodiment of the present invention, shown with its wide-area network connections. The central portal server is shown in darker shading color in the middle of the figure (blocks 106-116)

In addition, the rest part of the *Thorsteinsson* explains generating commend sequences based on received requests to prevent inconsistent or unauthorized access and control of the devices at the client site. See Fig. 2 to Fig. 15 and corresponding paragraphs of *Thorsteinsson*.

Applicant notes that there are various servers or even gateways mentioned in *Thorsteinsson*, as indicated in Page 3 to Page 5 of the Office Action. However, no teaching is clearly provided that a server is used as an administration server for receiving P2P connection request from a first device (corresponding to the 'proximal device' in amended claims of this Application) to be connected to a second device (corresponding to the 'remote device' in amended claims of this Application) with help of a linking server, and particularly the second device will continue to request the administration server to re-determine whether to change another linking server for serving the second device.

For the example illustrated in Fig. 1 of *Thorsteinsson*, if taking the central portal server as the administration server, the client in the left side as the first device for requesting connection with a device of the client site at the right side, no device can be reasonably corresponded to the 'linking server'. Even the 'Network gateway' 112 of *Thorsteinsson* is corresponded to the 'linking server,' the Network gateway is not taught to be re-determined by the central portal

server, not to mention the network gateway 112 is a single machine, not selected from a plurality of linking servers, or providing any help for the client device at the left side and the device at the right side to establish a P2P connection.

Moreover, such P2P connection violates the basic principle of *Thorsteinsson*. The major technical problem to solve in *Thorsteinsson* is to use an intermediate server like the central portal server in Fig. 1 to prevent undesired consequences for direct contact of the devices at the left side with the devices at the right side. Furthermore, *Thorsteinsson* teaches translating control requests to filtered command sequence. See Paragraphs [0058]-[0068]. In other words, *Thorsteinsson* not only fails to teach the claimed inventions but teaches away from P2P connection in their design.

In contrast, the two independent claims, i.e. Claims 1 and 17 of this Application, both encompass the features of alternation of linking servers when necessary and the features of selecting one from multiple linking servers, instead of directly using the administration server to conduct the P2P connection.

Even the other two cited references are combined, though as mentioned, such combination is not obvious since *Thorsteinsson* teaches away from P2P connection, their combination still fail to teach all features recited in Claims 1 and 17.

For example, *Gurun* teaches a P2P hole punching approach, but it is clearly illustrated in Fig. 1, Fig. 3(a) to Fig. 3(f) that it is always a central server helping establish hole punching. *Gurun* is silent on teaching selection from multiple linking servers dynamically and uses these linking servers to help establish P2P connection. It is the same in *Bucuk*, with similar description content and figures as *Gurun*.

In summary, Applicant respectfully submits that *Thorsteinsson* teaches away from being combined with *Gurun* or *Bucuk*, an even being combined, such combination still fails to teach features recited in the amended claims.

Other claims depend from these two independent claims and encompass further features and thus are not obvious over these cited references, either.

Accordingly, Applicant respectfully requests withdrawal of these rejections under 35 U.S.C. 103 (pre-AIA) based on the amended claims.

CONCLUSION

Claims 1-9, 12-24, 26-28 are currently pending. In view of the foregoing reasons, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

Respectfully Submitted,

Date : July 22, 2014

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

7F-2, No. 79, Sec. 2, Roosevelt Rd.
Taipei, Taiwan
Tel: +886-2-2362-9899
Fax: (703) 890-2397
Email: miketeng@litron-intl.com

Electronic Patent Application Fee Transmittal	
Application Number:	13293506
Filing Date:	10-Nov-2011
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Filer:	Min-Lee Teng
Attorney Docket Number:	6121.003US
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for Continued Examination	2801	1	600	600
		Total in USD ($)		**600**

Electronic Acknowledgement Receipt	
EFS ID:	19641024
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	11336
Filer:	Min-Lee Teng
Filer Authorized By:	
Attorney Docket Number:	6121.003US
Receipt Date:	22-JUL-2014
Filing Date:	10-NOV-2011
Time Stamp:	03:38:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$600
RAM confirmation Number	7852
Deposit Account	
Authorized User	

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_003_RCE_REQUEST.pdf	697860 7dd3122b8a0df7ae49af25ac14580d6d1f114b4f	no	3
Warnings:					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	6121_003_Amendment.pdf	261642 4e8b7fc4913276fe8d72447d8f2d398086148a53	no	12
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30211 542c934893d7ca61418ef68a7c85995ca84b2b5a	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	989713		

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
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 Substitute for Form PTO-875	Application or Docket Number 13/293,506	Filing Date 11/10/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	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	07/22/2014	(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))	* 24	Minus	** 28	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 3	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
/DEBORAH NASH/

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.

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.
13/293,506	11/10/2011	Chi-Ming KUO	6121.003US	1121

11336 7590 05/07/2014

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
05/07/2014	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. 13/293,506	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 *01/14/2014*.

☐ 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) *1-9,12-24 and 26-28* 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) *1-9,12-24 and 26-28* 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 *11/10/2011* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☒ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

Status of Claims:

1. Claims 1-9, 12-24, 26-28 are pending in this Office Action.

2. Claims 1-9, 12-24, 26-28 are amended.

3. Claims 10, 11, 25 are canceled.

4. Claims 1-9, 12-24, 26-28 are rejected. This rejection is **Final**.

Response to arguments

Applicant's arguments filed in the amendment filed 01/29/2013 have been fully considered but are moot in view grounds of rejection. The reasons set forth below.

Applicant's Invention as Claimed

Amendments to the claims:

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, 3-5, 8-9, 13-17, 23-24, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorsteinsson et al. , "Thorsteinsson" (US Patent Publication US 20030105854) and in view

of Gurun et al. "Gurun" (US Patent Publication US 20100185771).

As per claim 1, Thorsteinsson discloses a linking method of an information communication system, comprising steps of:

(a) providing an administration server and a plurality of linking servers' connected to the administration server **(Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network)**, for establishing connections between service devices and client devices through Internet **(Thorsteinsson, Para.32, The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account);**

(b) the administration server associating a linking server of the plurality of linking server to each of the service devices according to requests' of the service device, respectively **(Thorsteinsson, Para.55, Service providers link their systems to the central portal, using any of a plurality of communications protocols…. settings for each Client Site before being issued to devices through the appropriate Control Adapter (block 109 of FIG. 1) in each case, Para.8, Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services.)**, wherein each of the service devices respectively registers in a corresponding linking server according to an address of the corresponding linking server provided by the administration server **(Thorsteinsson, Para.55, In the middle of FIG. 1 is the central portal itself. It is linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences., Para.32, The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation);**

(c) a client device asking the administration server to locate a linking server of the plurality of linking server in which a specified service device is registered **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services, para.55, the central portal linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

(d) the administration server responding to the client device with the address of the linking server in which the specified service device is registered **(Thorsteinsson, Para.65, Using data from the event object, the event router discovers from which Client Site the event originated, validates that this is a known (registered) Client Site by consulting the portal's data store, and forwards the event into the Client Site handler mechanism (block 305). In one embodiment of this invention, the IP address of the originator of the event notification message is used to identify the Client Site.)**

(e) the client device requesting the linking server to establish between the client device and the specified service device according to the address of the linking server **(Thorsteinsson, Para.32,The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites, Para56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers.);**

(f) the linking server establishing between the client device and the specified service device according to the request of the client device, wherein the administration server is not part of the P2P connection **(Thorsteinsson, Para.8, Homeowner also needs to configure the home network's Internet gateway to allow routing of control information to and from each service provider, or in other words, punch**

holes in the home's Internet firewall, Para.51, The central portal helps users, typically homeowners and their families, administer and maintain their devices and appliances. It also serves as a conduit and platform for bundled services provided by external service and content providers, who then do not need to connect their services to individual home networks).

However Thorsteinsson does not discloses point-to-point (P2P) connection between service devices and client devices through Internet.

Gurun discloses point-to-point (P2P) connection between service devices and client devices through Internet **(Gurun, Para.9, Using direct endpoint to endpoint connection when available has the benefits of reducing data traffic through the communication server, the amount of Internet bandwidth, and perceived latency for critical data traffic).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Thorsteinsson in view of Gurun by implementing discloses point-to-point (P2P) connection between service devices and client devices through Internet in order to provide network efficiency and improving latency**(Gurun, Para.1, latency can potentially be higher than endpoint to endpoint connections (also commonly known as "direct connections" or "point to point connections") between the clients, thus reducing the perceived speed of the service. Direct connections on the other hand, while possessing many desirable characteristics, such as network efficiency with little server involvement, can be complex and relatively time consuming to setup and maintain).**

As per claim 3, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the administration server provides different addresses for the service devices supported by different service providers to register in the different linking servers **(Thorsteinsson, Para.63, Control Adapters are the final step on the portal's output side (block 216 in FIG. 2). They translate generic, protocol-neutral commands and queries to device and network specific control and query packets that are appropriate for the particular Client Site being addressed (block 217). The central portal**

can host a plurality of Control Adapters, one for each device control standard or proprietary protocol).

As per claim 4, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the administration server provides different addresses for the service devices with different product types to register in the different linking servers **(Thorsteinsson, Para.8, These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services).**

As per claim 5, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the administration server provides different addresses for the service devices at different geographic locations to register in the different linking servers **(Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network).**

As per claim 8, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the client device includes an application programming interface for a user to address a request of finding out one of the service devices **(Thorsteinsson, Para.86, These commands are submitted via a user interface device (client) (block 101 of FIG. 1) that may be located within the Client Site or elsewhere, but is connected over a wide area network (block 104 of FIG. 1) to the central portal, Thorsteinsson, Para.53, commands and queries from human users (block 101) via a Web Server (block 105) coupled to "User Interface Listeners" (block 106)).**

As per claim 9, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the p2p connection between the client device and the specified service device is established by hole

punching performed by the linking server **(Thorsteinsson, Para.117, Users are spared the inconvenience of maintaining individual log-in accounts with each service provider, and the security risk of punching further holes in their security firewalls, Thorsteinsson, Para.119, This solution is better than a point-to-point topology between home networks and service providers).**

As per claim 13, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the service device again requests the administration server to provide the address of at least one linking server supporting the service device, and wherein the service device again registers information thereof in the linking server **(Thorsteinsson, para.55, the central portal linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

As per claim 14, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the service device is a security alarm device **(Thorsteinsson, Para.80, The Conflict Resolution mechanism also allows higher-priority services, such as fire or burglar alarms).**

As per claim 15, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the service device is a home electric appliance **(Thorsteinsson, Para.106, The commands dim the lights in the living room, draw the curtains, turn on the television set, tune it to channel 5, and set the sound volume).**

As per claim 16, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the client device is equipped with an audio/video playing function **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices**

and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers).

As per claim 17, Thorsteinsson discloses an information communication system, comprising:

a plurality of service devices **(Thorsteinsson, Para.32, a portal that connects on one side to devices and appliances within houses (typically homes or cottages), buildings (including multifamily dwellings and commercial buildings), boats and cars--collectively referred to as Client Sites--and on the other side to service providers);**

an administration server **(Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network)**;

and a plurality of linking servers connected to the administration server **(Thorsteinsson, Para.32, a portal that connects on one side to devices and appliances within houses (typically homes or cottages), buildings (including multifamily dwellings and commercial buildings), boats and cars--collectively referred to as Client Sites--and on the other side to service providers),** wherein the administration server associates a linking server of the plurality of linking servers to each of the plurality of service devices **(Thorsteinsson, Para.55, Service providers link their systems to the central portal, using any of a plurality of communications protocols…. settings for each Client Site before being issued to devices through the appropriate Control Adapter (block 109 of FIG. 1) in each case, Para.8, Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services)**, wherein each of the service device registers in a corresponding linking server, respectively **(Thorsteinsson, Para.55, In the middle of FIG. 1 is the central portal itself. It is linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences., Para.32, The portal**

allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation) wherein a client device requests the administration server to locate a linking server of the plurality of linking servers in which a specified service device is registered **(Thorsteinsson, Para.8, a service provider who wants to offer services to homeowners through their home networks needs to connect its server computers to each home network. These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services, para.55, the central portal linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

However Thorsteinsson does not discloses establishing point-to-point (P2P) connections between service devices and client devices through Internet, wherein the client device communicates with the linking server to establish a P2P connection between the client device and the specified service device, wherein the administration server is not part of the P2P connection.

Gurun discloses point-to-point (P2P) connection between service devices and client devices through Internet **(Gurun, Para.9, Using direct endpoint to endpoint connection when available has the benefits of reducing data traffic through the communication server, the amount of Internet bandwidth, and perceived latency for critical data traffic),** wherein the client device communicates with the linking server to establish a P2P connection between the client device and the specified service device, wherein the administration server is not part of the P2P connection **(Gurun, Para.22, FIG. 3(b)-(f) depict an example of a process to establish a direct connection between endpoints 102 and 110 via, for a non-limiting example, "NAT/TCP hole punching.").**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Thorsteinsson in view of Gurun by implementing discloses point-to-point (P2P)

connection between service devices and client devices through Internet in order to provide network efficiency and improving latency**(Gurun, Para.1, latency can potentially be higher than endpoint to endpoint connections (also commonly known as "direct connections" or "point to point connections") between the clients, thus reducing the perceived speed of the service. Direct connections on the other hand, while possessing many desirable characteristics, such as network efficiency with little server involvement, can be complex and relatively time consuming to setup and maintain).**

As per claim 23, the modified Thorsteinsson discloses the information communication system according to claim 17, wherein the client device includes an application programming interface for a user to address a request of finding out a specified service device **(Thorsteinsson, Para.86, These commands are submitted via a user interface device (client) (block 101 of FIG. 1) that may be located within the Client Site or elsewhere, but is connected over a wide area network (block 104 of FIG. 1) to the central portal, Thorsteinsson, Para.53, commands and queries from human users (block 101) via a Web Server (block 105) coupled to "User Interface Listeners" (block 106)).**

As per claim 24, the modified Thorsteinsson discloses the information communication system according to claim 17, wherein the P2p connection between the client device and the specified service device is established by hole punching performed by the linking server **(Thorsteinsson, Para.117, Users are spared the inconvenience of maintaining individual log-in accounts with each service provider, and the security risk of punching further holes in their security firewalls, Thorsteinsson, Para.119, This solution is better than a point-to-point topology between home networks and service providers).**

As per claim 26, the modified Thorsteinsson discloses the information communication system according to claim 17, wherein the service device is a security alarm device **(Thorsteinsson, Para.80,**

The Conflict Resolution mechanism also allows higher-priority services, such as fire or burglar alarms).

As per claim 27, the modified Thorsteinsson discloses the information communication system according to claim 17, wherein the service device is a home electric appliance **(Thorsteinsson, Para.106, The commands dim the lights in the living room, draw the curtains, turn on the television set, tune it to channel 5, and set the sound volume).**

As per claim 28, the modified Thorsteinsson discloses the information communication system according to claim 17, wherein the client device is equipped with an audio/video playing function **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers).**

Claims 2, 6-7, 12 , 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorsteinsson et al. , "Thorsteinsson" (US Patent Publication US 20030105854) in view of Gurun et al. "Gurun" (US Patent Publication US 20100185771) and further in view of Bucuk (US Patent Publication US 20100274859).

As per claim 2, the modified Thorsteinsson discloses the linking method according to claim 1, wherein the administration server is one of a plurality of administration servers that constitute an administration server group, and each administration server storing the server list for memorizing one or more linking servers and the device list for memorizing one or more service devices **(Thorsteinsson, Para.55, In the middle of FIG. 1 is the central portal itself. It is linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

However the modified Thorsteinsson does not disclose the administration servers in the identical administration server group back up with each other

Bucuk discloses the administration servers in the identical administration server group back up to each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

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 Thorsteinsson and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 6, the modified Thorsteinsson discloses the linking method according to claim 1.

However the modified Thorsteinsson does not disclose the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other.

Bucuk discloses a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

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 Thorsteinsson and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 7, the modified Thorsteinsson discloses the linking method according to claim 1,

However the modified Thorsteinsson does not disclose the administration server updates the server list and the device list to increase or change the linking servers or the service devices.

Bucuk discloses the administration server updates the server list and the device list to increase or change the linking servers or the service devices **(Bucuk, Para.182, periodically update a database of all authorized BD_ADDR numbers of authorized users or devices).**

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 Thorsteinsson and in view of Bucuk by implementing the administration server updates the server list and the device list to increase or change the linking servers or the service devices in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 12, the modified Thorsteinsson discloses the linking method according to claim 1,

However the modified Thorsteinsson does not disclose

Bucuk discloses the service device periodically updates and registers the information thereof in the linking server that is assigned by the administration server **(Bucuk, Para.182, periodically update a database of all authorized BD_ADDR numbers of authorized users or devices).**

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 Thorsteinsson and in view of Bucuk by implementing the service device periodically updates and registers the information thereof in the linking server that is assigned by the administration server **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 18, the modified Thorsteinsson discloses the information communication system according to claim 17, wherein the administration server is one of a plurality of administration servers constitute an administration server group, and each administration server storing a server list for memorizing one or more linking servers and the device list for memorizing one or more service devices **(Thorsteinsson, Para.55, In the middle of FIG. 1 is the central portal itself. It is linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

However the modified Thorsteinsson does not disclose the administration servers in the identical administration server group back up with each other

Bucuk discloses the administration servers in the identical administration server group back up to each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk,**

Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).

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 Thorsteinsson and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 19, the modified Thorsteinsson discloses the information communication system according to claim 17.

However the modified Thorsteinsson does not discloses a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up tpeach other.

Bucuk discloses a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up to each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

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 Thorsteinsson and in view of Bucuk by implementing the administration servers in the identical administration server group back up to each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or**

theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).

As per claim 20, the modified Thorsteinsson discloses the information communication system according to claim 19, wherein the linking servers are managed by different service providers **(Thorsteinsson, Para.8, Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services).**

As per claim 21, the modified Thorsteinsson discloses the information communication system according to claim 19, wherein the linking servers support different service devices with different product types **(Thorsteinsson, Para.8, These networks are in the general case heterogeneous, i.e. they can be based on different device models and protocols. Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services).**

As per claim 22, the modified Thorsteinsson discloses the information communication system according to claim 19, wherein the linking servers are located at different geographic locations **(Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network).**

Conclusion

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.

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. 13/293,506	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-2010/0185771	07-2010	Gurun et al.	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	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

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

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

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/10 17:31

		appliance)	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
S19	1385	@ad<="20110127" and	US-PGPUB;	OR	ON	2013/10/10

		(surveillance and anti$theft)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:36
S20	60	@ad<="20110127" and (surveillance and anti$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; DERWENT;	OR	ON	2013/10/10 18:22

			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; FPRS; EPO;	OR	ON	2013/10/10 18:49

			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 near3 device) and proxy and (link$4	US-PGPUB; USPAT;	OR	ON	2013/10/10 19:10

		near1 server) and (server near1 list)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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
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	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2013/10/11 15:11

		software)	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 mobile or laptop)	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/11 16:38

			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
S80	0	@ad<="20110127" and ((remote or	US-PGPUB;	OR	ON	2013/10/11

		client or terminal or user) naer3 device) same register same server same (authent$4 or verificat$4) and derectory	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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; DERWENT;	OR	ON	2013/10/13 15:19

			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 pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2013/10/15 01:24

			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 pointtopoint	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	US-PGPUB; USPAT;	OR	ON	2013/10/16 15:41

		server	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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; 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
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;	OR	ON	2013/10/26 23:59

			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 provider) and set$top	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/27 00:35

			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
S141	2	((service near2 provider) near3	US-PGPUB;	OR	ON	2013/10/27

		(control$4 or manag$4 or monitor$4) near3 device) same (direct$4 near3 connect$4) and "709"/$.ccls.	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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; DERWENT;	OR	ON	2013/10/27 15:38

			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

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

			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	pointtopoint 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	pointtopoint and (service near3 provider) near6 account and (device near4 register$4)	US-PGPUB; USPAT; USOCR;	OR	ON	2014/04/24 19:34

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S177	94	@ad<="20110127" and pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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 pointtopoint 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

			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$4) near3 device and @ad<="20110127" and register and server and pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/24 20:21
S190	204	(ad$hoc near3 network) and (control$4 or monitor$4) near3 device and @ad<="20110127" and register and server and pointtopoint 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 pointtopoint 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 pointtopoint 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

			IBM_TDB			
S194	7	hole$punch$4 and pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:23
S195	4	hole$punch$4 and pointtopoint and peertopeer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/04/25 14:23
S196	51	hole$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

EAST Search History (Interference)

<This search history is empty>

4/28/2014 3:53:00 PM
C:\Users\nabedin\Documents\EAST\Workspaces\13293506.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	KUO ET AL.
	Examiner	Art Unit
	NORMIN ABEDIN	2449

CPC- SEARCHED		
Symbol	Date	Examiner
G06F15/173	4/23/2014	NA
H04L61/2539	4/23/2014	NA
H04L61/256	4/23/2014	NA
H04L61/2076	4/23/2014	NA

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	203, 206, 223, 224, 225	10/16/2013	NA
709	203, 206, 223, 224, 225	4/23/2014	NA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	10/16/2013	NA
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	4/23/2014	NA

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

/NORMIN ABEDIN/ Examiner.Art Unit 2449	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	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	10/11/2013	04/23/2014							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	-							
	11	✓	-							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							
	21	✓	✓							
	22	✓	✓							
	23	✓	✓							
	24	✓	✓							
	25	✓	-							
	26	✓	✓							
	27	✓	✓							
	28	✓	✓							

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	:	13/293,506	Confirmation No.	:	1121
First Named Applicant	:	Chi-Ming Kuo	Filed	:	11/10/2011
Examiner	:	ABEDIN, NORMIN	TC/A.U.	:	2449
Docket No.	:	6121.003US	Customer No.	:	11336

AMENDMENT

Sir:

In response to the Office action of Oct. 28, 2013, 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 8 of this paper.

Amendments to the Claims:

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

Listing of Claims:

1. (Currently amended) A linking method of an ~~remote~~ information communication system, comprising steps of:

~~Step A: at least one remote device asking an administration server to provide an address of at least one linking server supporting the remote device through an Internet;~~

~~Step B: the remote device registering information thereof in the linking server according to the address provided by the administration server;~~

~~Step C: a proximal device asking the administration server to find out a specified remote device through the Internet;~~

~~Step D: the administration server responding to the proximal device with the address of the linking server registered by the specified remote device;~~

~~Step E: the proximal device requesting the linking server to establish a link between the proximal device and the specified remote server according to the responded address; and~~

~~Step F: the linking server establishing the link between the proximal device and the specified remote device according to the request of the proximal device.~~

(a) providing an administration server and a plurality of linking servers connected to the administration server, for establishing point-to-point (P2P) connections between service devices and client devices through Internet;

(b) the administration server associating a linking server of the plurality of linking server to each of the service devices according to requests of the service device, respectively, wherein each of the service devices respectively registers in a corresponding linking server according to an address of the corresponding linking server provided by the administration server;

(c) a client device asking the administration server to locate a linking server of the plurality of linking server in which a specified service device is registered;

(d) the administration server responding to the client device with the address of the linking server in which the specified service device is registered;

(e) the client device requesting the linking server to establish a P2P connection between the client device and the specified service device according to the address of the linking server; and

(f) the linking server establishing a P2P connection between the client device and the specified service device according to the request of the client device, wherein the administration server is not part of the P2P connection.

2. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the administration server is one of a plurality of administration servers that constitutes a administration server group, and wherein the administration servers in the identical administration server group back up ~~with~~ to each other, each administration server storing a server list ~~of~~ for memorizing one or more linking servers and a device list ~~of~~ for memorizing one or more ~~remote~~ service devices.

3. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1 ~~2~~, wherein the administration server provides different addresses for the ~~remote~~ service devices supported by different service providers to register in the different linking servers.

4. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1 ~~2~~, wherein the administration server provides different addresses for the ~~remote~~ service devices with different product types to register in the different linking servers.

5. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1 ~~2~~, wherein the administration server provides different addresses for the ~~remote~~ service devices at different geographic locations to register in the different linking servers.

6. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein ~~a~~ the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up ~~with~~ to each other.

7. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1 ~~2~~, wherein the administration server updates ~~the~~ a server list and ~~the~~ a device list to increase or change the linking servers or the ~~remote~~ service devices.

8. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~proximal~~ client device includes an application programming interface for a user to address a request of finding out one of the ~~remote~~ service devices.

9. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~link~~ P2P connection between the ~~proximal~~ client device and the specified ~~remote~~ service device is established by hole punching performed by the linking server ~~to undertake point to point transmission between the proximal device and the specified remote service device~~.

10. (Cancelled)

11. (Cancelled)

12. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~remote~~ service device periodically updates and registers the information thereof in the linking server that is assigned by the administration server.

13. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~remote~~ service device again requests the administration server to provide the address of at least one linking server supporting the ~~remote~~ service device, and wherein the ~~remote~~ service device again registers information thereof in the linking server.

14. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~remote~~ service device is a security alarm device.

15. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~remote~~ service device is a home electric appliance.

16. (Currently amended) The linking method ~~of the remote information communication system~~ according to claim 1, wherein the ~~proximal~~ client device is equipped with an audio/video playing function.

17. (Currently amended) ~~A remote~~ An information communication system, comprising:

~~at least one administration server storing a server list and a device list;~~

~~at least one linking server registering in the server list of the administration server; and~~

~~at least one remote device requesting the administration server to provide addresses of the linking servers to register in the device list, and then register information thereof in one of the linking servers according to the address responded by the administration server;~~

~~wherein a proximal device requests the administration server to find out a specified remote device and provide the linking server registered by the specified remote device, and wherein the proximal device establishes a link between the specified remote device and the linking server provided by the administration server.~~

a plurality of service devices;

an administration server; and

a plurality of linking servers connected to the administration server, for establishing point-to-point (P2P) connections through Internet, wherein the administration server associates a linking server of the plurality of linking servers to each of the plurality of service devices, wherein each of the service device registers in a corresponding linking server, respectively;

wherein a client device requests the administration server to locate a linking server of the plurality of linking servers in which a specified service device is registered, wherein

the client device communicates with the linking server to establish a P2P connection between the client device and the specified service device, wherein the administration server is not part of the P2P connection.

18. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein the administration server is one of a plurality of administration servers that constitute an administration server group, and wherein the administration servers in the identical administration server group back up ~~with~~ to each other, each administration server storing ~~the~~ a server list ~~of~~ for memorizing one or more linking servers and ~~the~~ a device list ~~of~~ for memorizing one or more ~~remote~~ service devices.

19. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein ~~a~~ the plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up ~~with~~ to each other.

20. (Currently amended) The ~~remote~~ information communication system according to claim 19, wherein the linking servers are managed by different service providers.

21. (Currently amended) The ~~remote~~ information communication system according to claim 19, wherein the linking servers support different ~~remote~~ service devices with different product types.

22. (Currently amended) The ~~remote~~ information communication system according to claim 19, wherein the linking servers are located at different geographic locations.

23. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein the ~~proximal~~ client device includes an application programming interface for a user to address a request of finding out the linking server of the ~~a~~ specified ~~remote~~ service device.

24. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein the ~~link~~ P2P connection between the ~~proximal~~ client device and the specified ~~remote~~

service device is established by hole punching performed by the linking server ~~to undertake point-to-point transmission between the proximal device and the specified remote device~~.

25. (Cancelled)

26. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein the ~~remote~~ service device is a security alarm device.

27. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein the ~~remote~~ service device is a home electric appliance.

28. (Currently amended) The ~~remote~~ information communication system according to claim 17, wherein the ~~proximal~~ client device is equipped with an audio/video playing function.

REMARKS/ARGUMENTS

Claim Rejections under 35 U.S.C. 103

Previous claims 1, 8-10, 13-17, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable by Karaoguz et al. (US 20110302324 hereinafter "Karaoguz") and in view of Thorsteinsson et al. (US 20030105854 hereinafter "Thorsteinsson")

Response: Claims 1 has been amended as following:

A linking method of an information communication system, comprising steps of:

(a) providing an administration server and a plurality of linking servers connected to the administration server, for establishing point-to-point (P2P) connections between service devices and client devices through Internet;

(b) the administration server associating a linking server of the plurality of linking server to each of the service devices according to requests of the service device, respectively, wherein each of the service devices respectively registers in a corresponding linking server according to an address of the corresponding linking server provided by the administration server;

(c) a client device asking the administration server to locate a linking server of the plurality of linking server in which a specified service device is registered;

(d) the administration server responding to the client device with the address of the linking server in which the specified service device is registered;

(e) the client device requesting the linking server to establish a P2P connection between the client device and the specified service device according to the address of the linking server; and

(f) the linking server establishing a P2P connection between the client device and the specified service device according to the request of the client device, wherein the administration server is not part of the P2P connection.

In the amended claim 1, an administration server is connected to a plurality of linking servers so that each service device can be associated with a linking server through the administration server, wherein each service device can be registered in a corresponding linking server of the service

device. Since the administration server has the address information as well as the registered service devices in each of the linking server, a client device can contact the administration server to find out a linking server that is responsible for handling P2P connections for a particular service device to which the client device intends to connect.

In the amended claim 1, the cited reference, **Karaoguz**, does not disclose the limitation in claim 1 of instant application "**wherein the administration server associates a linking server of the plurality of linking server to each of the service devices, wherein each of the service device registers in a corresponding linking server, respectively;**" due to the fact that the broadband gateway is just a routing device which is not an **administration server** for associating a linking server to each of the service device, so that each service device can be registered into a corresponding linking server of the service device.

Furthermore, in the amended claim 1, **the administration server is not part of the P2P connection between the service device and the client device**, which is different from the cited reference, **Karaoguz**, in which **the broadband gateway is part of the connection** from each of the home device (client device) to a service device (portal of contents).

In the amended claim 1, **the administration server** is the contact point to associate services devices with linking servers, and each of the service devices can contact the administration server for registration of the service device into a corresponding linking server. The client device can then ask **the administration server** to provide the address of the linking server in which a desired service device is registered. However, in the office action, "**different administration servers" are used to reject the steps in the claim 1 SEPARATELY,** which is not applicable to the amended claim 1 in which **the administration server** is the **contact point of the service devices and the client devices for obtaining addresses of the linking servers so as to establish P2P connections between the service devices and the client devices**. Therefore, **the amended claim 1 is not disclosed by any or in combination of the cited references.**

Accordingly, Applicants hereby overcome the rejections on claim 1.

Amended claim 17 is a corresponding structure claim of the amended claim 1; therefore, rejection on claim 17 is overcome by the same reason as described above.

CONCLUSION

The claim 1 and claim 17 of instant application are not disclosed or taught by either single or a combination of the cited references; therefore, claim 1 and claim 17 are novel and patentable.

Claims 1-9 and 12-16 are dependent on claim 1 and should be allowed if claim 1 is allowed.

Claims 18-24 and 26-28 are dependent on claim 1 and should be allowed if claim 1 is allowed.

Claims 10-11 and 25 are cancelled.

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

Respectfully Submitted,

Date : Jan 13, 2014

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

7F-2, No. 79, Sec. 2, Roosevelt Rd.
Taipei, Taiwan
Tel: +886-2-2362-9899
Fax: (703) 890-2397
Email: miketeng@litron-intl.com

Electronic Acknowledgement Receipt

EFS ID:	17903057
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	11336
Filer:	Min-Lee Teng
Filer Authorized By:	
Attorney Docket Number:	6121.003US
Receipt Date:	14-JAN-2014
Filing Date:	10-NOV-2011
Time Stamp:	06:21:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	6121_003US_Amendment.pdf	140730 6bbb53f02464c92f2f4aa35d2063c5b067245d87	no	10
Warnings:					
Information:					

Total Files Size (in bytes):	140730

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 Substitute for Form PTO-875	Application or Docket Number 13/293,506	Filing Date 11/10/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)
☒ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	**190**
☐ 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	**190**

APPLICATION AS AMENDED – PART II

AMENDMENT	**01/14/2014**	(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))	* 25	Minus	** 28	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 2	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
/FELICIA JENKINS/

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.

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.
13/293,506	11/10/2011	Chi-Ming KUO	6121.003US	1121

11336 7590 10/28/2013

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
10/28/2013	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@litronip.com
miketeng@litron-intl.com
janiceshih@litron-intl.com

Office Action Summary	Application No. 13/293,506	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 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 *11/10/2011*.

☐ 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) *1-28* 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) *1-28* 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 *11/10/2011* 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/08) Paper No(s)/Mail Date _____.

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

4) ☐ Other: _____.

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

DETAILED ACTION

1. Claims 1-28 are pending in Instant **Application**.

Priority

2. Examiner acknowledges **Applicant's** claim to priority benefits of Taiwan application 100201960 and 100129888 filed on 1/28/2011.

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.

3. Claims 1, 8-10, 13-17, 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaoguz et al. "Karaoguz" (US Patent Publication US 20110302324) and in view of Thorsteinsson et al. , "Thorsteinsson" (US Patent Publication US 20030105854).

As per claim 1, Karaoguz discloses a linking method of a remote information communication system, comprising steps of:

Step A: at least one remote device asking an administration server to provide an address of at least one linking server supporting the remote device through an Internet **(Karaoguz, Para.67, The home devices may comprise, for example, one or more of a television 104a, a laptop computer 104b, a smoke detector, a carbon monoxide detector, and/or a security alarm 104c, a computer and/or server 104d, a mobile phone 104e…., Karaoguz, Para.63, The broadband gateway 102 may be utilized in the home network 100a to provide connectivity between the home network 100a and the service providers 120 (and/or the content providers 130) via the distribution networks 110);**

Step B: the remote device registering information thereof in the linking server according to the address provided by the administration server **(Karaoguz, Para.55, The one or more characteristics may comprise an identity or a type of a provider associated with the acquired content, a quality of the acquired content, and/or power consumption associated with communicating the acquired content to a destination device, and/or power consumption associated with presenting or otherwise processing the acquired content on a destination device);**

However Karaoguz does not disclose Step C: a proximal device asking the administration server to find out a specified remote device through the Internet; Step D: the administration server responding to the proximal device with the address of the linking server registered by the specified remote device; Step E: the proximal device requesting the linking server to establish a link between the proximal device and the specified remote server according to the responded address; Step F: the linking server establishing the link between the proximal device and the specified remote device according to the request of the proximal device.

Thorsteinsson teaches Step C: a proximal device asking the administration server to find out a specified remote device through the Internet in order to monitoring and controlling the remote device **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites, Thorsteinsson, Para.70, It checks whether a device command or query that is about to be issued is allowed to be initiated (block 1402 of FIG. 14) by the requesting user);**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Karaoguz and in view of Thorsteinsson by implementing Step C: a proximal device asking the administration server to find out a specified remote device through the Internet in order to monitoring and controlling the remote device **(Thorsteinsson, Para.4, residential or home networks, where appliances, devices, lighting and other fixtures are connected together for central control and coordination).**

Thorsteinsson teaches Step D: the administration server responding to the proximal device with the address of the linking server registered by the specified remote device **(Thorsteinsson, Para.72, the command sequence will contain a reference to the device being addressed, the identifier of a command and an optional parameter list, Para.8, Homeowners must then maintain log-in accounts with a plurality of service providers to allow them to administer and manage their subscribed services);**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Karaoguz and in view of Thorsteinsson by implementing Step D: the administration server responding to the proximal device with the address of the linking server registered by the specified remote device in order to monitoring and controlling the remote device **(Thorsteinsson, Para.32, The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation).**

Thorsteinsson teaches Step E: the proximal device requesting the linking server to establish a link between the proximal device and the specified remote server according to the responded address **(Thorsteinsson, Para.53, commands and queries from human users (block 101) via a Web Server (block 105) coupled to "User Interface Listeners" (block 106), Thorsteinsson, Para.52, The central portal connects to Client Site devices and appliances either directly or indirectly (through an**

intermediary gateway device) via a wide-area network. At the same time, it connects to human users and service providers' systems over the same or different wide-area network);

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Karaoguz and in view of Thorsteinsson by implementing Step E: the proximal device requesting the linking server to establish a link between the proximal device and the specified remote server according to the responded address in order to monitoring and controlling the remote device **(Thorsteinsson, Para.32, Aspects of the present invention are directed to a central portal for controlling and coordinating devices and appliances, via a wide-area communications network. The portal helps users, typically homeowners and their families, administer and maintain their devices and appliances.).**

Thorsteinsson teaches Step F: the linking server establishing the link between the proximal device and the specified remote device according to the request of the proximal device **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Karaoguz and in view of Thorsteinsson by implementing Step F: the linking server establishing the link between the proximal device and the specified remote device according to the request of the proximal device in order to monitoring and controlling device remotely by the user device **(Thorsteinsson, Para.32, systems do allow homeowners to "log on" to their home control systems remotely to obtain status and even issue commands).**

As per claim 8, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the proximal device includes an application programming interface for a user to address a request of finding out one of the remote devices **(Thorsteinsson, Para.86, These commands are submitted via a user interface device (client) (block**

101 of FIG. 1) that may be located within the Client Site or elsewhere, but is connected over a wide area network (block 104 of FIG. 1) to the central portal, Thorsteinsson, Para.53, commands and queries from human users (block 101) via a Web Server (block 105) coupled to "User Interface Listeners" (block 106)).

As per claim 9, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the link between the proximal device and the specified remote device is established by hole punching performed by the linking server to undertake point-to-point transmission between the proximal device and the specified remote device **(Thorsteinsson, Para.117, Users are spared the inconvenience of maintaining individual log-in accounts with each service provider, and the security risk of punching further holes in their security firewalls, Thorsteinsson, Para.119, This solution is better than a point-to-point topology between home networks and service providers).**

As per claim 10, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the linking server forwards data packets through the link between the proximal device and the specified remote device **(Thorsteinsson, Para.92, After association with a Client Site, the user command is forwarded into the Client Site handler mechanism (block 405). The Client Site handler associates a Client Site Context with the command, retrieving information about the Client Site from the portal's data store)**.

As per claim 13, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the remote device again requests the administration server to provide the address of at least one linking server supporting the remote device, and wherein the remote device again registers information thereof in the linking server **(Karaoguz, Para.64, the broadband gateway 102 may be operable to perform such operations as network access related processing (e.g., PHY/MAC, transport layer processing), encryption and/or decryption, user and/or**

account authentication, and/or at least some of video and/or audio processing operations that may be needed for consumption of multimedia content).

As per claim 14, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the remote device is a security alarm device **(Karaoguz, Para.67, a smoke detector, a carbon monoxide detector, and/or a security alarm 104c).**

As per claim 15, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the remote device is a home electric appliance **(Karaoguz, Para.67, The home devices may comprise, for example, one or more of a television 104a, a laptop computer 104b, a smoke detector, a carbon monoxide detector, and/or a security alarm 104c, a computer and/or server 104d, a mobile phone 104e, a speaker 104f, an AM/FM radio 104g, a phone 104h, an appliance 104i (e.g., refrigerator), a digital video recorder (DVR) or personal video recorder (PVR) 104j, a thermostat or other environmental control(s) 104k, a power strip 104l, and lighting systems and/or controls 104m.).**

As per claim 16, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the proximal device is equipped with an audio/video playing function **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers).**

As per claim 17, Karaoguz discloses a remote information communication system, comprising:

at least one administration server storing a server list and a device list; at least one linking server registering in the server list of the administration server **Karaoguz, Para.67, The home devices may comprise, for example, one or more of a television 104a, a laptop computer 104b, a smoke**

detector, a carbon monoxide detector, and/or a security alarm 104c, a computer and/or server 104d, a mobile phone 104e…., Karaoguz, Para.63, The broadband gateway 102 may be utilized in the home network 100a to provide connectivity between the home network 100a and the service providers 120 (and/or the content providers 130) via the distribution networks 110);

and at least one remote device requesting the administration server to provide addresses of the linking servers to register in the device list, and then register information thereof in one of the linking servers according to the address responded by the administration server **(Karaoguz, Para.55, The one or more characteristics may comprise an identity or a type of a provider associated with the acquired content, a quality of the acquired content, and/or power consumption associated with communicating the acquired content to a destination device, and/or power consumption associated with presenting or otherwise processing the acquired content on a destination device);**

However Karaoguz does not disclose a proximal device requests the administration server to find out a specified remote device and provide the linking server registered by the specified remote device, and wherein the proximal device establishes a link between the specified remote device and the linking server provided by the administration server

Thorsteinsson discloses a proximal device requests the administration server to find out a specified remote device and provide the linking server registered by the specified remote device **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites, Thorsteinsson, Para.70, It checks whether a device command or query that is about to be issued is allowed to be initiated (block 1402 of FIG. 14) by the requesting user);** and wherein the proximal device establishes a link between the specified remote device and the linking server provided by the administration server **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Karaoguz and in view of Thorsteinsson by implementing a proximal device asking the

administration server to find out a specified remote device and establishing the link between the proximal device and the specified remote device according to the request of the proximal device in order to controlling the home network devices remotely by the user **(Thorsteinsson, Para.32, The portal allows homeowners to configure and control their home devices, appliances and services from one central point, via one log-in account, and allows service providers to offer their services in a standard way to a multitude of Client Sites without having to know or care about the details of each network implementation).**

As per claim 23, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein the proximal device includes an application programming interface for a user to address a request of finding out a specified remote device **(Thorsteinsson, Para.86, These commands are submitted via a user interface device (client) (block 101 of FIG. 1) that may be located within the Client Site or elsewhere, but is connected over a wide area network (block 104 of FIG. 1) to the central portal, Thorsteinsson, Para.53, commands and queries from human users (block 101) via a Web Server (block 105) coupled to "User Interface Listeners" (block 106)).**

As per claim 24, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein the link between the proximal device and the specified remote device is established by hole punching performed by the linking server to undertake point-to-point transmission between the proximal device and the specified remote device **(Thorsteinsson, Para.117, Users are spared the inconvenience of maintaining individual log-in accounts with each service provider, and the security risk of punching further holes in their security firewalls, Thorsteinsson, Para.119, This solution is better than a point-to-point topology between home networks and service providers).**

As per claim 25, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein the linking server forwards data packets through the link between the

proximal device and the specified remote device **(Thorsteinsson, Para.92, After association with a Client Site, the user command is forwarded into the Client Site handler mechanism (block 405). The Client Site handler associates a Client Site Context with the command, retrieving information about the Client Site from the portal's data store)**.

As per claim 26, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein the remote device is a security alarm device **(Karaoguz, Para.67, a smoke detector, a carbon monoxide detector, and/or a security alarm 104c).**

As per claim 27, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein the remote device is a home electric appliance **(Karaoguz, Para.67, The home devices may comprise, for example, one or more of a television 104a, a laptop computer 104b, a smoke detector, a carbon monoxide detector, and/or a security alarm 104c, a computer and/or server 104d, a mobile phone 104e, a speaker 104f, an AM/FM radio 104g, a phone 104h, an appliance 104i (e.g., refrigerator), a digital video recorder (DVR) or personal video recorder (PVR) 104j, a thermostat or other environmental control(s) 104k, a power strip 104l, and lighting systems and/or controls 104m).**

As per claim 28, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein the proximal device is equipped with an audio/video playing function **(Thorsteinsson, Para.56, Human users can log on to their accounts on the central portal, and view and administer devices and appliances at their associated Client Site or Sites. They can also view information about services being provided into their Client Site or Sites by service providers).**

Claims 2- 7, 12 , 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaoguz et al. "Karaoguz" (US Patent Publication US 20110302324) and in view of Thorsteinsson et al. ,

"Thorsteinsson" (US Patent Publication US 20030105854) and further in view of Bucuk (US Patent Publication US 20100274859).

As per claim 2, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein a plurality of administration servers constitute an administration server group, and each storing the server list of memorizing one or more linking servers and the device list of memorizing one or more remote devices **(Thorsteinsson, Para.55, In the middle of FIG. 1 is the central portal itself. It is linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

However Modified Karaoguz does not disclose the administration servers in the identical administration server group back up with each other

Bucuk discloses the administration servers in the identical administration server group back up with each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Modified Karaoguz and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 3, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 2, wherein the administration server provides different addresses for the remote devices supported by different service providers to register in the different linking servers **(Karaoguz, Para.95, the broadband gateway 102 may blend different video and audio contents for an event by accessing one or more service/content providers and providing automatic and/or manual content synchronization).**

As per claim 4, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 2, wherein the administration server provides different addresses for the remote devices with different product types to register in the different linking servers **(Karaoguz, Para.72, different options for obtaining particular content may be characterized by, for example, different prices, different power requirements, different providers, different versions or quality of the content, and/or different times at which the content is available).**

As per claim 5, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 2, wherein the administration server provides different addresses for the remote devices at different geographic locations to register in the different linking servers **(Karaoguz, Para.63, the location may be a residence (e.g., home, apartment), a small business, a school, a library, and/or other like settings in which users may want to obtain access to service and/or to content provider networks. The broadband gateway 102 may be utilized in the home network 100a to provide connectivity between the home network 100a and the service providers 120 (and/or the content providers 130) via the distribution networks 110).**

As per claim 6, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1.

However Karaoguz does not disclose a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other.

Bucuk discloses a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Modified Karaoguz and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 7, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 2, wherein the administration server updates the server list and the device list to increase or change the linking servers or the remote devices **(Bucuk, Para.182, periodically update a database of all authorized BD_ADDR numbers of authorized users or devices).**

As per claim 12, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1, wherein the remote device periodically updates and registers the information thereof in the linking server that is assigned by the administration server **(Bucuk,**

Para.182, periodically update a database of all authorized BD_ADDR numbers of authorized users or devices).

As per claim 18, Modified Karaoguz discloses the remote information communication system according to claim 17, wherein a plurality of administration servers constitute an administration server group, and each storing the server list of memorizing one or more linking servers and the device list of memorizing one or more remote devices **(Thorsteinsson, Para.55, In the middle of FIG. 1 is the central portal itself. It is linked to a data storage medium (block 111) that maintains information about registered users and Client Sites, as well as service providers, authorization information, event maps, scheduler configuration, and command sequences).**

However Modified Karaoguz does not disclose the administration servers in the identical administration server group back up with each other

Bucuk discloses the administration servers in the identical administration server group back up with each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Modified Karaoguz and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 19, Modified Karaoguz discloses the remote information communication system according to claim 17.

However Modified Karaoguz does not discloses a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other.

Bucuk discloses a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other **(Bucuk, Para.148, both devices are acting as authentication servers, where (155, 157) are optional back-up servers synchronised using the Internet connection (154, 156), Bucuk, Para.242, list of available devices, Bucuk, Para.133, the list of available bonding devices on their authentication servers (112) and (118) respectively).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Modified Karaoguz and in view of Bucuk by implementing the administration servers in the identical administration server group back up with each other in order to create more efficiency in the system **(Bucuk, Para.336, A disadvantage of such a system is that when a device is not connected to the network, (E.g. due to poor network coverage, low battery or due to loss or theft) it will be absent from the system and thus unavailable for other connected entities connecting in the background (for example updating or requesting information). Some of these issues could be resolved by adding a back-up system).**

As per claim 20, Modified Karaoguz discloses the remote information communication system according to claim 19, wherein the linking servers are managed by different service providers **(Karaoguz, Para.95, the broadband gateway 102 may blend different video and audio contents for an event by accessing one or more service/content providers and providing automatic and/or manual content synchronization).**

As per claim 21, Modified Karaoguz discloses the remote information communication system according to claim 19, wherein the linking servers support different remote devices with different product types **(Karaoguz, Para.72, different options for obtaining particular content may be characterized by, for example, different prices, different power requirements, different providers, different versions or quality of the content, and/or different times at which the content is available).**

As per claim 22, Modified Karaoguz discloses the remote information communication system according to claim 19, wherein the linking servers are located at different geographic locations **(Karaoguz, Para.95, the broadband gateway 102 may blend different video and audio contents for an event by accessing one or more service/content providers and providing automatic and/or manual content synchronization).**

.

Claims 11 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaoguz et al. "Karaoguz" (US Patent Publication US 20110302324) and in view of Thorsteinsson et al. , "Thorsteinsson" (US Patent Publication US 20030105854) and further in view of Harrison (US Patent 8180891).

As per claim 11, Modified Karaoguz discloses the linking method of the remote information communication system according to claim 1.

However Modified Karaoguz does not discloses the link between the proximal device and the specified remote device is established by hole punching at the first priority, and wherein if the hole punching fails to complete, the linking server turns to forward data packets through the link between the proximal device and the specified remote device.

Harrison discloses the link between the proximal device and the specified remote device is established by hole punching at the first priority, and wherein if the hole punching fails to complete, the linking server turns to forward data packets through the link between the proximal device and the

specified remote device. **(Harrison, Col.21, Line.5-14, the process is sometimes called hole punching. Sometimes the hole punch succeeds and further bidirectional communication can commence. When a hole punch attempt fails, the client and peer may attempt communicating on port numbers neighboring the public port numbers to exploit port allocation patterns in many NATs).**

It would have been obvious to an artisan of ordinary skill at the time of applicant's invention to modify the teaching of Modified Karaoguz and in view of Harrison by the link between the proximal device and the specified remote device is established by hole punching at the first priority, and wherein if the hole punching fails to complete, the linking server turns to forward data packets through the link between the proximal device and the specified remote device in order to **(Harrison, Col.21, Line.5-14, the process is sometimes called hole punching. Sometimes the hole punch succeeds and further bidirectional communication can commence. When a hole punch attempt fails, the client and peer may attempt communicating on port numbers neighboring the public port numbers to exploit port allocation patterns in many NATs).**

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, Benjamin Bruckart can be reached on (571)272-3982. 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

/Michael Won/
Primary Examiner
AU 2449
October 18, 2013

Notice of References Cited	Application/Control No. 13/293,506	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-2011/0302324	12-2011	Karaoguz et al.	709/246
*	B	US-2003/0105854	06-2003	Thorsteinsson et al.	709/223
*	C	US-2010/0274859	10-2010	Bucuk, Asim	709/206
*	D	US-8,180,891	05-2012	Harrison, David A.	709/224
*	E	US-2012/0158161	06-2012	Cohn et al.	700/90
	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
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

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

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

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	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
L3	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
L4	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
L5	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
L6	107	((hole near3 punch$4) with fail)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/16 15:41
L7	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
L8	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
S1	1	"13293506"	US-PGPUB;	OR	ON	2013/10/10

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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$theft)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 17:32
S13	0	@ad<="20110127" and ((surveillance near1 camera) and anti$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$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 17:35
S19	1385	@ad<="20110127" and (surveillance and anti$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;	OR	ON	2013/10/10 17:36

			DERWENT; IBM_TDB			
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$4) and security and home	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/10 18:22
S28	322	@ad<="20110127" and ((surveillance near3 video)or anti$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	US-PGPUB; USPAT; USOCR;	OR	ON	2013/10/10 18:23

		and (monitor$4 or control$4) and security and home and alarm	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S30	45	@ad<="20110127" and ((surveillance near3 video)or anti$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; 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	US-PGPUB;	OR	ON	2013/10/10

		near3 device) and (administration near3 server) and (linking near3 server) and register	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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 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;	OR	ON	2013/10/11 13:01

			IBM_TDB			
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; 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	US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	2013/10/11 14:07

		electronic or appliance) same(control$4 or monitor)	JPO; DERWENT; IBM_TDB			
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 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	US-PGPUB; USPAT;	OR	ON	2013/10/11 15:20

		same server) and (authentica$4 or verifica$4) and (correspond$4 near3 server)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
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 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; 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;	OR	ON	2013/10/11 18:35

			DERWENT; IBM_TDB			
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; 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;	OR	ON	2013/10/14 02:03

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
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 pointtopoint	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;	OR	ON	2013/10/15

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			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 pointtopoint	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/15 01:27

EAST Search History (Interference)

<This search history is empty>

10/16/2013 5:25:32 PM
C:\Users\nabedin\Documents\EAST\Workspaces\13293506.wsp

PTO/SB/08a (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.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	NEW
Filing Date	11/10/2011
First Named Inventor	KUO, Chi-Ming
Art Unit	
Examiner Name	
Attorney Docket Number	2450/2455PUS1

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 6,373,851 B1	04-16-2002	F R ALEMAN & ASSOCIATES, INC.	
		US- 2009/0100309 A1	04-16-2009	ZHENG	
		US- 2005/0047379 A1	03-03-2005	BOYDEN et al.	
		US- 2004/0186908 A1	09-23-2004	AMDAHL et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
		GB-2475279	05-18-2011	THROUGHTEK CO LTD		
		CN-100389602C	05-21-2008	CHINESE MOBILE COMM		✓

Examiner Signature	/Normin Abedin/	Date Considered	10/17/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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 (1-800-786-9199) and select option 2.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /N.A./

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	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	10/11/2013								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								
	22	✓								
	23	✓								
	24	✓								
	25	✓								
	26	✓								
	27	✓								
	28	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13293506	KUO ET AL.
	Examiner	Art Unit
	NORMIN ABEDIN	2449

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	203, 206, 223, 224, 225	10/16/2013	NA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor Search, Double Patenting Search, East (USPAT, USPG-PUB, DERWENT, USOCR, IBM_TDB, JPO, EPO)	10/16/2013	NA

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

/NORMIN ABEDIN/ Examiner.Art Unit 2449	

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

BIB DATA SHEET

CONFIRMATION NO. 1121

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/293,506	11/10/2011 RULE	709	2449	6121.003US

APPLICANTS

Chi-Ming KUO, Taipei Clty, TAIWAN;
Yu-Li Kao, Taipei Clty, TAIWAN;
Chien-Chih Yang, Taipei Clty, TAIWAN;
Sheng-Fu Chang, Taipei Clty, TAIWAN;

** CONTINUING DATA **********

** FOREIGN APPLICATIONS **********

TAIWAN 100129888 01/28/2011
TAIWAN 100201960 01/28/2011

** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY **

11/19/2011

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☑ Yes ☐ No	☑ Yes ☐ No	/NORMIN ABEDIN/ Examiner's Signature	☐ Initials	TAIWAN	11	28	2

ADDRESS

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

TITLE

REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

FILING FEE RECEIVED	FEES: Authority has been given in Paper	
770	No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/293,506	11/10/2011	Chi-Ming KUO	2450/2455PUS1

CONFIRMATION NO. 1121

11336
Min-Lee Teng
Litron Patent and Trademark Office
7F-2, No. 79, Sec.2, Roosevelt Rd.
Taipei, 106
TAIWAN

POA ACCEPTANCE LETTER

OC000000061880886

Date Mailed: 06/13/2013

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/10/2013.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/fstephanos/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/293,506	11/10/2011	Chi-Ming KUO	2450/2455PUS1

CONFIRMATION NO. 1121

60601
Muncy, Geissler, Olds & Lowe, PLLC
4000 Legato Road
Suite 310
FAIRFAX, VA 22033

POWER OF ATTORNEY NOTICE

OC000000061880845

Date Mailed: 06/13/2013

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/10/2013.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/fstephanos/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/AIA/82 (07-12)
Approved for use through 11/30/2014. OMB 0651-0035
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.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint

■ Practitioners associated with Customer Number: 11336

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

■ The address associated with Customer Number: 11336

OR

☐	Firm or Individual Name		
	Address		
	City	State	Zip
	Country		
	Telephone	Email	

Assignee Name and Address: THROUGHTEK CO., LTD.
4F., NO.221, CHONGYANG RD.,NANGANG DISTRICT,TAIPEI CITY, TAIWAN

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Chi-Ming Kuo	Date	Jun. 9, 2013
Name	Chi-Ming Kuo	Telephone	886-2-2653-5111
Title	President/CEO		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 3 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.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. 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 displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: THROUGHTEK CO., LTD.

Application No./Patent No.: 13293506 Filed/Issue Date: 10-NOV-2011

Titled: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

THROUGHTEK CO., LTD., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 027209, Frame 0570, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). 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. 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.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. 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 displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Min-Lee Teng/	JUN. 10, 2013
Signature	Date
Min-Lee Teng	Reg. No. 65623
Printed or Typed Name	Title or Registration Number

[Page 2 of 2]

Electronic Acknowledgement Receipt

EFS ID:	15988233
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	60601
Filer:	Min-Lee Teng
Filer Authorized By:	
Attorney Docket Number:	2450/2455PUS1
Receipt Date:	10-JUN-2013
Filing Date:	10-NOV-2011
Time Stamp:	05:31:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	6121_003US_POA_with_3_73C_Form.pdf	1636381 6f588a8838be706353848f6efe86ebd08c0c030	no	3
Warnings:					
Information:					

Total Files Size (in bytes):	1636381

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.

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/293,506	11/10/2011	Chi-Ming KUO	2450/2455PUS1

CONFIRMATION NO. 1121

60601
Muncy, Geissler, Olds & Lowe, PLLC
4000 Legato Road
Suite 310
FAIRFAX, VA 22033

PUBLICATION NOTICE



Title:REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

Publication No.US-2012-0198040-A1
Publication Date:08/02/2012

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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 NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/293,506	11/10/2011	2447	770	2450/2455PUS1	28	2

CONFIRMATION NO. 1121

60601
Muncy, Geissler, Olds & Lowe, PLLC
4000 Legato Road
Suite 310
FAIRFAX, VA 22033

FILING RECEIPT



Date Mailed: 11/25/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Chi-Ming KUO, Taipei City, TAIWAN;
Yu-Li Kao, Taipei City, TAIWAN;
Chien-Chih Yang, Taipei City, TAIWAN;
Sheng-Fu Chang, Taipei City, TAIWAN;

Power of Attorney: The patent practitioners associated with Customer Number 60601

Domestic Priority data as claimed by applicant

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)
TAIWAN 100129888 01/28/2011
TAIWAN 100201960 01/28/2011

If Required, Foreign Filing License Granted: 11/19/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/293,506**

Projected Publication Date: 08/02/2012

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****

Title

REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

Preliminary Class

709

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

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, facilitate, and accelerate 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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/293,506

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	95		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	310		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	125		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	28 minus 20 =	* 8	x 30 =	240	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*	x 125 =	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	770		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.



中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE
MINISTRY OF ECONOMIC AFFAIRS
REPUBLIC OF CHINA

茲證明所附文件，係本局存檔中原申請案的副本，正確無訛，
其申請資料如下 ：

This is to certify that annexed is a true copy from the records of this office of the application as originally filed which is identified hereunder：

申　　請　　日 ： 西元 2011 年 01 月 28 日
Application Date　　Jan. 28, 2011

申　請　案　號 ： 100129888
Application No.

申　　請　　人 ： 物聯智慧股份有限公司
Applicant(s)

發明人 / 創作人： 郭啟銘、高于立、楊健智、張生福
Inventor(s)

局　　長
Director General

王美花

西元 2011 年 11 月 01 日
Nov. 1, 2011

發明專利說明書

（本說明書格式、順序，請勿任意更動，※記號部分請勿填寫）

※ 申請案號：

※ 申請日：　　※IPC 分類：

※ 原申請案號：100201960

一、發明名稱：(中文/英文)

遠端訊息溝通系統以及其連線方法

二、中文發明摘要：

一種遠端訊息溝通系統以及其連線方法，該遠端訊息溝通系統包含了一管理伺服器、至少一連線伺服器、至少一遠端設備。其中該連線方法令該遠端設備、連線伺服器向該管理伺服器驗證，又令近端設備需先向該管理伺服器詢問指定遠端設備的連線標的，該管理伺服器才回覆可與該被指定遠端設備建立連線的連線伺服器之位址。依據該管理伺服器回覆的位址，該近端設備可與連線伺服器連線，並透過該連線伺服器找到被指定遠端設備，透過該連線伺服器協助建立近端設備與遠端設備之間的連線。

三、英文發明摘要：

四、指定代表圖：

(一)本案指定代表圖為：第（ 5 ）圖。

(二)本代表圖之元件符號簡單說明：

1 ・・・・・・管理伺服器群組

11、12 ・・・・管理伺服器

20 ・・・・・・連線伺服器群組A

201、202 ・・・連線伺服器

21 ・・・・・・連線伺服器群組B

211、212 ・・・連線伺服器

31 ・・・・・・遠端設備A

32 ・・・・・・遠端設備B

33 ・・・・・・遠端設備C

4 ・・・・・・近端設備

960、961・・・・・・打洞連線訊息

97 ・・・・・・點對點傳輸連線

五、本案若有化學式時，請揭示最能顯示發明特徵的化學式：

六、發明說明：

【發明所屬之技術領域】

一種遠端訊息溝通系統以及其連線方法，特別是利用一管理伺服器指引至少一遠端設備、連線伺服器以及近端設備連線目標的系統以及連線方法。

【先前技術】

由於網路技術發展快速，許多電子產品可透過與網路連接而具有遠端監控、線上更新或其他業者所提供的線上服務功能。例如美國專利 US 6,373,851 號專利，該前案揭示了一種利用乙太網路控制電子裝置的技術。揭示了一通訊系統包含一第一傳輸媒介(first communicating medium)、一乙太網路伺服器(ethernet polling server)以及複數乙太網路設備端(ethernet client stations)。其中該乙太網路伺服器包含一連接該第一傳輸媒介的傳輸器，該傳輸器與該第一傳輸媒介雙向的傳輸信號。而複數乙太網路設備端相互連接，且該些乙太網路設備端各具有一傳輸器，該傳輸器包含一第二傳輸媒介，該第二傳輸媒介只有在該乙太網路伺服器提出要求時才傳輸一訊號給該第一傳輸媒介，但該第二傳輸媒介隨時可接收該第一傳輸媒介發出的信號。US 6,373,851 號專利是基於交通管控設備以及受到乙太網路最低傳輸速率(minimun rate)以及建議最大傳輸距離(maximun recommended distance)所限制。因此該前案提出前述的設計而提供較大的可傳輸範圍，並避免設備端傳輸相互衝突(collisions)及延遲(delay)。

近端設備與設備端透過網際網路連線為已普遍使用的技術，若要推廣家電產品上網，家電產品還需牽設網路線將造成線路複雜，增加施工麻煩。因此另有利用電力網路做為通訊網路的技術，如美國第 US2005/0047379 號先行公開專利，該前案揭示了一種利用寬頻無線/

電力線通訊系統傳輸影音內容的技術。其中一資料伺服器(content server)接收了影音訊息後，轉換為PLC相容訊號，其中PLC代表了電力線傳輸(Power-line communication)。並且該前案提供了一電力傳輸/寬頻無線傳輸模組(PLC/UWB module)，並透過該電力傳輸/寬頻無線與一電氣裝置的訊號收發器建立資料連線。因此，該電氣裝置可接收網路訊息而受遠端監控，並且係透過電力線傳輸，不需再牽設網路線。

同樣使用電力線提供傳輸的技術還包括美國第 US 2004/0186908 號先行公開專利，該前案揭示了一電力插頭內包含交流電力線、一網路資料線以及一電力線網路適配器。該前案的另一實施態樣中，該電力插頭除了交流電力線、網路資料線、電力線網路適配器以外還包括一交流-直流轉換元件。

而該類電力線傳輸技術運用在安全監視系統的先前技術如中華人民共和國授權公告第 CN 100389602 號「攝像系統及攝像控制方法」。該前案揭示了一攝像模塊連接一電力線通信攝像適配模塊，該電力線通信攝像適配模塊接收該攝像模塊所錄下的音/視頻信息，並將該音/視頻信息調制後輸入電源線進行傳輸。同時，對電源線傳輸的調制信號進行解調而獲得控制信號，利用該控制信號對該攝像模塊進行控制。而該電力線通信攝像適配模塊包括一攝像信號處理單元、一數字多媒體信息壓縮處理單元、一乙太網適配單元、一第一電力線通信調制解調單元。其中該攝像信號處理單元、數字多媒體信息壓縮處理單元係壓縮或轉換該攝像模塊所輸出的影像訊號格式。而該乙太網適配單元進一步轉換為乙太網信號，該第一電力線通信調制解調單元將該乙太網信號加載至電力載波上進行傳輸。藉由前述的結構，該攝像模塊的影音訊號可透過電力線傳輸到監控端。

電氣裝置透過電力線上網可解決網路線牽設麻煩的問題，令家用

各種電器設備或者安全警報設備可直接透過電力線上網。然而在實施遠端監控時仍具有以下問題：首先，透過習知網路連線手段，該些電器設備透過路由器(router)分配一 IP(可能是固定 IP 或浮動 IP)，再者需建置一伺服器接受電器設備端與監控端(使用者端)於該伺服器內交換資料。習知架構所面臨的問題是，監控端需要記憶電器設備或者伺服器的 Domain name 或 IP 位址才可連線，除了記憶位址這件事造成使用者麻煩以外，當電器設備或者伺服器要擴充數量或變動位址時，所有 Domain name 或 IP 位址都需要由使用者自行更新，非常的麻煩且造成系統擴充時的困擾。再者，由於電器設備或者伺服器的 Domain name 或 IP 位址都是被公開的，容易受到駭客的側錄或破壞，安全性不足。

【發明內容】

為了改善習知連線方式在擴充性、安全性的不足，本案的目的在於提出一種改良的連線與監控系統，並令該系統具有擴充性以及加強的安全性。

本案為一種遠端訊息溝通系統以及其連線方法，其中該連線方法包括以下步驟：A. 至少一遠端設備與透過網際網路請求一管理伺服器提供至少一個支援該遠端設備的連線伺服器之位址；B. 該遠端設備依據該管理伺服器所提供之位址而登錄該遠端設備的資訊於該連線伺服器；C. 一近端設備透過網際網路向該管理伺服器提出尋找被指定之遠端設備的請求；D. 該管理伺服器將被指定遠端設備所登錄的連線伺服器之位址回應給該近端設備；E. 該近端設備依據所回應的位址向連線伺服器提出與該被指定遠端設備連線的請求；F. 該連線伺服器依據該近端設備的請求而建立該近端設備與該被指定遠端設備的連線。

而前述的方法可透過本案所提出的遠端訊息溝通系統具體實施，該遠端訊息溝通系統包括：一管理伺服器、至少一連線伺服器、至少一遠端設備，且該監控系統可接受一個或多個近端設備連線。其中該

管理伺服器儲存有一伺服器列表及一設備列表，該連線伺服器向管理伺服器連線登錄於該伺服器列表中，而該遠端設備在請求管理伺服器請求連線伺服器位址時，亦被登錄於該設備列表中，使得該管理伺服器儲存有該遠端監控設備中的所有連線伺服器、遠端設備之資訊。又，該管理伺服器回應該遠端設備的請求而回應其中一連線伺服器的位址，令該遠端設備依據所回應的位址而登錄該遠端設備的資訊於其中一連線伺服器中。而一近端設備向該管理伺服器提出尋找被指定之遠端設備的請求，該管理伺服器將回應被指定之遠端設備所登錄的連線伺服器，使該該近端設備透過該管理伺服器所提供的連線伺服器與被指定之遠端設備建立連線。

在具體的實施態樣中，該管理伺服器包含了至少一管理伺服器，該管理伺服器的數量可依需求擴增，且該管理伺服器儲存有記憶一個或多個連線伺服器的伺服器列表，以及記憶一個或多個遠端設備的設備列表。該連線伺服器包含了至少一台連線伺服器。該連線伺服器以及遠端設備的數量亦可不斷擴增，該連線伺服器的數量、連線伺服器連線資訊的改變時，都可透過更新該管理伺服器的設備列表及伺服器列表而增加支援的設備。而該伺服器列表中可包含複數連線伺服器相異服務提供者所營運的連線伺服器，該管理伺服器可依據支援遠端設備的相異服務提供者而指派該遠端設備登錄至相異的連線伺服器。該管理伺服器亦可依據相異遠端設備的產品類型或者遠端設備的地理位置而指派該遠端設備登錄至相異的連線伺服器。該近端設備具備一應用介面程式(Application Programming Interface, API)供使用者提出尋找任一遠端設備的請求。該近端設備透過管理伺服器找到被指定遠端設備所登錄的連線伺服器後，該近端設備對該連線伺服器提出與該被指定遠端設備連線的請求，該連線伺服器先對近端設備與被指定遠端設備兩者執行打洞技術，試圖建立近端設備與被指定遠端設備之間

的點對點連線，若該連線伺服器未完成對兩者的打洞程序則透過該連線伺服器相互轉發近端設備與該被指定遠端設備的資料封包。

前述的遠端設備可為一安全警報設備或者一家電設備。而該遠端設備每經過一時段後重新與管理伺服器所指派的連線伺服器登錄該遠端設備的資訊，令連線伺服器時常更新該遠端設備的最新狀態。當該遠端設備有所變動時，或者該遠端設備所登錄的連線伺服器有所變動時，該遠端設備可再次請求該管理伺服器提供至少一個支援該遠端設備的連線伺服器之位址，並且該遠端設備再次向被提供的連線伺服器登錄其資訊。

透過前述的技術，該遠端設備以及該連線伺服器不需要直接揭露其 IP 位址或 Domain name，以降低被駭客侵入的危險。同樣的，該近端設備不需要具有固定 IP，亦不需要記憶固定的 IP 位址或 Domain name，只需透過該管理伺服器即可詢找特定遠端設備所屬的連線伺服器。因此，該近端設備只需要具有該管理伺服器支援的應用介面程式(Application Programming Interface, API)即可請求管理伺服器查詢連線位址。又，該系統容許該遠端設備、連線伺服器的數量、規格、類別依需求而擴充、變動，只需要向管理伺服器登錄而更新伺服器列表、設備列表即可。令連線伺服器或者遠端設備的製造商可依設備負載量而變動。

【實施方式】

本案為一種遠端訊息溝通系統以及其連線方法，以下將配合各圖式說明本案的技術。

首先，本案定義了一遠端訊息溝通系統包含至少一遠端設備、管理伺服器、以及至少一連線伺服器，並且該遠端訊息溝通系統接受至少一近端設備的請求而使該近端設備與該遠端設備之間建立連線，而遠端訊息溝通系統的連線方法，該方法包括以下步驟：A. 至少一遠端

設備透過網際網路請求一管理伺服器提供至少一個支援該遠端設備的連線伺服器之位址；B. 該遠端設備依據該管理伺服器所提供之位址而登錄該遠端設備的資訊於該連線伺服器；C. 一近端設備透過網際網路向該管理伺服器提出尋找被指定之遠端設備的請求；D. 該管理伺服器將被指定遠端設備所登錄的連線伺服器之位址回應給該近端設備；E. 該近端設備依據所回應的位址向連線伺服器提出與該被指定遠端設備連線的請求；F. 該連線伺服器依據該近端設備的請求而建立該近端設備與該被指定遠端設備的連線。該方法的技術重點係令該連線伺服器以及遠端設備不需直接公開其 IP 位址或 Domain name，所有的近端設備只能先向管理伺服器請求尋找被指定之遠端設備，再由管理伺服器提供的連線伺服器之位址供近端設備請求建立連線。所以可減少連線伺服器以及遠端設備降低被駭客侵入的危險。從近端設備的角度來看，該近端設備不需要具有固定 IP，亦不需要記憶固定的 IP 位址或 Domain name，對近端設備的使用者而言可節省很多連線設定的技術問題。

為了更具體的說明前述的方法，本案更揭示了一具體實施該方法的遠端訊息溝通系統，該遠端訊息溝通系統包含至少一管理伺服器、至少一連線伺服器以及至少一遠端設備。請參閱圖 1，圖 1 中揭示該遠端訊息溝通系統的架構示意圖。圖 1 中可見兩台管理伺服器 11、12 形成一管理伺服器群組 1 作相互備援用。該管理伺服器 11、12 內儲存有一設備列表以及一伺服器列表，該設備列表內存有允許登錄的複數遠端設備的資訊。而該伺服器列表則儲存了複數連線伺服器的資訊。在具體的實施態樣中，該伺服器列表內可能包含了相異服務提供者所營運的複數連線伺服器，或者包含了支援的設備型態不同的複數連線伺服器，或者包含複數所在地理位置不同的連線伺服器。更進一步的，該設備列表與伺服器列表之間具有對應關係，待稍後詳述。於圖 1 中

更可見該遠端訊息溝通系統另具有一連線伺服器 201、一連線伺服器 211，在本實施例中該連線伺服器 201、連線伺服器 202 可分屬於相異服務提供者所營運。又，圖 1 中可見該連線伺服器 201 可與另一連線伺服器 202 組成一連線伺服器群組 A 20 作相互備援用；同樣的，該連線伺服器 211 與另一連線伺服器 212 構成一連線伺服器群組 B 21 相互備援。為了方便敘述本案的技術，以下各連線對象將直接以管理伺服器群組 1 以及連線伺服器群組 A 20、連線伺服器群組 B 21 代表其所屬的伺服器。該遠端訊息溝通系統更包含了一遠端設備 A 31、一遠端設備 B 32、一遠端設備 C 33。如先前所述，設備列表內存有複數遠端設備的資訊，該些遠端設備 A~C 31、32、33 各別具有其獨特的序號(Unique ID)、該些遠端設備 A~C 31、32、33 所屬的服務提供者的訊息都已被預存入該管理伺服器群組 1 所儲存的設備列表中。在該些連線伺服器群組 A 20、連線伺服器群組 B 21，以及該遠端設備 A 31、一遠端設備 B 32、一遠端設備 C 33 剛連上網際網路運作時，該連線伺服器群組 A 20、連線伺服器群組 B 21 透過網際網路向該管理伺服器群組 1 傳輸一伺服器登錄資訊 92 登錄其位址與組態資訊(型號、連線狀態等資訊)。該管理伺服器群組 1 驗證該連線伺服器群組 A 20、連線伺服器群組 B 21 是否為已預存於伺服器列表內的合法設備，若是回覆該連線伺服器群組 A 20、連線伺服器群組 B 21 已登錄成功。而該遠端設備 A 31 至遠端設備 C 33 為了尋找可支援的伺服器，則各別透過網際網路向該管理伺服器群組 1 發出一伺服器查詢資訊 91，該管理伺服器群組 1 驗證該遠端設備 A 31 至遠端設備 C 33 是否為預存於設備列表內的合法設備後，分別向該遠端設備 A 31 至遠端設備 C 33 回覆一連線的目標。

在具體的實施態樣中，該連線伺服器群組 A 20、連線伺服器群組 B 21 可能分別為相異服務提供者所營運，因此，該管理伺服器群組 1 會將遠端設備 A 31 指派連線到支援遠端設備 A 31 的服務提供者所營

運的連線伺服器群組 A 20。同樣的，基於服務提供者的不同，該遠端設備 B 32、遠端設備 C 33 就由管理伺服器群組 1 指派連線到支援遠端設備 B 32、遠端設備 C 33 的服務提供者所營運的連線伺服器群組 B 21。然而，該遠端訊息溝通系統亦包含了不同的實施方式，該管理伺服器群組 1 亦可能因為遠端設備 A 31 至遠端設備 C 33 為相異的產品類型而分別指派該遠端設備 A 31 至遠端設備 C 33 登錄至連線伺服器群組 A 20 或連線伺服器群組 B 20。另一不同實施方式為該管理伺服器群組 1 還可依據該遠端設備 A 31 至遠端設備 C 33 本身的地理位置不同而指派連線到較近的連線伺服器群組 A 20 或連線伺服器群組 B 20。

請再參閱圖 2，基於管理伺服器群組 1 回應的連線位址，該遠端設備 A 31 與該連線伺服器群組 A 20 連線並登錄該遠端設備 A 31 的資訊於該連線伺服器群組 A 20 中。同樣依據該管理伺服器群組 1 回應的連線位址，該遠端設備 B 32、遠端設備 C 33 連線至該連線伺服器群組 B 21，並登錄其本身資訊於該連線伺服器群組 B 21 中。令該連線伺服器群組 A 20 得知該遠端設備 A 31 的網路位址；該連線伺服器群組 B 21 得知該遠端設備 B 32、遠端設備 C 33 的網路位址。

請再參閱圖 3，該遠端訊息溝通系統可接受一個或多個近端設備 4 連線，該近端設備 4 需具有支援與該管理伺服器群組 1 連線的應用介面程式(Application Programming Interface, API)，該近端設備 4 可透過該應用介面程式而選擇一被指定的遠端設備。假設該近端設備 4 透過該應用介面程式選擇與遠端設備 A 31 連線，近端設備 4 透過該應用介面程式向該管理伺服器群組 1 發出一連線標的查詢資訊 94，詢問管理伺服器群組 1 可與該遠端設備 A 31 連線的連線伺服器群組為何。該管理伺服器群組 1 提供被指定之遠端設備(遠端設備 A 31)所登錄的連線伺服器群組 A 20 的位置。因而該近端設備 4 的應用介面程式再依據管理伺服器群組 1 回覆的位址而與該連線伺服器群組 A 20 連線，該

近端設備 4 發出欲與該遠端設備 A 31 連線的一連線請求資訊 95。請參閱圖 5，該連線伺服器群組 A 20 優先選擇使用執行打洞技術(Hole punching)，分別與該近端設備 4、遠端設備 A 31 傳輸一打洞連線訊息 960、961，令該近端設備 4 與該被指定的遠端設備 A 31 建立一點對點傳輸連線 97，該近端設備 4 可透過點對點傳輸技術而獲得遠端設備 A 31 的資訊，或者對該遠端設備 A 31 進行控制。前述的打洞技術(Hole punching)可參見中華民國專利公開第 200935808 號專利，或中華民國專利證書第 M382669 號專利，由於該打洞技術非本案所主張的技術特徵，因此不再贅述其技術內容。或者，如圖 6 所示，若該連線伺服器群組 A 20 未完成對兩者的打洞程序，則透過該連線伺服器群組 A 20 相互轉發近端設備 4 與該被指定的遠端設備 A 31 的資料封包。

由於該近端設備 4 需要透過該管理伺服器群組 1 才能得到該連線伺服器群組 A 20、連線伺服器群組 B 21 的連線位址，因此連線伺服器群組 A 20、連線伺服器群組 B 21 的位址、機械規格變動不會阻礙該近端設備 4 詢找連線對象。更基於該特點，連線伺服器群組 B 21 的架構(數量、規格、類別等等)可依照市場的需求而作變動，例如當某一類產品上線的數量增加時，可增加支援該類產品的連線伺服器數量以符合設備負載量。而新增連線伺服器群組或改變連線伺服器群組連線資訊(例如 IP 位址變動)或者改變連線伺服器群組內機械數量時只需要更新該伺服器列表即可，並令該連線伺服器群組再次向該管理伺服器群組 1 發出伺服器登錄資訊 92 進行登錄即可。同樣的，遠端設備的數量與種類變動時，或者遠端設備所登錄的連線伺服器群組有所變動時，亦同樣更新設備列表，並該遠端設備再次向被提供的連線伺服器群組詢問供連線的連線伺服器群組資訊即可。

請參閱圖 7，圖 7 為該遠端訊息溝通系統擴充的實施例，該實施例增加了遠端設備 D 34，即使增加數量或者位址的變動，都可透過更新

該管理伺服器群組 1 的設備列表而增加支援的遠端設備數量(或規格)。遠端設備 A 31 至遠端設備 D 34 都可透過傳送伺服器查詢資訊 91 的過程由管理伺服器群組 1 重新詢問可連線的連線伺服器群組。同樣的，圖 7 中可見該連線伺服器群組 B 21 增加了一連線伺服器 213，且新增了一個由連線伺服器 221、222、223 所組成的連線伺服器群組 C 22，同樣是透過該更新該管理伺服器群組 1 的伺服器列表而擴增進入該遠端訊息溝通系統的連線伺服器數量。藉此，該遠端訊息溝通系統容許該遠端設備、連線伺服器群組的數量、規格、類別依需求而擴充、變動，只需要更新伺服器列表、設備列表且再次向管理伺服器群組 1 登錄即可，令連線伺服器群組或者遠端設備的製造商可依設備負載量而變動。

該遠端訊息溝通系統允許多個連線伺服器接受同一遠端設備登錄，請參閱圖 8，圖 8 揭示了該遠端訊息溝通系統包含了連線伺服器群組 A、D、E 20、23、24，連線伺服器群組 D 23 係由連線伺服器 231、232 所構成，連線伺服器群組 E 24 係由連線伺服器 241、242 所構成。該遠端設備 A 31 經過發出伺服器查詢資訊 91 詢問該管理伺服器群組 1 後，該管理伺服器群組 1 回覆該遠端設備 A 31 可與該些連線伺服器群組 A、D、E 20、23、24 進行登錄。透過該特徵，可令相異的連線伺服器群組 A、D、E 20、23、24 共同支援該遠端設備 A 31。假設連線伺服器群組 A 20 故障或其他原因離線時，該遠端設備 A 31 仍可登錄於連線伺服器群組 D 23 或連線伺服器群組 E 24 的其中之一。又假設該遠端設備 A 31 為可移動的設備，該遠端設備 A 31 可透過該管理伺服器群組 1 的分配而連線到實體距離最接近的任一連線伺服器群組。

該複數遠端設備與連線伺服器群組的對應關係如表一所示：

	連線伺服器代號	遠端設備序號	備註
服務提供者A	Ser01、Ser02、Ser03	D01、D02、D03、D04、D05	Ser01：上海 Ser02：東京 Ser03：洛杉磯
	Ser04、Ser05	D06、D07、D08、D09	Ser04：紐約 Ser05：柏林
服務提供者B	Ser11： Ser12：	D11、D12、D13、D14	Ser11：巴黎 Ser12：開羅

表一：複數遠端設備與連線伺服器群組的對應關係表

以表一為例，前述管理伺服器的伺服器列表可儲存有服務提供者A所營運的連線伺服器Ser01～Ser05，以及服務提供者B所營運的連線伺服器Ser11～Ser12。其中連線伺服器Ser01～Ser03被分配供遠端設備D01～D05登錄，其中D01～D05為各遠端設備的序號，如先前所述，每一遠端設備皆具有其獨特的序號，用於供管理伺服器或連線伺服器驗證與辨識遠端設備的身份。該些連線伺服器Ser01～Ser03接收近端設備的請求而建立與遠端設備D01～D05的連線。由於連線伺服器Ser01～Ser03都可執行同樣的功能，因此連線伺服器Ser01～Ser03之間可相互備援，再者連線伺服器Ser01～Ser03可分別設置於相異位置，例如連線伺服器Ser01～Ser03分別位於上海、東京、洛杉磯，遠端設備D01～D05可登錄於離本身地理位置較近的連線伺服器。同樣的，遠端設備D04～D05接受遠端設備D06～D09登錄。服務提供者B所營運的連線伺服器Ser11～Ser12則接受遠端設備D11～D14的登錄。因此，對管理伺服器而言，只要遠端設備D01上線詢問連線伺服器，該管理伺服器可同時提供連線伺服器Ser01～Ser05的位置給該遠

端設備 D01，讓遠端設備 D01 隨時都可尋找到正常運作的連線伺服器。

藉此，可令該遠端訊息溝通系統內的複數連線伺服器群組之間相互備援，又因該連線伺服器群組內包含了可相互備援的複數連線伺服器，形成多重備援架構，使該遠端訊息溝通系統非常穩定，不會因少數機械故障而影響運作。

請參閱圖 9，前述的連線伺服器與該管理伺服器之間的運作如圖 9 所示的流程，首先，當一個或多個連線伺服器上線（步驟 S01）或者一個或多個連線伺服器的 IP 或 Port 變更（步驟 S02）時，該連線伺服器需透過網際網路與該管理伺服器連線，並且送出伺服器登錄資訊給該管理伺服器(步驟 S03)。管理伺服器會驗證該伺服器登錄資訊的內容，在伺服器列表中是否為合法(步驟 S04)，若驗證成功，代表該連線伺服器確實為伺服器列表中的合法伺服器，則依據伺服器登錄資訊更新伺服器列表(步驟 S05)，並由該管理伺服器回覆登錄成功訊息(步驟 S06)，連線伺服器接收回覆之訊息(步驟 S07)，並為了確保管理伺服器能存有連線伺服器群組最新的狀態，每經過一預定時間(步驟 S09)將會重覆執行步驟 S03 重新送出伺服器登錄資訊。若在步驟 S04 驗證該伺服器登錄資訊為失敗，代表該連線伺服器並不在伺服器列表中，為不合法的連線伺服器，亦回覆登錄失敗訊息(步驟 S08)，由連線伺服器接收回覆之訊息(步驟 S07)。

接著，圖 10 可見該遠端設備與該管理伺服器連線請求回覆連線伺服器的過程。首先，遠端設備會發出詢問伺服器位址的訊息(步驟 S11)，該管理伺服器會驗證該遠端設備所送訊息是否有效(步驟 S12)，若驗證成功則該管理伺服器回覆連線伺服器的位址給該遠端設備(步驟 S13)；若驗證失敗，則該管理伺服器回覆一拒絕請求訊息給該遠端設備(步驟 S14)。接著，該遠端設備需再與該管理伺服器所回覆的連線伺服器連線。該遠端設備送出該遠端設備的登錄訊息(步驟 S15)，連線

伺服器群組接收該登錄訊息(步驟S16)，接著該連線伺服器回覆一回應訊息給該遠端設備(步驟S17)。因此，該連線伺服器可得知該遠端設備的IP位址以聯繫該遠端設備的必要資訊。為了確保該連線伺服器可找到該遠端設備，在每經過一預定時間後(可預設為每10分鐘)，該遠端設備需回到步驟S11重新送出本身的資訊訊息(步驟S18)，使該連線伺服器可時常獲得該遠端設備的更新狀態。又，該遠端設備可每經過一較長時間(例如可預設每24小時)重新詢問管理伺服器(步驟S19)，令管理伺服器提供最新的連線伺服器位址置與資訊。

最後，該近端設備請求與該遠端設備連線的過程可見於圖11，使用者透過近端設備的應用介面程式(API)指定一遠端設備，該近端設備透過該應用介面程式(API)向管理伺服器提出尋找被指定遠端設備的請求(步驟S21)，該管理伺服器回應該遠端設備登錄的連線伺服器的位址給該近端設備(步驟S22)，於是該近端設備即可獲得與哪一個連線伺服器連線可找到被指定的遠端設備。接著該近端設備向該連線伺服器請求與該遠端設備連線(步驟S23)，該連線伺服器優先選擇對該近端設備與遠端設備執行打洞程序(步驟S24)，若成功，則可令該近端設備與遠端設備進行點對點傳輸(步驟S25)；若失敗，則該近端設備與遠端設備的資料封包透過該連線伺服器轉發(步驟S26)。

透過前述的技術，該遠端設備以及該連線伺服器不需要直接揭露其IP位址或Domain name，以降低被駭客侵入的危險。同樣的，該近端設備不需要具有固定IP，亦不需要記憶固定的IP位址或Domain name，只需透過該管理伺服器即可詢找特定遠端設備所屬的連線伺服器。因此，該近端設備只需要具有該管理伺服器支援的應用介面程式(Application Programming Interface, API)即可請求管理伺服器查詢連線位址，並且使用者只需要選擇其中一遠端設備，剩下與管理伺服器、連線伺服器溝通的程序皆可由該應用介面程式自動處理，以大幅

簡化使用者操作的複雜度。又，該系統容許該遠端設備、連線伺服器的數量、規格、類別依需求而擴充、變動，只需要向管理伺服器登錄而更新伺服器列表、設備列表即可。令連線伺服器或者遠端設備的製造商可依設備負載量而變動。前述的遠端設備可為一安全警報系統，例如監視攝影器材、防盜器、煙霧火災警報器等等；亦可為一家電設備，例如冰箱、空調設備等等。再者，該近端設備應具備有影音播放功能，例如具有影音播放功能的行動電話、電腦、個人數位助理(PDA)等等。

雖然本案以較佳實施例揭露如上，然其並非用以限定本案。任何熟習此技藝者，在不脫離本案之精神和範圍內，而所作之些許更動與潤飾，皆應涵蓋於本案中，因此本案之保護範圍當視後附之申請專利範圍所界定者為準。

綜上所述，本案較習知之創作增進上述功效，應已充分符合新穎性及進步性之法定創新專利要件，爰依法提出申請，懇請　貴局核准本件發明專利申請案，以勵創作，至感德便。

【圖式簡單說明】

圖 1 為第一實施態樣的狀態示意圖(一)。

圖 2 為第一實施態樣的狀態示意圖(二)。

圖 3 為第一實施態樣的狀態示意圖(三)。

圖 4 為第一實施態樣的狀態示意圖(四)。

圖 5 為第一實施態樣的狀態示意圖(五)。

圖 6 為第一實施態樣的狀態示意圖(六)。

圖 7 為第一實施態樣的狀態示意圖(七)。

圖 8 為為多個連線伺服器群組可供一遠端設備登錄的示意圖。

圖 9 為連線伺服器與管理伺服器的連線流程圖。

圖 10 為遠端設備與連線伺服器的連線流程圖。

圖 11 為近端設備請求與該遠端設備連線的連線流程圖。

【主要元件符號說明】

1 ・・・・・・管理伺服器群組

11、12、13 ・・管理伺服器

20 ・・・・・・連線伺服器群組 A

201、202 ・・・連線伺服器

21 ・・・・・・連線伺服器群組 B

211、212、213 ・・・連線伺服器

22 ・・・・・・連線伺服器群組 C

221、222、223 ・・・連線伺服器

23 ・・・・・・連線伺服器群組 D

231、232 ・・・連線伺服器

24 ・・・・・・連線伺服器群組 E

241、242 ・・・連線伺服器

31 ・・・・・・遠端設備 A

32 ・・・・・・遠端設備 B

33 ・・・・・・遠端設備 C

34 ・・・・・・遠端設備 D

4 ・・・・・・近端設備

91 ・・・・・・伺服器查詢資訊

92 ・・・・・・伺服器登錄資訊

93 ・・・・・・遠端設備資訊

94 ・・・・・・連線標的查詢資訊

95 ・・・・・・連線請求資訊

960、961・・・・・・打洞連線訊息

97 ・・・・・・點對點傳輸連線

98、99・・・・・・代轉發資料封包

S01～S09・・・・・・步驟

S11～S19・・・・・・步驟

S21～S26・・・・・・步驟

七、申請專利範圍：

1. 一種遠端訊息溝通系統的連線方法，該方法包括以下步驟：

A. 至少一遠端設備透過一網際網路請求一管理伺服器提供至少一個支援該遠端設備的連線伺服器之位址；

B. 該遠端設備依據該管理伺服器所提供之位址而登錄該遠端設備的資訊於該連線伺服器；

C. 一近端設備透過網際網路向該管理伺服器提出尋找被指定之遠端設備的請求；

D. 該管理伺服器將被指定遠端設備所登錄的連線伺服器之位址回應給該近端設備；

E. 該近端設備依據所回應的位址向連線伺服器提出與該被指定遠端設備連線的請求；

F. 該連線伺服器依據該近端設備的請求而建立該近端設備與該被指定遠端設備的連線。

2. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中複數管理伺服器可組成一管理伺服器群組，且同一管理伺服器群組內的複數管理伺服器相互備援，且該些管理伺服器儲存有記憶一個或多個連線伺服器的一伺服器列表，以及記憶一個或多個遠端設備的一設備列表。

3. 如申請專利範圍第 2 項所述的遠端訊息溝通系統的連線方法，其中該管理伺服器依據支援遠端設備的相異服務提供者，而提供相異的位址供該遠端設備登錄至相異的連線伺服器。

4. 如申請專利範圍第 2 項所述的遠端訊息溝通系統的連線方法，其中該管理伺服器依據相異遠端設備的產品類型而提供相異的位址供該遠端設備登錄至相異的連線伺服器。

5. 如申請專利範圍第 2 項所述的遠端訊息溝通系統的連線方法，其中該管理伺服器依據該遠端設備本身的地理位置而提供相異的位址供該遠端設

備登錄至相異的連線伺服器。

6. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中複數連線伺服器可組成一連線伺服器群組，且同一連線伺服器群組內的複數連線伺服器相互備援。

7. 如申請專利範圍第 2 項所述的遠端訊息溝通系統的連線方法，其中該管理伺服器得更新該伺服器列表、設備列表內容，以新增或變動連線伺服器、遠端設備。

8. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中該近端設備具備一應用介面程式(Application Programming Interface)供使用者提出尋找任一遠端設備的請求。

9. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中該近端設備與該被指定遠端設備之間的連線係由該連線伺服器執行打洞技術(Hole punching)令該近端設備與該被指定遠端設備進行點對點傳輸。

10. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中該近端設備與該被指定遠端設備之間的連線係透過該連線伺服器相互轉發近端設備與該被指定遠端設備的資料封包。

11. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中該近端設備與該被指定遠端設備之間的連線係先由該連線伺服器對近端設備與被指定遠端設備兩者執行打洞技術，若該連線伺服器未完成對兩者的打洞程序則透過該連線伺服器相互轉發近端設備與該被指定遠端設備的資料封包。

12. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中該遠端設備每經過一時段後重新與管理伺服器所指派的連線伺服器登錄該遠端設備的資訊。

13. 如申請專利範圍第 1 項所述的遠端訊息溝通系統的連線方法，其中該遠端設備可再次請求該管理伺服器提供至少一個支援該遠端設備的連線伺

服器之位址，並且該遠端設備再次向被提供的連線伺服器登錄其資訊。

14. 如申請專利範圍第 1 項至第 13 項中任一項所述的遠端訊息溝通系統的連線方法，其中該遠端設備為一安全警報設備。

15. 如申請專利範圍第 1 項至第 13 項中任一項所述的遠端訊息溝通系統的連線方法，其中該遠端設備為一家電設備。

16. 如申請專利範圍第 1 項至第 13 項中任一項所述的遠端訊息溝通系統的連線方法，其中該近端設備具有影音播放功能。

17. 一種遠端訊息溝通系統，係包括：

至少一管理伺服器，該管理伺服器儲存有一伺服器列表及一設備列表；

至少一連線伺服器，該連線伺服器向管理伺服器連線登錄於該伺服器列表中；

至少一個向該管理伺服器請求連線伺服器位址而被登錄於該設備列表的遠端設備，該遠端設備依據管理伺服器回應的連線位址而登錄該遠端設備的資訊於其中一連線伺服器；

其中該管理伺服器接受一近端設備尋找被指定之遠端設備的請求而提供被指定之遠端設備所登錄的連線伺服器，該近端設備透過該管理伺服器所提供的連線伺服器與被指定之遠端設備建立連線。

18. 如申請專利範圍第 17 項所述的遠端訊息溝通系統，其中複數管理伺服器可組成一管理伺服器群組，且同一管理伺服器群組內的複數管理伺服器相互備援，且該些管理伺服器儲存有記憶一個或多個連線伺服器的一伺服器列表，以及記憶一個或多個遠端設備的一設備列表。

19. 如申請專利範圍第 17 項所述的遠端訊息溝通系統，其中複數連線伺服器可組成一連線伺服器群組，且同一連線伺服器群組內的複數連線伺服器相互備援。

20. 如申請專利範圍第 19 項所述的遠端訊息溝通系統，其中複數連線伺服

器區分為相異服務提供者所營運的多個連線伺服器。

21. 如申請專利範圍第 19 項所述的遠端訊息溝通系統，其中複數連線伺服器區分為支援相異產品類型遠端設備的多個連線伺服器。

22. 如申請專利範圍第 19 項所述的遠端訊息溝通系統，其中複數連線伺服器區分為設置於相異地理位置的多個連線伺服器。

23. 如申請專利範圍第 17 項所述的遠端訊息溝通系統，其中該近端設備具備一應用介面程式(Application Programming Interface)供使用者提出尋找被指定之遠端設備的請求。

24. 如申請專利範圍第 17 項所述的遠端訊息溝通系統，其中該近端設備與該被指定遠端設備之間的連線係由該連線伺服器執行打洞技術(Hole punching)令該近端設備與該被指定遠端設備進行點對點傳輸。

25. 如申請專利範圍第 17 項所述的遠端訊息溝通系統，其中該近端設備與該被指定遠端設備之間的連線係透過該連線伺服器相互轉發近端設備與該被指定遠端設備的資料封包。

26. 如申請專利範圍第 17 項至第 25 項中任一項所述的遠端訊息溝通系統，其中該遠端設備為一安全警報設備。

27. 如申請專利範圍第 17 項至第 25 項中任一項所述的遠端訊息溝通系統，其中該遠端設備為一家電設備。

28. 如申請專利範圍第 17 項至第 25 項中任一項所述的遠端訊息溝通系統，其中該近端設備為具有影音播放功能的設備。

八、圖式：

圖 1

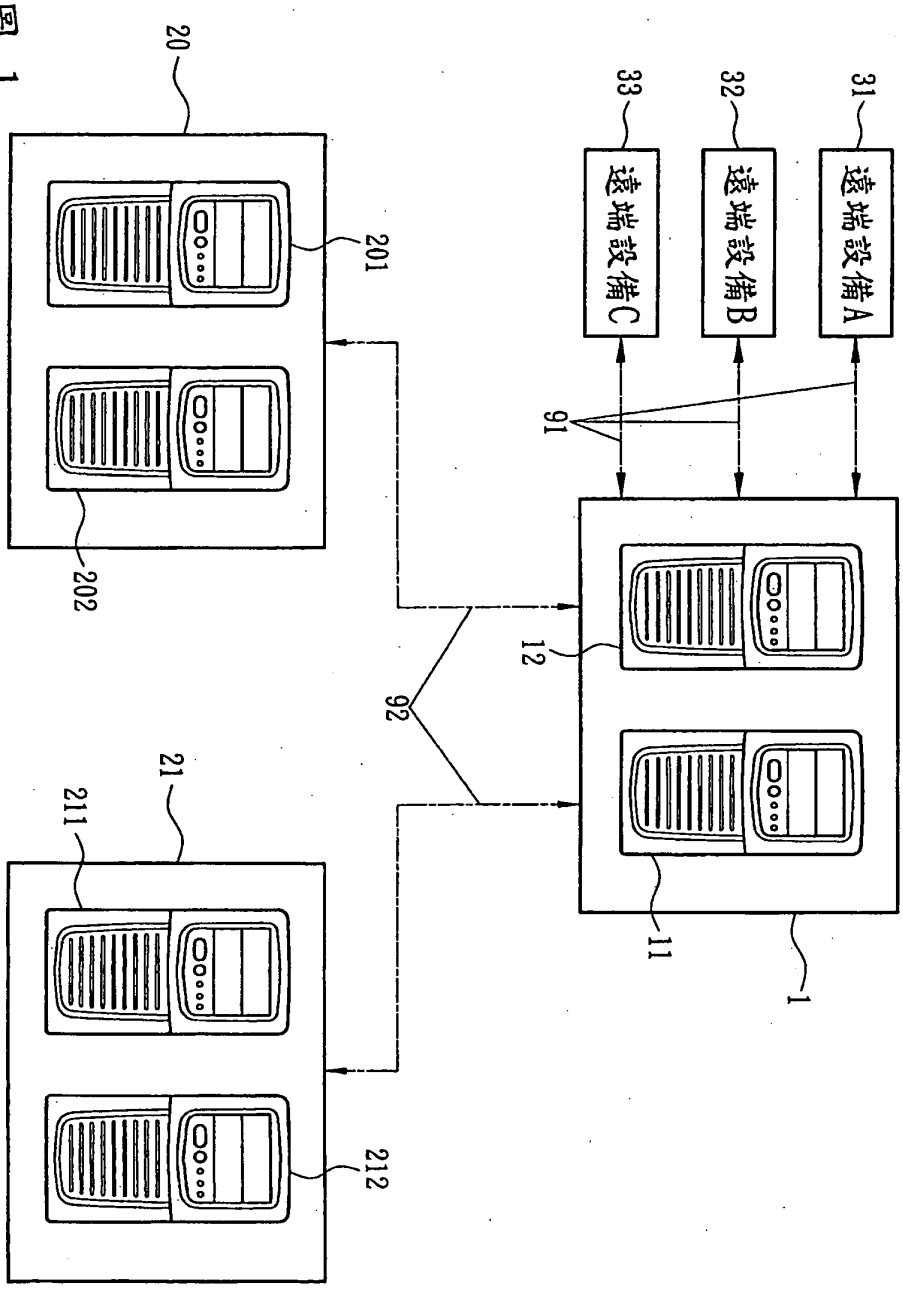


圖 2

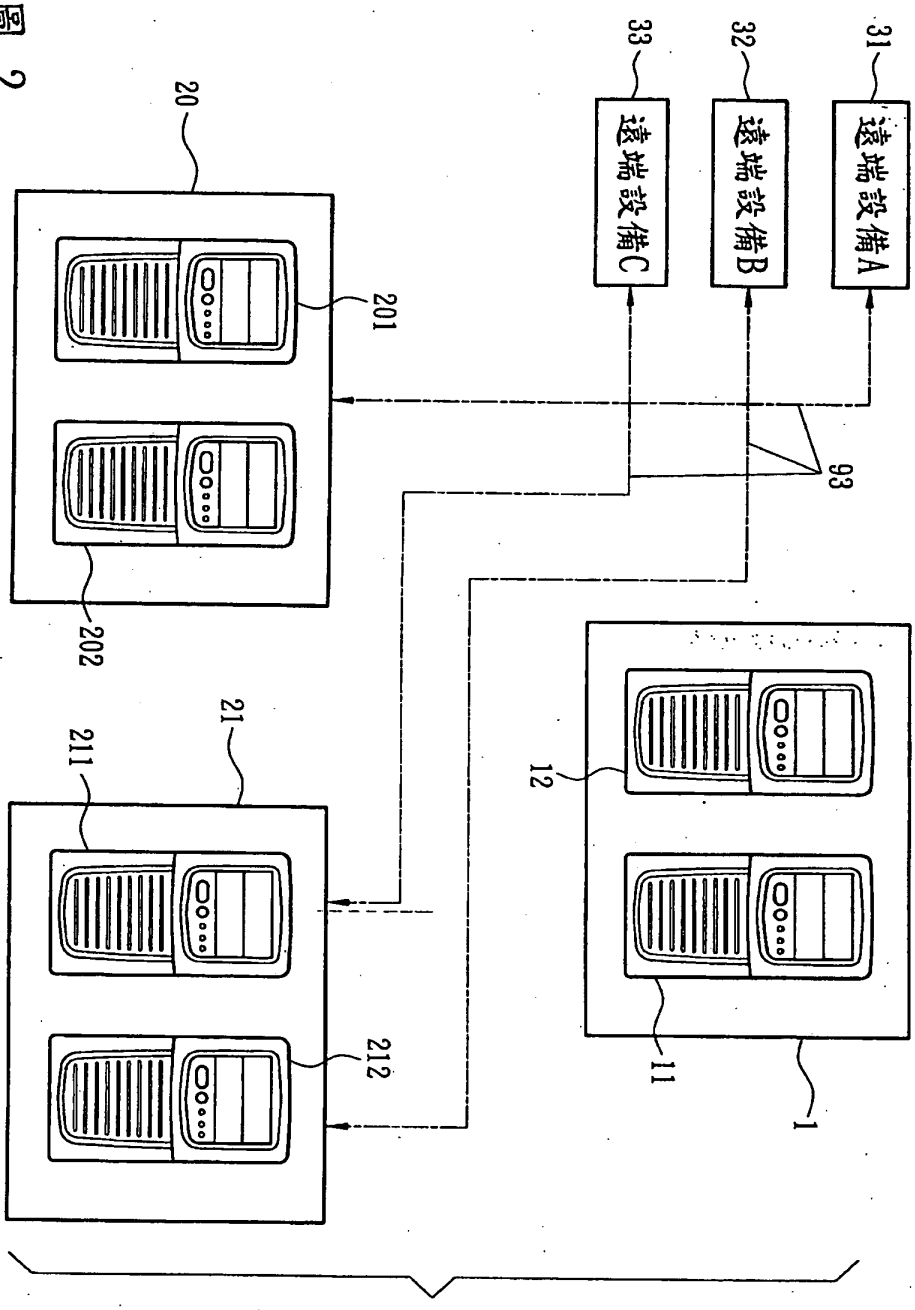


圖 3

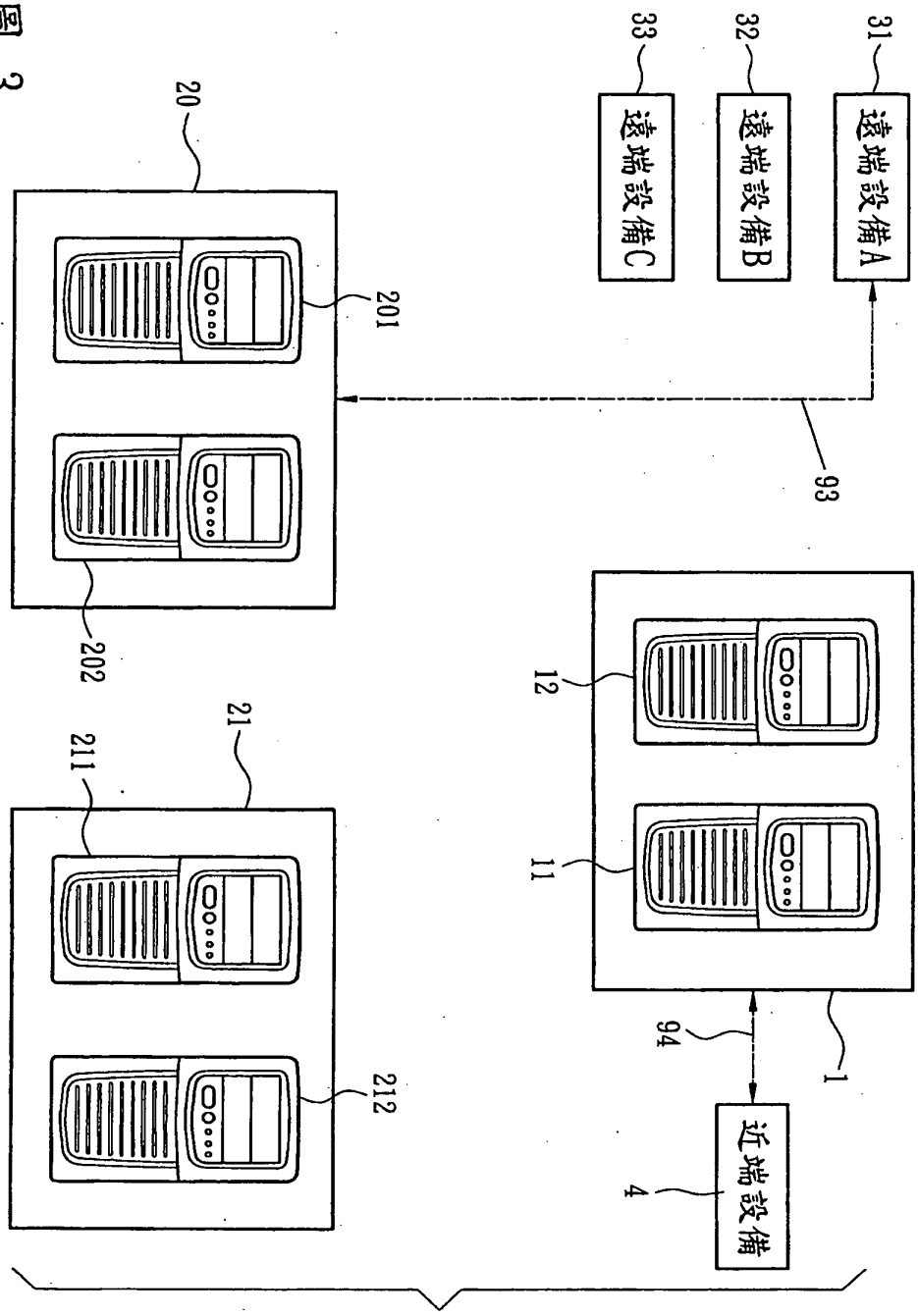

遠端設備A
遠端設備B
遠端設備C
31
32
33
20
201
202
93
12
11
21
211
212
94
1
近端設備
4

圖 4

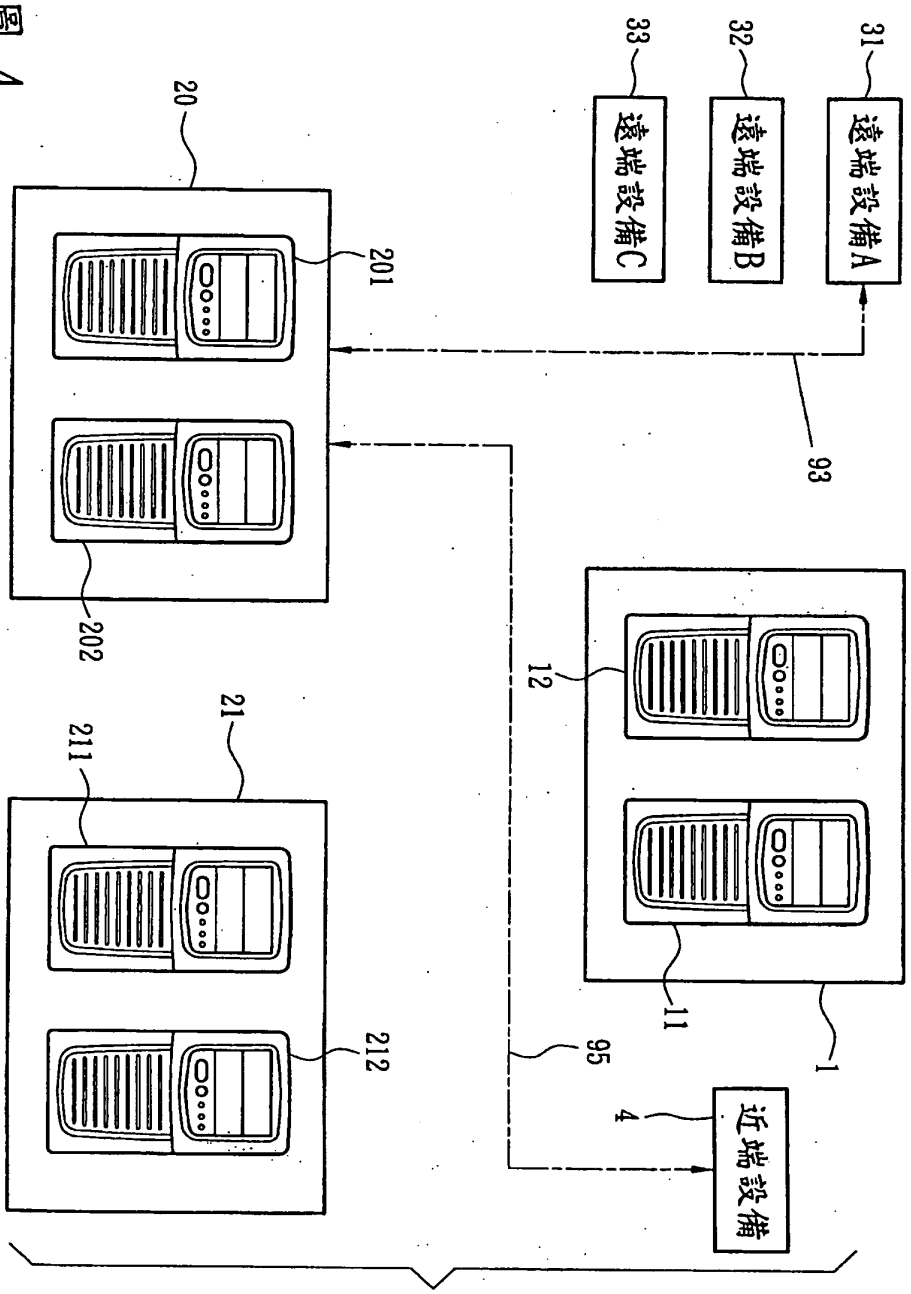

遠端設備A
遠端設備B
遠端設備C
近端設備
31
32
33
4
1
11
12
20
201
202
21
211
212
93
95

圖 5

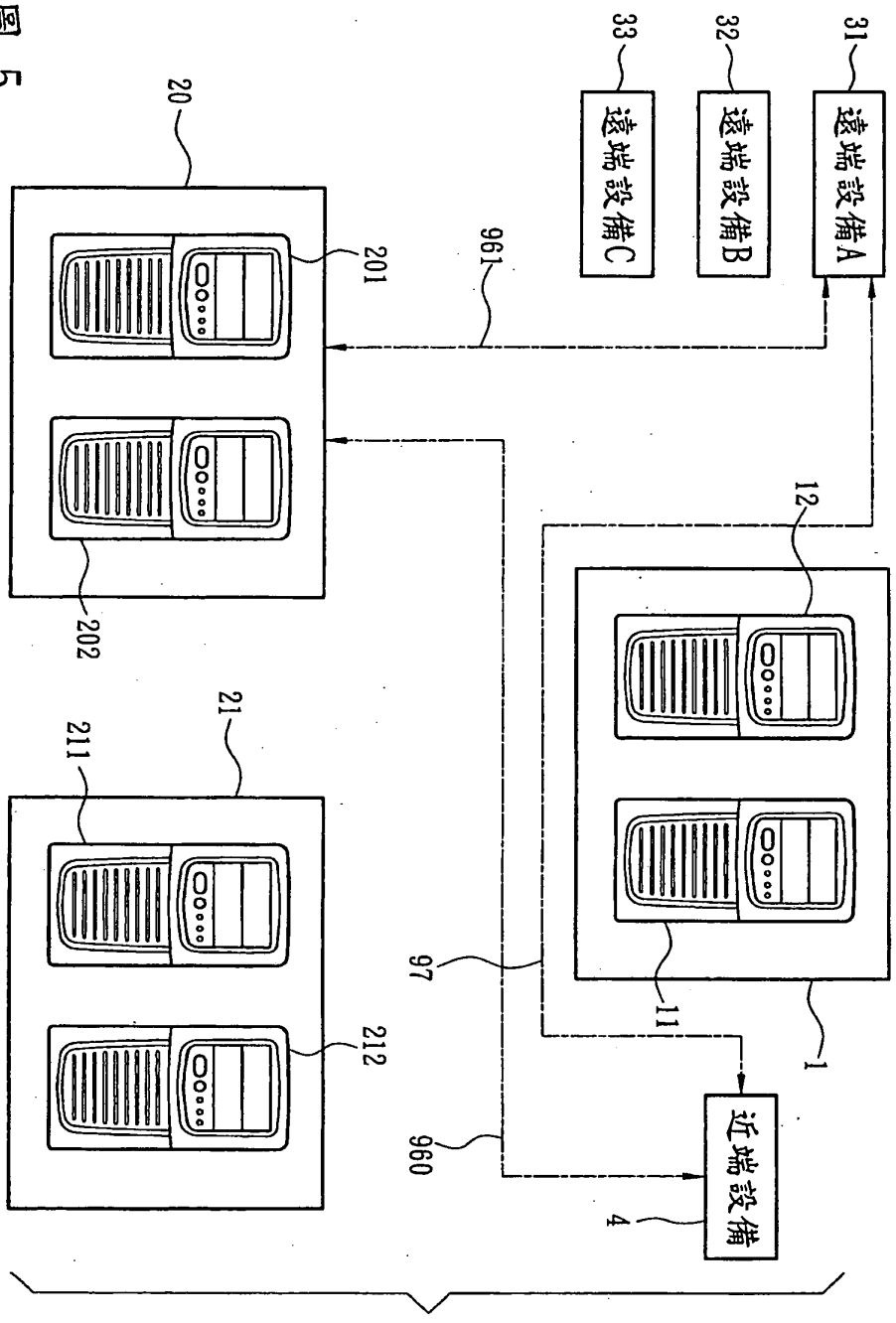

遠端設備A
遠端設備B
遠端設備C
近端設備
31
32
33
4
1
11
12
20
201
202
21
211
212
961
960
97

圖 6

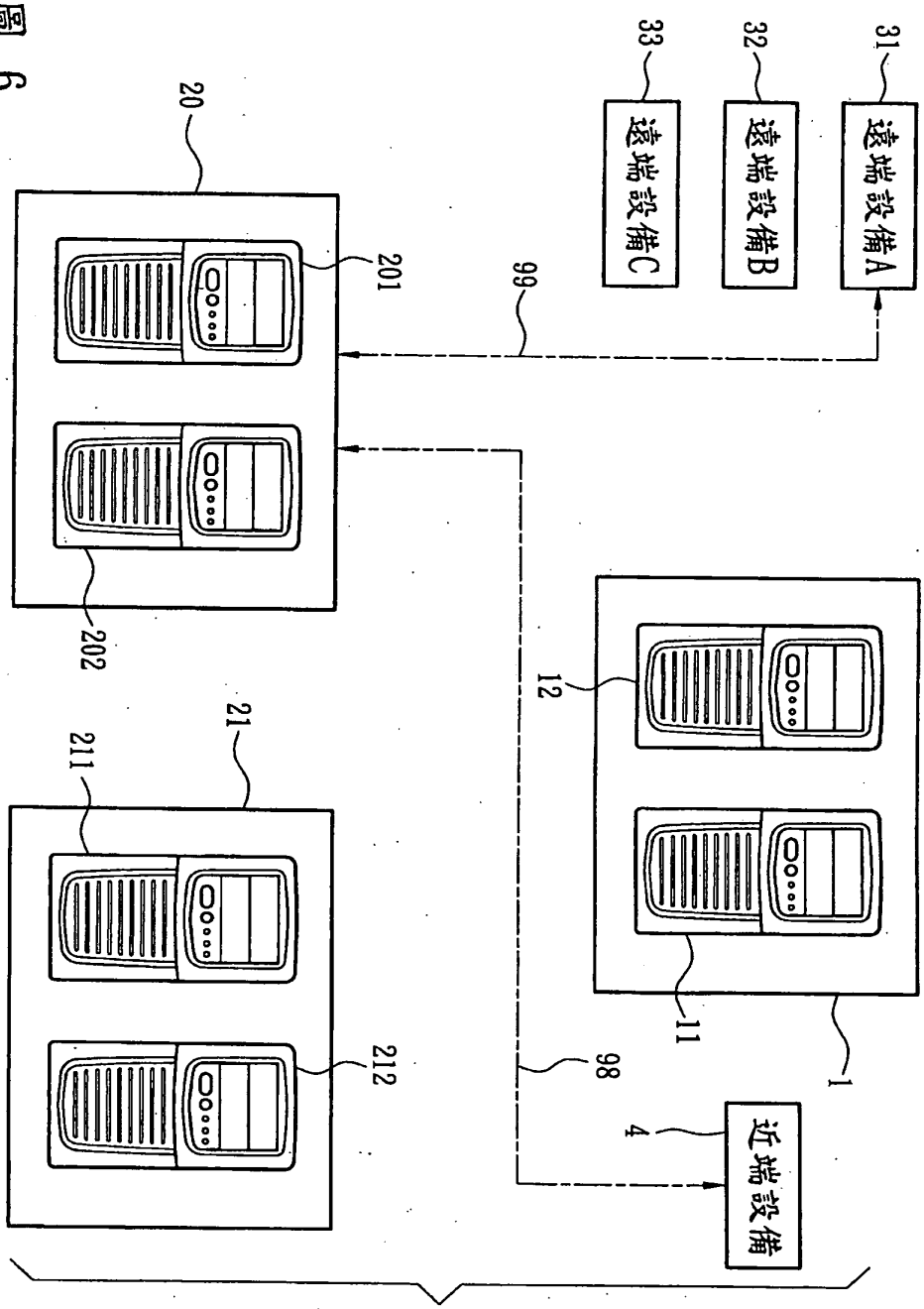

遠端設備A
遠端設備B
遠端設備C
近端設備
31
32
33
4
1
11
12
20
201
202
21
211
212
99
98

圖 7

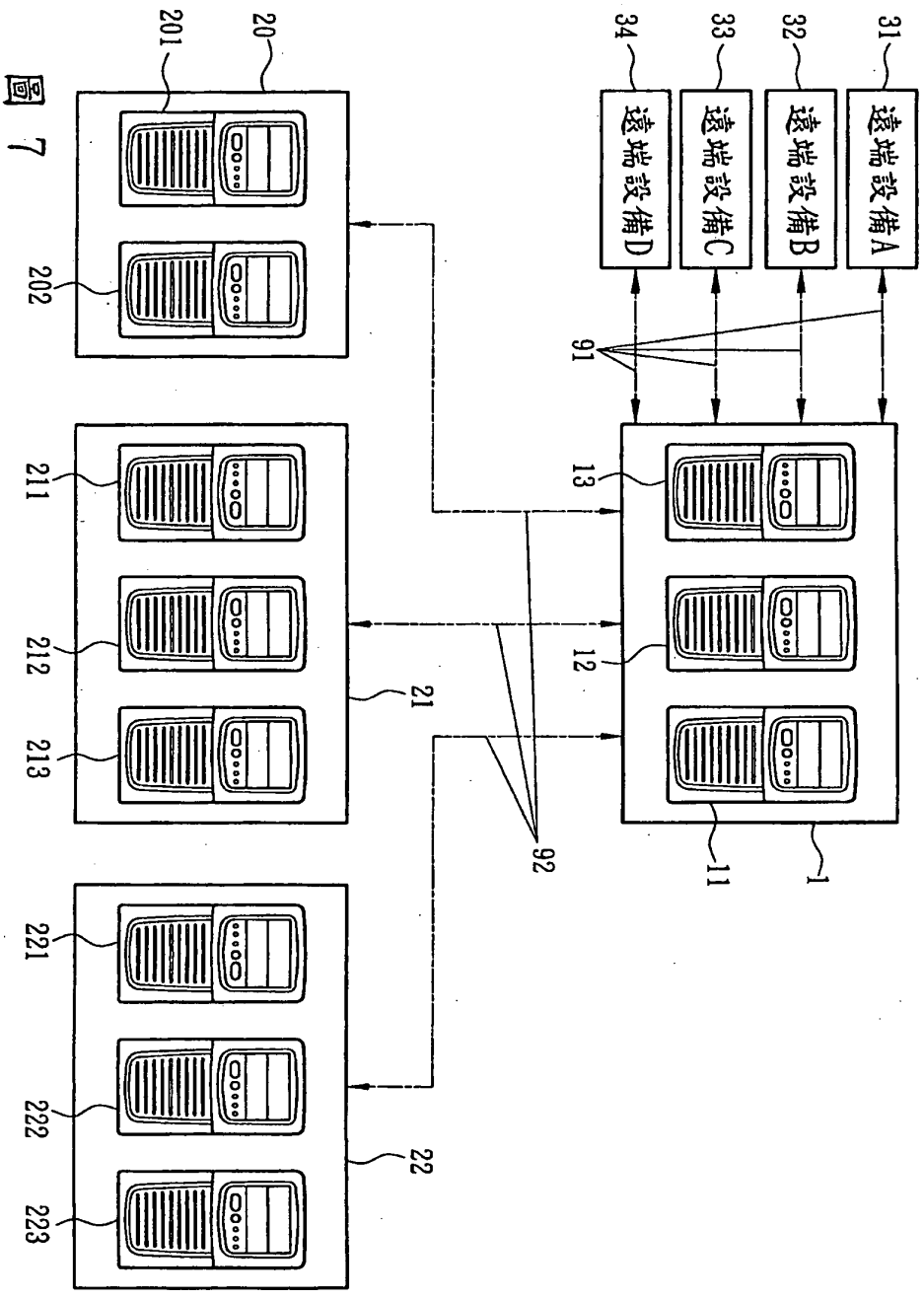
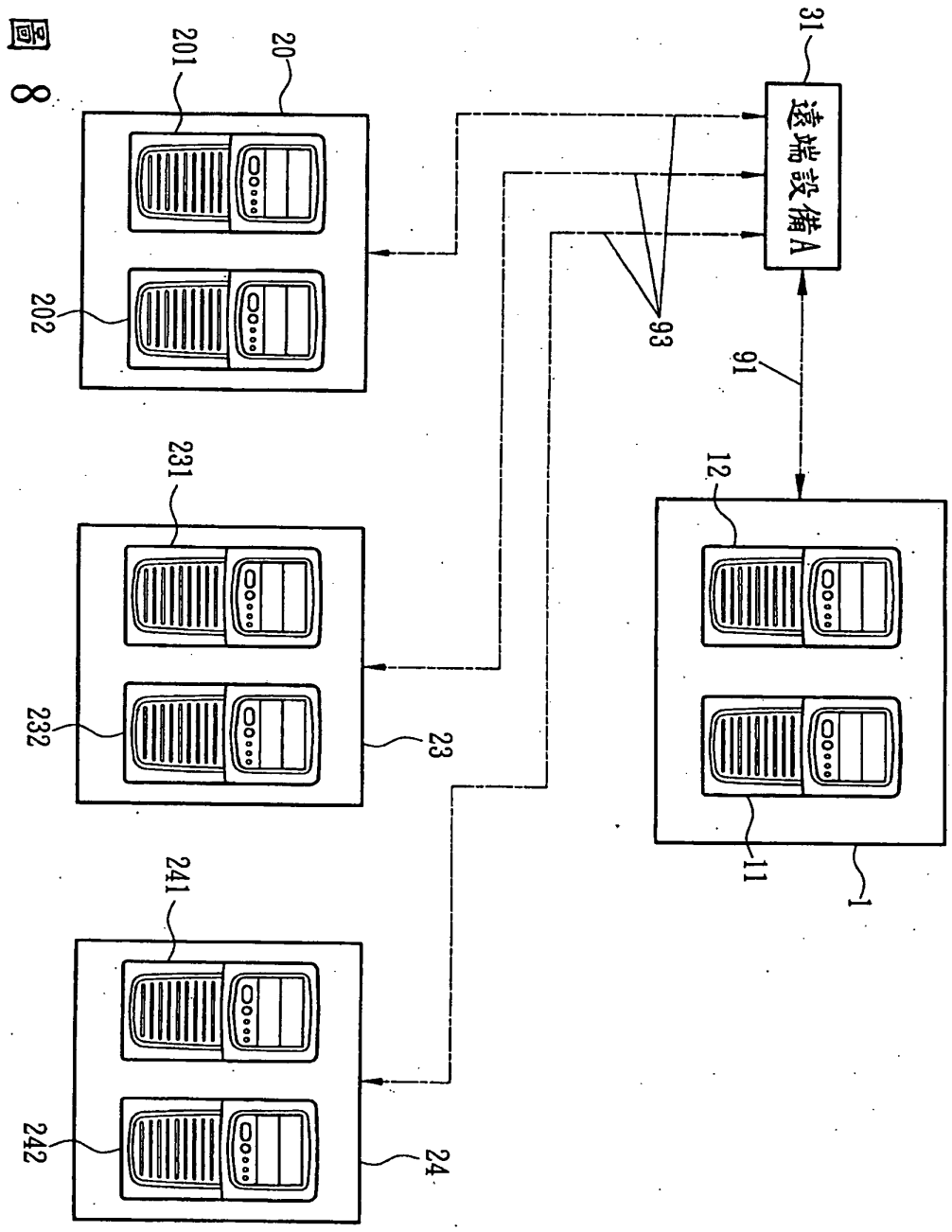

遠端設備A
遠端設備B
遠端設備C
遠端設備D
31
32
33
34
91
92
1
11
12
13
20
201
202
21
211
212
213
22
221
222
223

圖 8



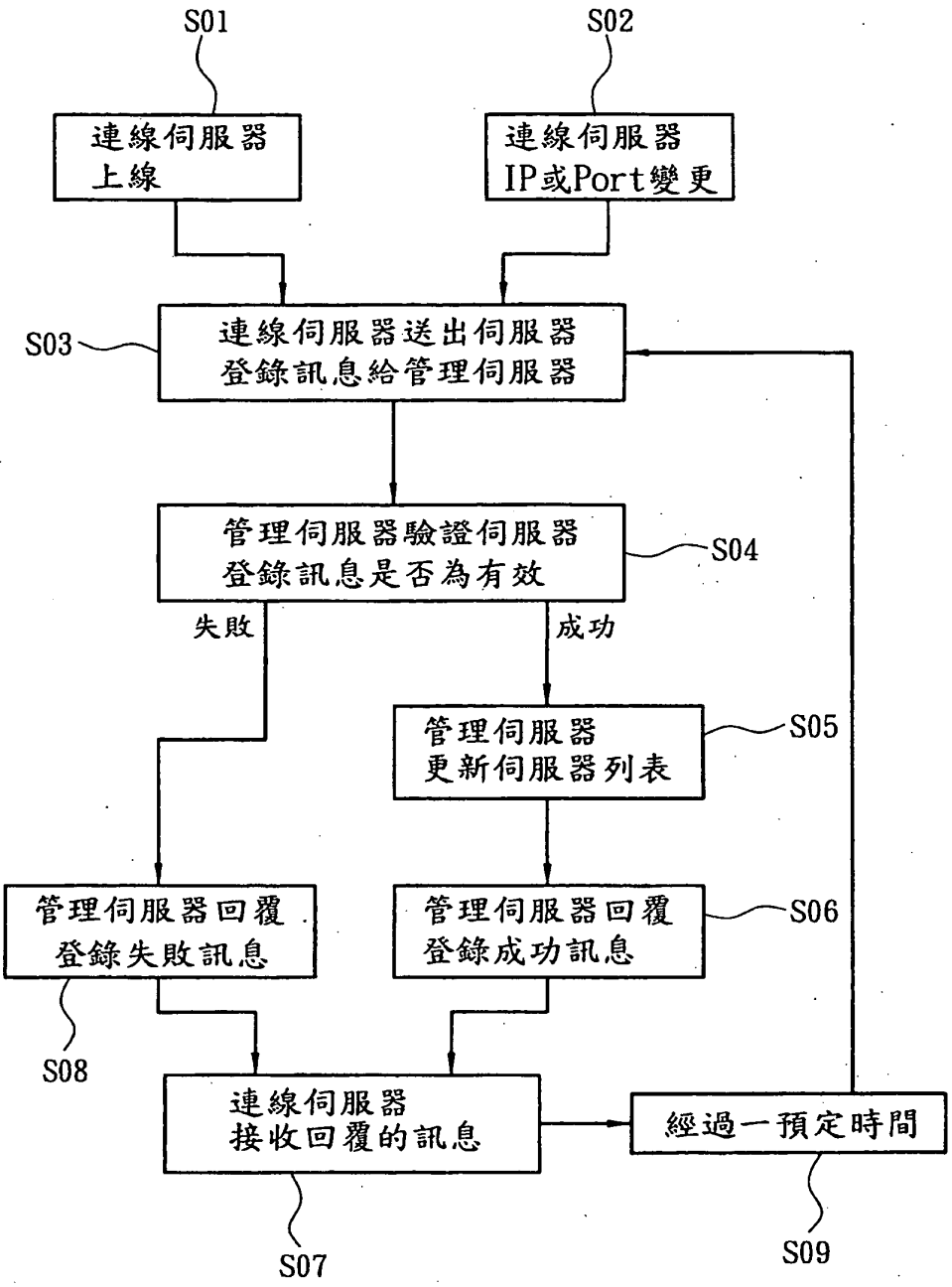

S01
S02
連線伺服器
上線
連線伺服器
IP或Port變更
S03
連線伺服器送出伺服器
登錄訊息給管理伺服器
管理伺服器驗證伺服器
登錄訊息是否為有效
S04
失敗
成功
管理伺服器
更新伺服器列表
S05
管理伺服器回覆
登錄失敗訊息
管理伺服器回覆
登錄成功訊息
S06
S08
連線伺服器
接收回覆的訊息
經過一預定時間
S07
S09

圖 9

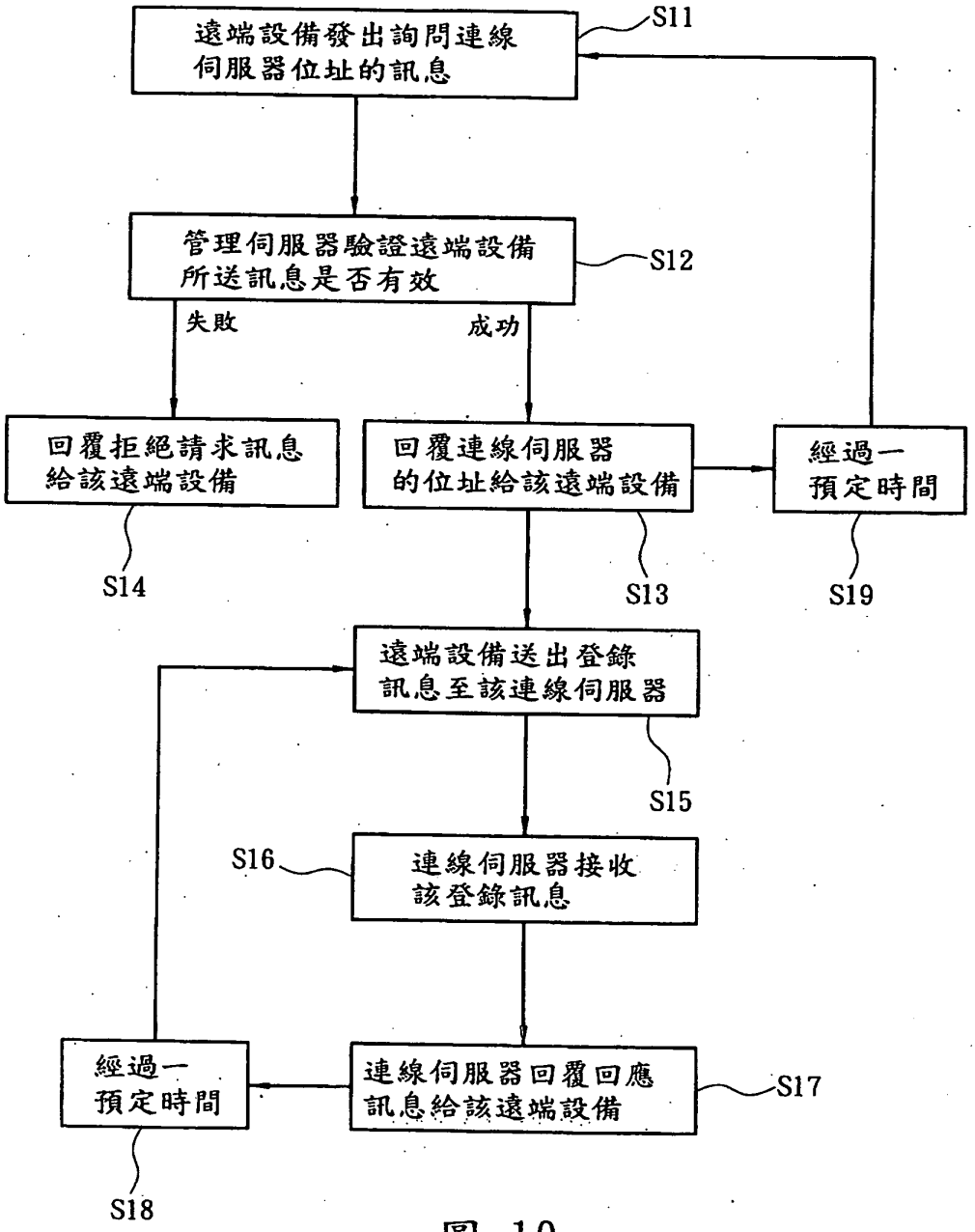

遠端設備發出詢問連線伺服器位址的訊息
S11
管理伺服器驗證遠端設備所送訊息是否有效
S12
失敗
成功
回覆拒絕請求訊息給該遠端設備
回覆連線伺服器的位址給該遠端設備
經過一預定時間
S14
S13
S19
遠端設備送出登錄訊息至該連線伺服器
S15
S16
連線伺服器接收該登錄訊息
經過一預定時間
連線伺服器回覆回應訊息給該遠端設備
S17
S18

圖 10

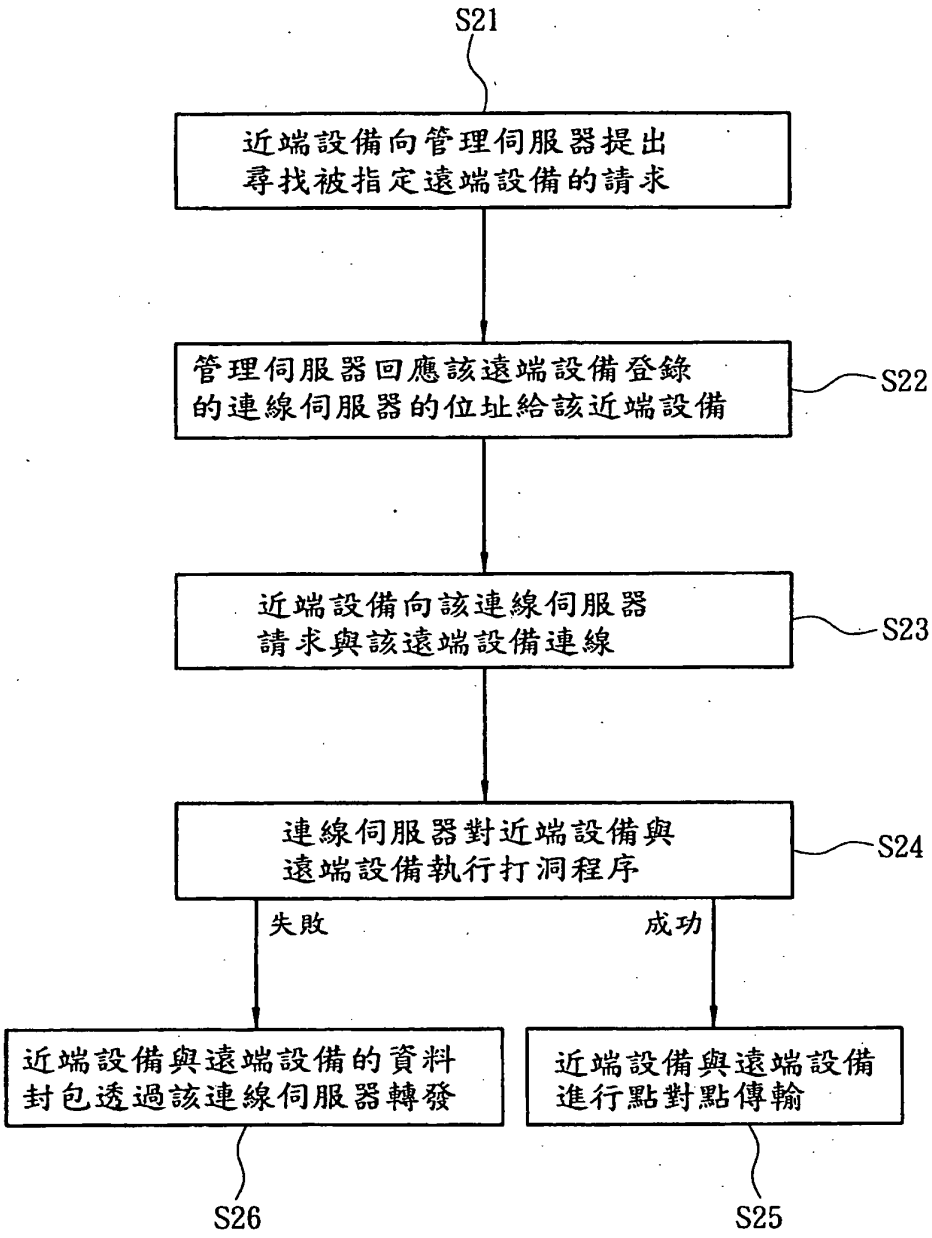

S21
近端設備向管理伺服器提出
尋找被指定遠端設備的請求
管理伺服器回應該遠端設備登錄
的連線伺服器的位址給該近端設備
S22
近端設備向該連線伺服器
請求與該遠端設備連線
S23
連線伺服器對近端設備與
遠端設備執行打洞程序
S24
失敗
成功
近端設備與遠端設備的資料
封包透過該連線伺服器轉發
近端設備與遠端設備
進行點對點傳輸
S26
S25

圖 11

中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE
MINISTRY OF ECONOMIC AFFAIRS
REPUBLIC OF CHINA

茲證明所附文件，係本局存檔中原申請案的副本，正確無訛，
其申請資料如下 ：

This is to certify that annexed is a true copy from the records of this office of the application as originally filed which is identified hereunder：

申　　請　　日 ： 西元 2011 年 01 月 28 日
Application Date　　Jan. 28, 2011

申　請　案　號 ： 100201960
Application No.

申　　請　　人 ： 物聯智慧股份有限公司
Applicant(s)

發明人 / 創作人： 郭啟銘、高于立、張生福、楊健智
Inventor(s)

局　　長
Director General
王美花

西元 2011 年 09 月 15 日
Sep. 15, 2011

新型專利說明書

（本說明書格式、順序，請勿任意更動，※記號部分請勿填寫）

※申請案號：100201960

※申請日：　　※IPC分類：

一、新型名稱：（中文/英文）

點對點物聯網連線平台

二、中文新型摘要：

本創作為有關於一種點對點物聯網連線平台，此平台係透過網際網路建立管理伺服器及對應的複數點對點伺服器之間的連線，透過管理伺服器能讓不同分別具備網路連線功能的被動裝置取得所需點對點伺服器的網際通訊協定（IP）位置，由於該些被動裝置均具備程式單元，因此能直接透過路由器(Router)讓同樣具備對應此程式單元之對應程式單元的主動裝置直接連接，因此透過此平台能輕易地讓任何具備網際網路功能的設備透過網際網路完成點對點之間的資料傳送，並且受到程式單元的建置，能跨越不同廠商間的連線障礙，除此之外，此平台兼具快速完成點對點連線之優勢。

三、英文新型摘要：

四、指定代表圖：

(一)本案指定代表圖為：第（四）圖。

(二)本代表圖之元件符號簡單說明：

連接平台	?	3
管理伺服器	?	30
認證單元	?	302
點對點伺服器	?	32
網際網路	?	4
被動裝置	?	5
程式單元	?	50
主動裝置	?	6
對應程式單元	?	60
路由器	?	7

五、新型說明：

【新型所屬之技術領域】

本創作為提供一種點對點連接平台，尤指一種透過適用各種作業系統的應用程式接口（Application Programming Intercace，API），達到高相容性的點對點連接，以提升各種具備網路連線的移動設備進行直接互動的點對點物聯網連線平台。

【先前技術】

按，長久以來，大部份所有家用的網路設備因使用浮動ＩＰ的緣故，再加上透過網際網路連線時都需要使用動態域名服務（Dynamic Domain Name Service，ＤＤＮＳ），功能加上路由器(Router)上的 Port Mapping 設定，同時請參閱第一圖所示，其主要對ＤＤＮＳ１０做申請並連接至路由器１２(Router)，透過網際網路連接到數據機１４以取得浮動ＩＰ，再由路由器１２(Router)設定ＰＯＲＴ　ＭＡＰＰＩＮＧ以取得ＰＯＲＴ的位置，而後再由ＩＰ－ＣＡＭ１６設定ＤＤＮＳ以達到連線關係，此時其他的電腦１８亦可經由路由器１２直接與ＩＰ－ＣＡＭ１６連線，此種方式的複雜程度是非專業人員所能完成的，因此一般的使用者完全無法自行設定。

因此，有鑑於一般的浮動ＩＰ問題，則發展出點對點的連線機制，如第二圖所示，為一般的使用者不需複雜的ＤＤＮＳ及Port Mapping設定即可達到連線目的的點對點連線因應而生，其主要由ＩＰ－ＣＡＭ２０（網路攝影機）向點對點伺服器２２註冊，此時ＩＰ－ＣＡＭ系統２４則向點對點伺服器２２請求點對點連線並建立連線服務，而點對點伺服器２２會通知ＩＰ－ＣＡＭ２０的外網位置，並供ＩＰ－ＣＡＭ２０往ＩＰ－ＣＡＭ系統２４所在的外網位置形成直接連接的ＰＯＲＴ，因此讓ＩＰ－ＣＡＭ２０與ＩＰ－ＣＡＭ系統２４透過由路由器２６（Router）互相運用對方外網的ＰＯＲＴ直接連接，然而，此種點對點的連線機制僅只能運用於同系統、軟體或同產品的網路設備上，並無法達到高相容性之目的。

是以，要如何解決上述習用之問題與缺失，即為本創作之創作人與從事此行業之相關廠商所亟欲研究改善之方向所在者。

【新型內容】

故，本創作之創作人有鑑於上述缺失，乃搜集相關資料，經由多方評估及考量，並以從事於此行業累積之多年經驗，經由不斷試作及修改，始設計出此種透過適用各種作業系統的

應用程式接口（Application Programming Interface，API），達到高相容性的點對點連接，以提升各種具備網路連線的移動設備進行直接互動的點對點物聯網連線平台的新型專利者。

本創作之主要目的在於：讓所有具備網路連線功能的設備可透過不同的連接介面，並同時藉由API直接進入點對點連線平台，與遠端具網路功能的設備直接連線。本創作為兼具彈性、穩定可靠、可擴充及有效率的高相容性之點對點物聯網連線平台，以達到最佳化的點對點連線為目的。

為達到上述目的，本創作係一種採用雲端運算方式的點對點物聯網連線平台，此平台係包括：複數分別由網際網路建立對複數點對點伺服器連接之管理伺服器，且該些管理伺服器具備一認證單元；複數個已具備一程式單元（API）、並分別經由該認證單元透過網際網路連結至該管理伺服器、同時取得須連結的該點對點伺服器之網際通訊協定的被動裝置（具備連接網際網路之電器電子用品）；複數個已具備與該程式單元相對應之對應程式單元（API）、並直接透過網際網路連結至該管理伺服器、並取得對應該被動裝置之點對點伺服器的主動裝置（具備連接網際網路之電子用品）。

本創作之次要目的在於：具備跨平台之優勢，能跨越不同廠商間產品的連線障礙。

本創作之另一目的在於：掌握時效性之優勢，能快速完成點對點（Ｐ２Ｐ）的連線，不需自行架設並維護複雜的點對點平台。

本創作之又一目的在於：具備使用上彈性之優勢，可根據所連接平台的設備數量及地區分配而動態調整。

本創作之再一目的在於：具備點對點伺服器之穩定性優勢，可架設複數個點對點伺服器以隨時接手服務。

本創作之又另一目的在於：點對點伺服器具備可擴充之優勢，可隨著使用者數量的增加而逐漸擴充點對點伺服器的數量。

本創作之又再一目的在於：具備高效率的優勢，點對點服務的請求者（主動裝置）及等待主動裝置連線者（被動裝置）可在多個點對點伺服器中選擇出相對負載較小或延遲速度較低者來完成點對點所需的服務。

【實施方式】

為達成上述目的及功效，本創作所採用之技術手段及構造，茲繪圖就本創作較佳實施例詳加說明其特徵與功能如下，俾利完全了解。

請參閱第三圖所示，本創作較佳實施例之

平台架構圖及，由圖中可清楚看出本創作係一種點對點物聯網連線平台，此連接平台3係包括：

複數個管理伺服器30，以分別由網際網路4建立對複數點對點伺服器32連接，且該些管理伺服器30具備一認證單元302；複數個已具備一程式單元50（應用程式接口（Application Programming Intercace，API））的被動裝置5（具備連接網際網路之電器電子用品），並分別經由認證單元302以取得認證，再透過網際網路4連結至管理伺服器30、同時取得須連結的點對點伺服器32之網際通訊協定（IP）；複數個已具備與具程式單元50的被動裝置5相對應之對應程式單元60（應用程式接口（Application Programming Intercace，API））的主動裝置6（具備連接網際網路之電子用品）、並直接透過網際網路4連結至管理伺服器30、並取得對應該被動裝置5之點對點伺服器32，主動裝置6及被動裝置5相互取得連線位置後，再經由路由器7（Router）直接建立連線關係。

藉由上述之結構、組成設計，茲就本創作之使用作動情形說明如下，請同時配合參閱第四圖及第五圖所示，係為本創作較佳實施例之運作流程示意圖及平台應用示意圖，由圖中可

清楚看出：所述之被動裝置5係為一般的家用品或３Ｃ產品，而該些產品均須具備能與網際網路４連結的功能，而主動裝置６係為一般的行動式及固定式網路設備（如：手機、電腦、筆記型電腦），而該些網路設備的產品均須具備能與網際網路４連結的功能。

延續第三圖的架構，首先，各個點對點伺服器３２須先對管理伺服器３０透過網際網路４連結，此時管理伺服器３０能有效掌握所有區域的每個點對點伺服器３２的位置及負載狀況。而前述之被動裝置５必須具備程式單元５０（API），而此 API 能適用於各種不同的作業系統，只要調用 API 就能與任何同樣具備對應程式單元６０(API)的主動裝置６建立連線，所以運用統一的接口方式即可達到跨越不同的平台，如：Win32、Linux、iPhone/MAC、Android...等。此外，被動裝置５係可運用不同的連接介面８做為連接網際網路的媒介，如：interfaces、Ethernet、Homeplug、WiFi、WiMax、Bluetooth、Zigbee)。

在前述中具備 API 的被動裝置５在登入管理伺服器３０之前須先透過認證單元３０２以取得認證(ID)，運用此認證(ID)即可設立一組帳號密碼，如此一來，遠端的主動裝置６只要知道被動裝置５所的認證(ID)即可達到相互建

立連線的關係，當被動裝置5登入管理伺服器30後則能即時掌握所有的點對點伺服器32，此時被動裝置5的則會連結到最近的數個點對點伺服器32，此時在該些點對點伺服器32則已與被動裝置5呈現連線狀態。

當進行遠端的主動裝置6操作時，主動裝置6只要直接登入管理伺服器30並運用與被動裝置5所使用的相同認證(ID)，即可得知被動裝置5所在的點對點伺服器32位置，此時主動裝置6則可直接透過點對點伺服器32，並用運路由器7與被動裝置5建立連線關係。

而本創的連接平台具有各種不同的應用方式，如下所述：

1、用手機或電腦監看家裡的網路攝影機。

2、用手機或電腦控制家中的電器設備。

3、手機之間的信息傳送。

4、透過辦公室的桌上型電腦啟動家中的電器用品。

5、家中的門被破壞開啟時會即時通之手機或電腦。

6、用手機拍照上傳回家中的網路儲存設備（NAS）。

7、用手機連接家中的網路儲存設備（NAS）並播放影片、資料或照片等不同的媒體資訊。

透過上述的應用層面，能更進一步了解運

用此種透過適用各種作業系統的應用程式接口（Application Programming Intercace，API），達到高相容性的點對點連接，以提升各種具備網路連線的移動設備進行直接互動，能夠直接解決目前因網路設定過於複雜及跨平台而導致的難以普及化及相容性低的問題。

惟，以上所述僅為本創作之較佳實施例而已，非因此即侷限本創作之專利範圍，故舉凡運用本創作說明書及圖式內容所為之簡易修飾及等效結構變化，均應同理包含於本創作之專利範圍內，合予陳明。

綜上所述，本創作之點對點物聯網連線平台於使用時，為確實能達到其功效及目的，故本創作誠為一實用性優異之創作，為符合新型專利之申請要件，爰依法提出申請，盼　審委早日賜准本創作，以保障創作人之辛苦創作，倘若　鈞局審委有任何稽疑，請不吝來函指示，創作人定當竭力配合，實感德便。

【圖式簡單說明】

第一圖　係為習用之一般網路設備示意圖。

第二圖　係為習用之點對點連線機制示意圖。

第三圖　本創作較佳實施例之平台架構圖。

第四圖　係為本創作較佳實施例之運作流程示意圖。

第五圖　係為本創作較佳實施例之平台應用示意圖。

【主要元件符號說明】

習知元件

ＤＤＮＳ	？	１０
路由器	？	１２
數據機	？	１４
ＩＰ－ＣＡＭ	？	１６、２０
電腦	？	１８
點對點伺服器	？	２２
ＩＰ-ＣＡＭ系統	？	２４
路由器	？	２６

創作元件

連接平台	？	３
管理伺服器	？	３０
認證單元	？	３０２
點對點伺服器	？	３２
網際網路	？	４

被動裝置	?	5
程式單元	?	50
主動裝置	?	6
對應程式單元	?	60
路由器	?	7
連接介面	?	8

六、申請專利範圍：

1、一種點對點物聯網連線平台，此平台係包括：

複數分別由網際網路建立對複數點對點伺服器連接之管理伺服器，且該些管理伺服器具備一認證單元；

複數個已具備一程式單元、並分別經由該認證單元透過網際網路連結至該管理伺服器、同時取得須連結的該點對點伺服器之網際通訊協定的被動裝置；

複數個已具備與該程式單元相對應之對應程式單元、並直接透過網際網路連結至該管理伺服器、並取得對應該被動裝置之點對點伺服器的主動裝置。

2、如申請專利範圍第1項所述之點對點物聯網連線平台，更包括複數分別供該被動裝置及該主動裝置直接建立連線之路由器(Router)。

3、如申請專利範圍第1項所述之點對點物聯網連線平台，其中該程式單元係為應用程式接口(Application Programming Interface，API)。

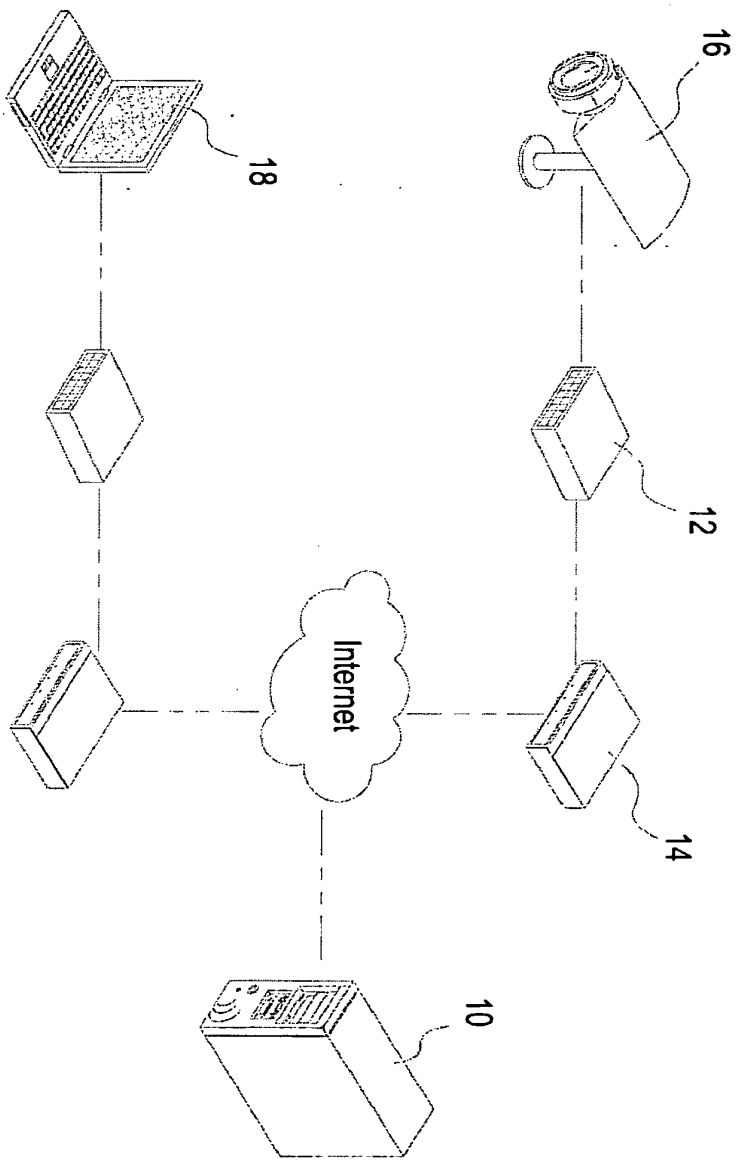
4、如申請專利範圍第1項所述之點對點物聯網連線平台，其中該對應程式單元係為應用程式接口(Application Programming I

nterface，API）。

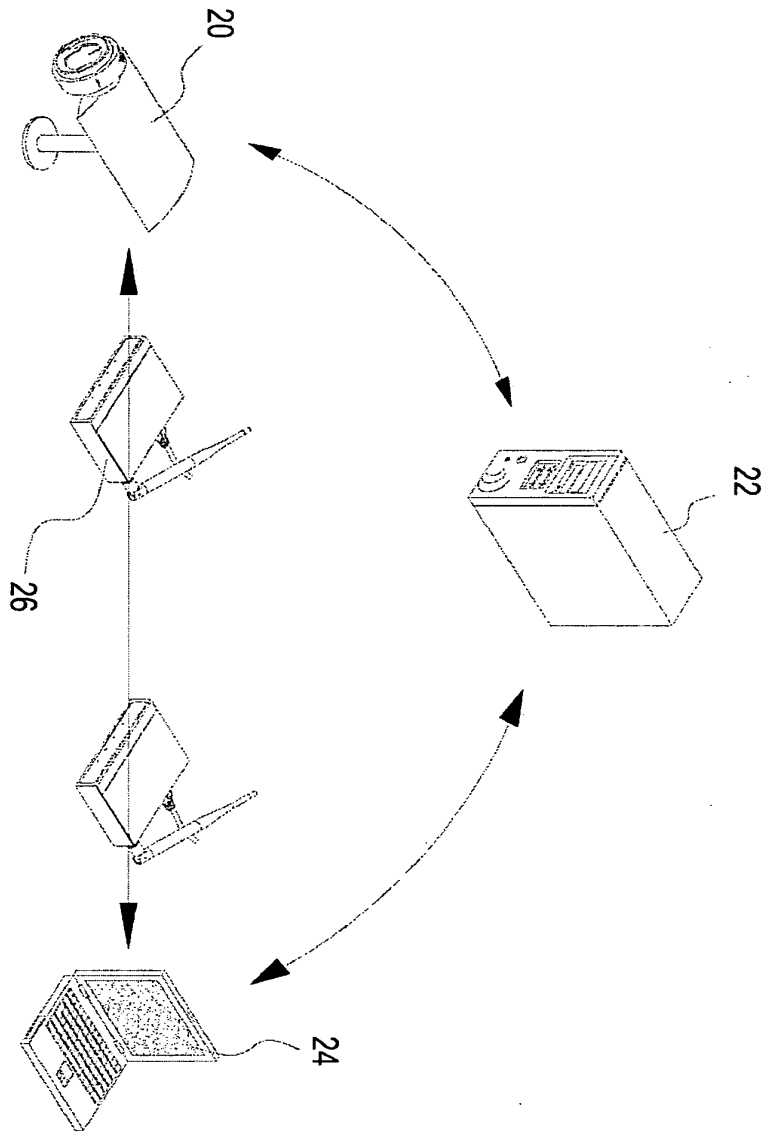
5、如申請專利範圍第1項所述之點對點物聯網連線平台，其中該被動裝置係為具備連接網際網路之電器電子用品。

6、如申請專利範圍第1項所述之點對點物聯網連線平台，其中該主動裝置係為具備連接網際網路之電子用品。

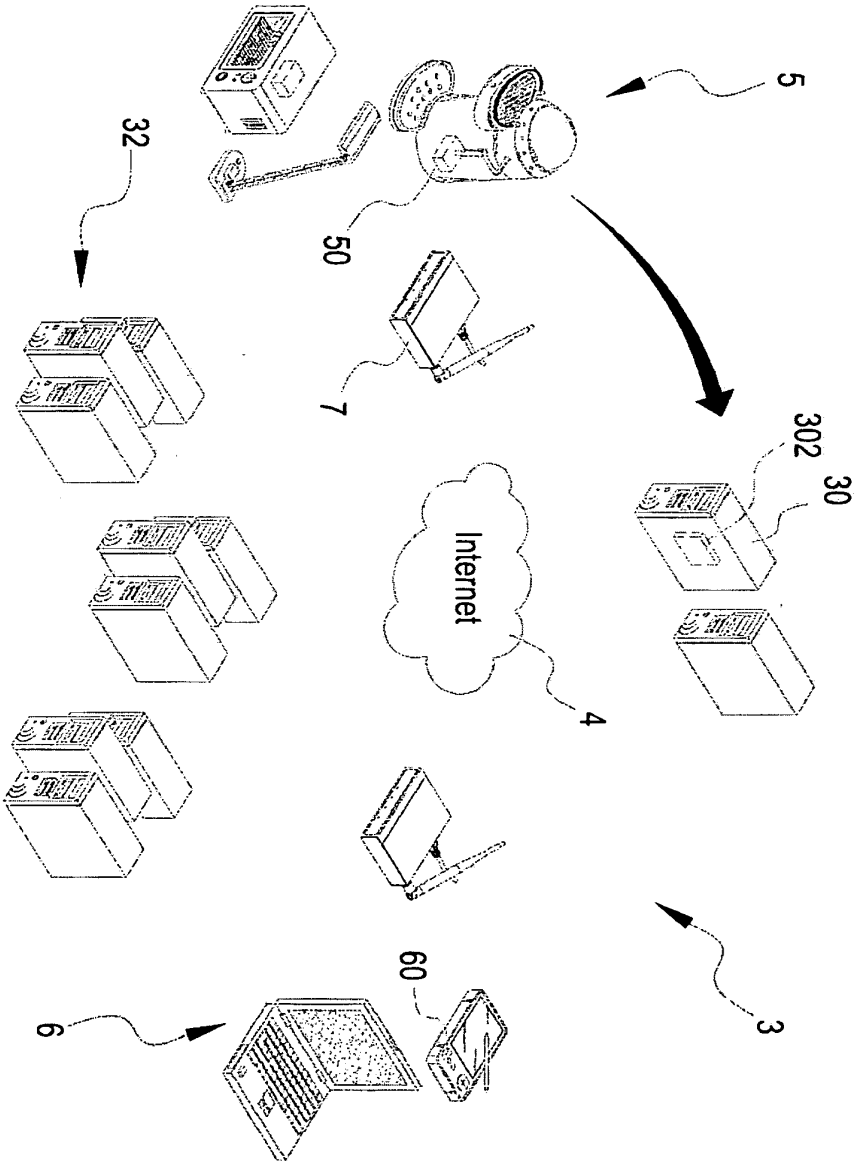
七、圖式：



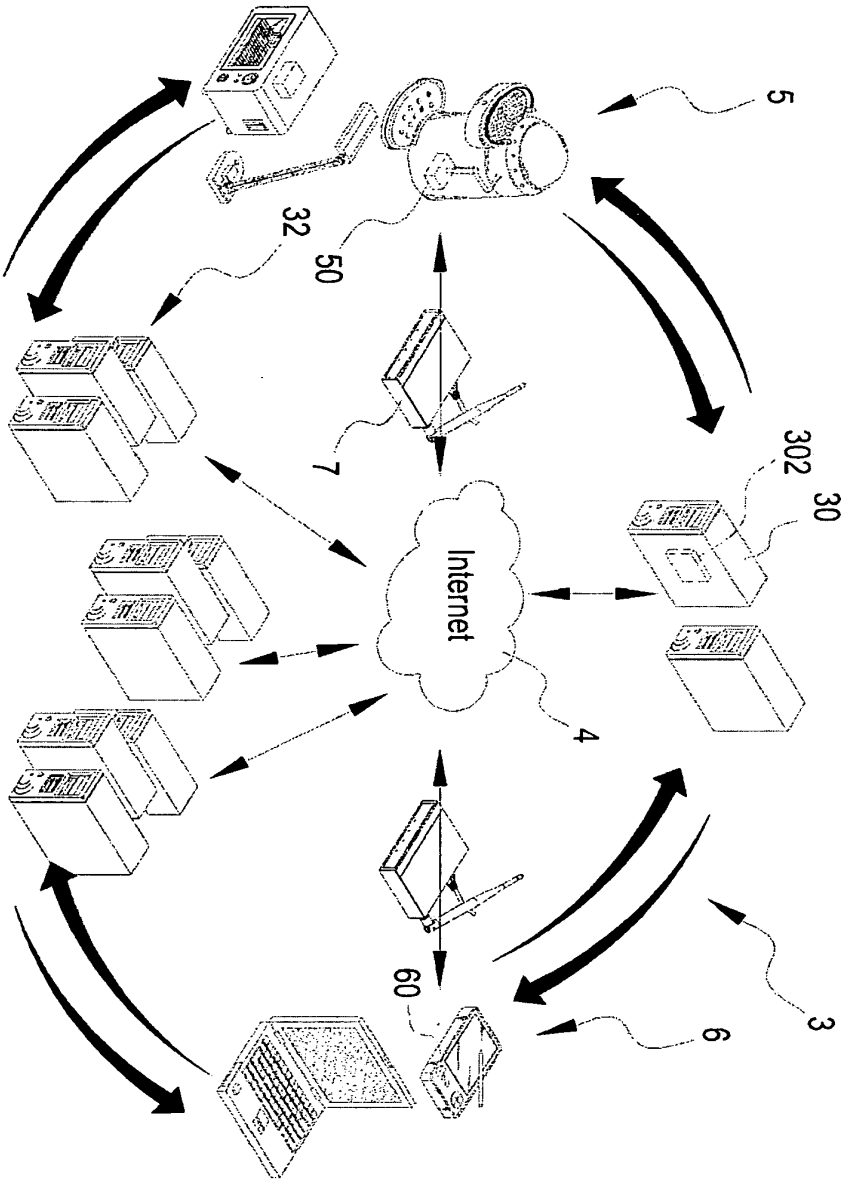
第一圖



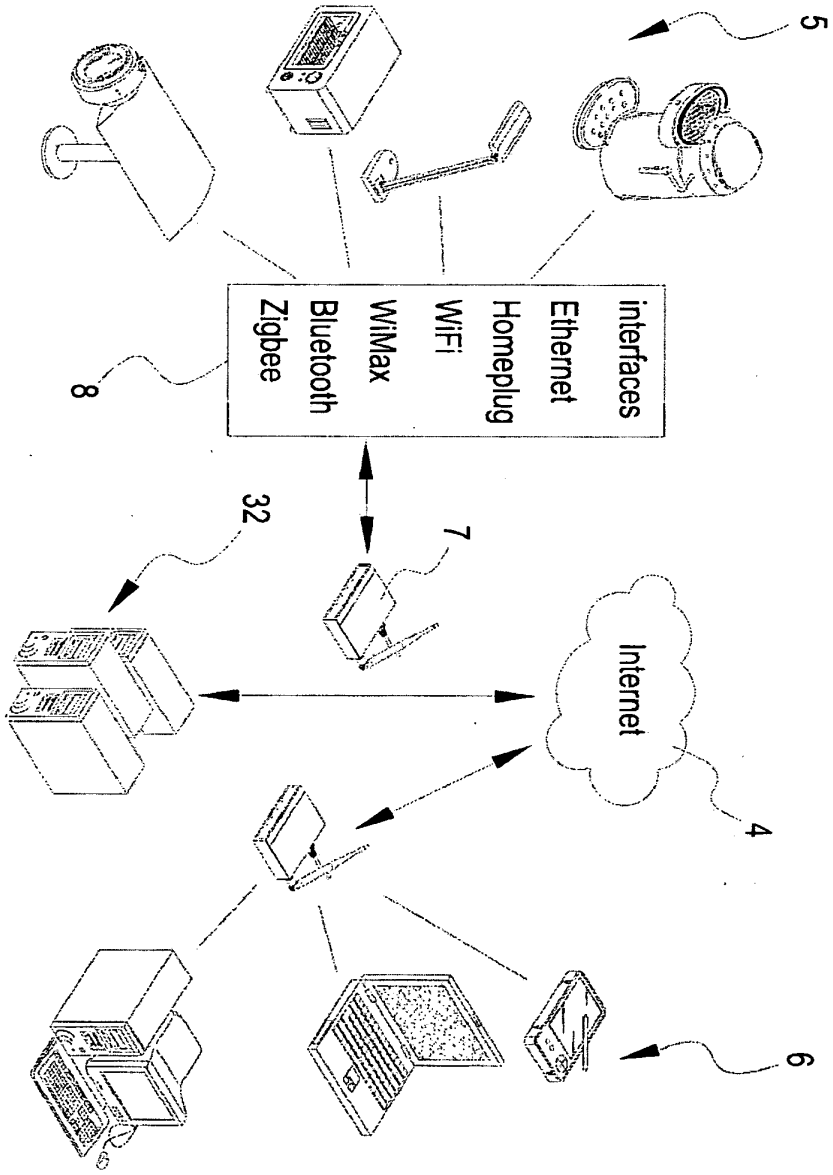
第二圖



第三圖



第四圖


5
interfaces
Ethernet
Homeplug
WiFi
WiMax
Bluetooth
Zigbee
8
32
7
Internet
4
6

第五圖

OPAP IAP12 NOV 16 2011 PATENT & TRADEMARK OFFICE

PTO/SB/21 (10-08)
Approved for use through 11/30/2008. 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 displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	

Application Number	13/293,506
Filing Date	11/10/2011
First Named Inventor	KUO, Chi-Ming
Art Unit	
Examiner Name	
Attorney Docket Number	2450/2455PUS1

ENCLOSURES *(Check all that apply)*

- [ ] Fee Transmittal Form
- [ ] Fee Attached
- [ ] Amendment / Reply
- [ ] After Final
- [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [x] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
- [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
- [ ] Landscape Table on CD
- [ ] After Allowance communication to (TC)
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please identify below):

Remarks

Taiwan 100129888
&
Taiwan 100201960

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Muncy, Geissler, Olds & Lowe, PLLC		
Signature			
Printed name	Joe McKinney Muncy ROBERT F. GNUSE		
Date	11/10/2011 Registration #27295	Reg. No.	32334

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
Typed or printed name	Joe McKinney Muncy ROBERT F. GNUSE Registration #27295	Date	11/10/2011

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours 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.

PTO/SB/05 (07-07)
Approved for use through 06/30/2010. 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.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	2450/2455PUS1
First Inventor	KUO, Chi-Ming
Title	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
Express Mail Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☑ **Fee Transmittal Form** (e.g., PTO/SB/17)
   (Submit an original and a duplicate for fee processing)
2. ☑ **Applicant claims small entity status.**
   See 37 CFR 1.27.
3. ☑ **Specification** [*Total Pages* 30]
   Both the claims and abstract must start on a new page
   (For information on the preferred arrangement, see MPEP 608.01(a))
4. ☑ **Drawing(s)** (*35 U.S.C. 113*) [*Total Sheets* 11]
5. **Oath or Declaration** [*Total Sheets* 2]
   a. ☑ Newly executed (original or copy)
   b. ☐ A copy from a prior application (37 CFR 1.63(d))
   (for continuation/divisional with Box 18 completed)
   i. ☐ DELETION OF INVENTOR(S)
   Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ **Application Data Sheet.** See 37 CFR 1.76
7. ☐ **CD-ROM or CD-R** in duplicate, large table or Computer Program *(Appendix)*
   ☐ Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission**
   (if applicable, items a. – c. are required)
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

ADDRESS TO: **Commissioner for Patents**
P.O. Box 1450
Alexandria VA 22313-1450

ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
   Name of Assignee Throughtek Co., Ltd.
10. ☐ **37 CFR 3.73(b) Statement** *(when there is an assignee)* ☐ **Power of Attorney**
11. ☐ **English Translation Document** *(if applicable)*
12. ☑ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☑ Copies of citations attached
13. ☐ **Preliminary Amendment**
14. ☐ **Return Receipt Postcard** (MPEP 503)
    (Should be specifically itemized)
15. ☐ **Certified Copy of Priority Document(s)**
    (if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:*

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: .....

Prior application information: *Examiner* _____ *Art Unit:* _____

19. CORRESPONDENCE ADDRESS

☑ The address associated with Customer Number: 60601 *OR* ☐ Correspondence address below

Name	Muncy, Geissler, Olds & Lowe, PLLC				
Address	4000 Legato Rd., Suite 310				
City	Fairfax	State	VA	Zip Code	22033
Country	USA	Telephone	703-621-7140	Email	mailroom@mg-ip.com

Signature		Date	11/10/2011
Name (Print/Type)	Joe McKinney Muncy ~~ROBERT F. GNUSE~~	Registration No. (Attorney/Agent)	32,334
	~~Registration #27295~~		

This collection of information is required by 37 CFR 1.53(b). 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. 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.

PTO/SB/17 (09-11)
Approved for use through 01/31/2014. 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

FEE TRANSMITTAL

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($)	770.00

Complete if Known	
Application Number	NEW
Filing Date	11/10/2011
First Named Inventor	KUO, Chi-Ming
Examiner Name	
Art Unit	
Attorney Docket No.	2450/2455PUS1

METHOD OF PAYMENT (check all that apply)

☐ Check ☑ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 50-3828 Deposit Account Name: MG-IP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

☑ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☑ Credit any overpayments

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

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	380	190	620	310	250	125	530.00
Design	250	125	120	60	160	80	
Plant	250	125	380	190	200	100	
Reissue	380	190	620	310	750	375	
Provisional	250	125	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	60	30
Each independent claim over 3 (including Reissues)	250	125
Multiple dependent claims	450	225

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
28 - 20 or HP =	8	x 30	= 240.00

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
2 - 3 or HP =	0	x 0	= 0

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims Fee ($)	Multiple Dependent Claims Fee Paid ($)
0	0

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), 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).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
41 - 100 =	0	/ 50 = 0 (round **up** to a whole number)	x 0	= 0

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	0
Other (e.g., late filing surcharge): _____	0

SUBMITTED BY

Signature	ROBERT F. GNUSE	Registration No. (Attorney/Agent) 32,334	Telephone 703-621-7140
Name (Print/Type)	Joe McKinney Muncy	Registration #27295	Date 11/10/2011

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, 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.

REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

FIELD OF THE INVENTION

The present invention relates to a remote information communication system and linking method thereof, particularly to a system and linking method thereof using an administration server to direct linking of at least one remote device, at least one linking server, and at least one proximal device.

BACKGROUND OF THE INVENTION

With advancement of network technology, many electronic products can access the Internet to have online services, such as remote control and online update. For example, a US patent No. 6373851 disclosed a technology using the Ethernet to control electronic devices, wherein a communication system comprises a first communicating medium, an Ethernet polling server, and a plurality of Ethernet client stations. The Ethernet polling server has a transmitter connecting with the first communicating medium. The transmitter and the first communicating medium can bidirectionally communicate with each other. The Ethernet client stations interconnect with each other, and each of them has a transmitter containing a second communicating medium. The second communicating medium would not send any signal to the first communicating medium unless required by the Ethernet polling server. However, the second communicating medium can receive signals from the first communicating medium anytime. The prior art

is based on a traffic controlling device and constrained by the minimum transmission rate and the maximum recommended distance of the Ethernet. Therefore, the prior art has a greater transmission range and can prevent from the transmission delay and collision of the terminal devices.

The Internet connection between proximal devices and terminal devices has been a very popular technology. If home electric appliances are intended to link with the network, they need wiring with network cables and thus consume more manpower. Therefore were developed technologies using the power network as the communication network. For example, a US publication No. 2005/0047379 disclosed a technology using wireless wideband or power cables to transmit audio/video contents. The device of the prior art has a content server receiving AV information and converting the information into PLC (Power Line Communication)-compatible signals. The device also has a PLC/UWB module able to establish a link with a signal transceiver of an electric appliance. Thereby, the electric appliance can receive information from the network and can be controlled by a remote device via the power lines without using any network cables.

A US publication No. 2004/0186908 also disclosed a PLC technology, wherein a power plug comprises AC power cords, network cables and a PLC adaptor. In another embodiment of the prior art, the power plug further has an AC/DC converter besides the AC power cords, network cables and PLC adaptor.

A China patent No. CN100389602 entitled "a camera system and a controlling method of the same" using a PLC technology for surveillance systems. In the prior art, a camera module connects with a PLC adaption module. The PLC adaption module receives the AV information recorded by the camera module, modulates the AV information and transmits the modulated AV information via the power lines. At the same time, the modulated signals received from the power lines are demodulated to obtain the control signals for controlling the camera module. The PLC adaption module includes a camera signal processing unit, a digital multimedia information compressing unit, an Ethernet adaption unit and a first PLC modulation/demodulation unit. The camera signal processing unit and the digital multimedia information compressing unit compress or convert the format of the image signals output by the camera module. The Ethernet adaption unit converts the signals into Ethernet signals. The first PLC modulation/demodulation unit loads the Ethernet signals on carrier waves able to be transmitted via the power lines. Thereby, the AV signals of the camera module can be transmitted to the monitoring side via the power lines.

The PLC technology exempts electric appliances from being wired with network cables and enables them to directly link with the network via power lines. In the conventional technology, the router assigns an IP (fixed IP or floating IP) to the electric appliance, and the electric appliance needs a server to allow the electric appliance side and the surveillance/control side (the user side) to

exchange data. In the conventional technology, the surveillance/control side cannot link to the appliance unless it remembers the IP or domain name of the appliance or server. Further, the user has to renew the IPs or domain names by himself when the appliances or servers increase or when the IPs thereof are changed. The user should be very troubled by the complicated process. Furthermore, as the domain names or IPs of the electric appliances or servers are open to the public, they are likely to be sniffed or damaged by hackers. Therefore, the conventional remote surveillance/control technology still has some problems have to be overcome.

SUMMARY OF THE INVENTION

One objective of the present invention is to provide a network linking and device monitoring system having enhanced expandability and security to improve the conventional technology insufficient in expandability and security.

The present invention proposes a linking method of a remote information communication system. The linking method of the present invention comprises steps of: A. at least one remote device asking an administration server to provide an address of at least one linking server supporting the remote device through an 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 asking the administration server to find out a specified remote device through the Internet; D. the

administration server responding to the proximal device with the address of the linking server that the specified remote device registers; E. the proximal device requesting the linking server to establish a link with the specified remote server according to the address of the linking server; and 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 also proposes a remote information communication system to realize the above-mentioned linking method. The system of the present invention comprises an administration server, at least one linking server and at least one remote device, wherein one or more proximal devices can be linked with the system of the present invention. The administration server stores a server list and a device list. The linking server registers in the server list of the administration server through the Internet. The remote device requests the administration server to provide the addresses of the linking servers, and the remote device registers in the device list at the same time, whereby the administration server stores all the information of the linking servers and the remote devices. The administration server responds to the remote device with the address of one of the linking servers, so that the remote device registers the information thereof in one of the linking servers according the responded address. A proximal device requests the administration server to find out a specified remote device. The administration server provides a linking server that the specified

remote device registers for the proximal device. The proximal device establishes a link with the specified remote device through the linking server provided by the administration server.

In some embodiments, the number of the administration servers can be increased according to using requirement. Each administration server stores a server list containing one or more linking servers and a device list containing one or more remote devices. Moreover, the number of the linking servers and the remote devices also can be increased persistently; when the number and linking information of the linking servers are changes, the server list and device list of the administration server can be updated to increase the apparatus to support them. The server list may include the linking servers respectively managed by different service providers. The administration server may assign the remote devices to register in different linking servers according to different service providers supporting the remote devices. The administration server may assign the remote devices to register in different linking servers according to different product types or geographic locations of the remote devices. The proximal device has an API (Application Programming Interface) for a user to address a request of finding out one of the remote devices. After the proximal device finds out the linking server that the specified remote device registers via the administration server, the proximal device requests the linking server to establish a link between the proximal device and the specified remote device. The linking server performs hole punching

between the proximal device and the specified remote device at the first priority to establish point-to-point transmission. If the hole punching process fails, the linking server forwards the data packets between the proximal device and the specified remote device.

In the present invention, the remote device may be a security alarm device or a home electric appliance. The remote device periodically registers the information thereof in the linking server assigned by the administration server, whereby the linking server can regularly update the status of the remote device. When the remote device is changed or when the linking server that the remote device registers is changed, the remote device can again request the administration server to provide the address of at least one linking server supporting the remote device, and then the remote device can register the information thereof in the linking server provided by the administration server once again.

Via the technique set forth above, the remote device and the linking server needn't directly disclose the IP addresses 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 API supported by the administration server, the user can request the administration server to find out the linking address. Furthermore, the present invention allows the

manufacturers to expand or vary the quantities, specifications and types of the remote devices and the linking servers according to using requirement as long as registering in the administration server and updating the device list and the server list. Therefore, the manufacturers can vary the remote devices and the linking servers according to load of the apparatus.

BRIEF DESCRIPTION OF THE DRAWINGS

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;

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;

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;

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;

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;

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;

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;

Fig.8 schematically shows that a remote device registers in a plurality of linking server groups according to one embodiment of the present invention;

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;

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

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.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention pertains to a remote information communication system and linking method thereof. The technical contents of the present invention are described in cooperation with the drawings below.

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.

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.

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).

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).

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 point-to-point 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 point-to-point 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).

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.

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.

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).

The mapping relationship between the remote devices and the linking server groups is shown in Table.1.

	Codes of Linking Servers	Serial Numbers of Remote Devices	Notes
Service Provider A	Ser 01 Ser 02 Ser 03	D01, D02, D03, D04, D05	Ser 01: Shanghai Ser 02: Tokyo Ser 03: Los Angeles
	Ser 04 Ser 05	D06, D07, D08, D09	Ser 04: New York Ser 05: Berlin
Service Provider B	Ser 11 Ser 12	D11, D12, D13, D14	Ser 11: Paris Ser 12: Cairo

Table.1 the mapping relationship between the remote devices and the linking server groups

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.

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.

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).

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.

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 point-to-point 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).

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.

The embodiments described above are only to exemplify the present invention but not to limit the scope of the present invention. Any equivalent modification or variation according to the spirit of the present invention is to be also included within the scope of the present invention.

In conclusion, the present invention possesses utility, novelty and non-obviousness and meets the condition for a patent. Thus, the Inventors file the application for a patent. It is appreciated if the patent is approved fast.

What is Claimed is:

1. A linking method of a remote information communication system, comprising steps of:

Step A: at least one remote device asking an administration server to provide an address of at least one linking server supporting the remote device through an Internet;

Step B: the remote device registering information thereof in the linking server according to the address provided by the administration server;

Step C: a proximal device asking the administration server to find out a specified remote device through the Internet;

Step D: the administration server responding to the proximal device with the address of the linking server registered by the specified remote device;

Step E: the proximal device requesting the linking server to establish a link between the proximal device and the specified remote server according to the responded address; and

Step F: the linking server establishing the link between the proximal device and the specified remote device according to the request of the proximal device.

2. The linking method of the remote information communication system according to claim 1, wherein a plurality of administration servers constitutes a administration server group, and wherein the administration servers in the identical

administration server group back up with each other each storing a server list of memorizing one or more linking servers and a device list of memorizing one or more remote devices.

3. The linking method of the remote information communication system according to claim 2, wherein the administration server provides different addresses for the remote devices supported by different service providers to register in the different linking servers.

4. The linking method of the remote information communication system according to claim 2, wherein the administration server provides different addresses for the remote devices with different product types to register in the different linking servers.

5. The linking method of the remote information communication system according to claim 2, wherein the administration server provides different addresses for the remote devices at different geographic locations to register in the different linking servers.

6. The linking method of the remote information communication system according to claim 1, wherein a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other.

7. The linking method of the remote information communication system according to claim 2, wherein the administration server updates the server list and the device list to increase or change the linking servers or the remote devices.

8. The linking method of the remote information communication system according to claim 1, wherein the proximal device includes an application programming interface for a user to address a request of finding out one of the remote devices.

9. The linking method of the remote information communication system according to claim 1, wherein the link between the proximal device and the specified remote device is established by hole punching performed by the linking server to undertake point-to-point transmission between the proximal device and the specified remote device.

10. The linking method of the remote information communication system according to claim 1, wherein the linking server forwards data packets through the link between the proximal device and the specified remote device.

11. The linking method of the remote information communication system according to claim 1, wherein the link between the proximal device and the specified remote device is established by hole punching at the first priority, and wherein if the hole punching fails to complete, the linking server turns to forward data packets through the link between the proximal device and the specified remote device.

12. The linking method of the remote information communication system according to claim 1, wherein the remote device periodically updates and registers the information thereof in the linking server that is assigned by the administration server.

13. The linking method of the remote information communication system according to claim 1, wherein the remote device again requests the administration server to provide the address of at least one linking server supporting the remote device, and wherein the remote device again registers information thereof in the linking server.

14. The linking method of the remote information communication system according to claim 1, wherein the remote device is a security alarm device.

15. The linking method of the remote information communication system according to claim 1, wherein the remote device is a home electric appliance.

16. The linking method of the remote information communication system according to claim 1, wherein the proximal device is equipped with an audio/video playing function.

17. A remote information communication system, comprising:

at least one administration server storing a server list and a device list;

at least one linking server registering in the server list of the administration server; and

at least one remote device requesting the administration server to provide addresses of the linking servers to register in the device list, and then register information thereof in one of the linking servers according to the address responded by the administration server;

wherein a proximal device requests the administration server to find out a specified remote device and provide the linking server registered by the specified remote device, and wherein the proximal device establishes a link between the specified remote device and the linking server provided by the administration server.

18. The remote information communication system according to claim 17, wherein a plurality of administration servers constitute an administration server group, and wherein the administration servers in the identical administration server group back up with each other each storing the server list of memorizing one or more linking servers and the device list of memorizing one or more remote devices.

19. The remote information communication system according to claim 17, wherein a plurality of linking servers constitute a linking server group, and wherein the linking servers in the identical linking server group back up with each other.

20. The remote information communication system according to claim 19, wherein the linking servers are managed by different service providers.

21. The remote information communication system according to claim 19, wherein the linking servers support different remote devices with different product types.

22. The remote information communication system according to claim 19, wherein the linking servers are located at different

geographic locations.

23. The remote information communication system according to claim 17, wherein the proximal device includes an application programming interface for a user to address a request of finding out a specified remote device.

24. The remote information communication system according to claim 17, wherein the link between the proximal device and the specified remote device is established by hole punching performed by the linking server to undertake point-to-point transmission between the proximal device and the specified remote device.

25. The remote information communication system according to claim 17, wherein the linking server forwards data packets through the link between the proximal device and the specified remote device.

26. The remote information communication system according to claim 17, wherein the remote device is a security alarm device.

27. The remote information communication system according to claim 17, wherein the remote device is a home electric appliance.

28. The remote information communication system according to claim 17, wherein the proximal device is equipped with an audio/video playing function.

ABSTRACT

A remote information communication system comprises an administration server, at least one linking server and at least one remote device. The linking method of the remote information communication system comprises steps of: the administration server authenticating the remote device and linking server; the proximal device requesting the administration server to find out a specified remote device; the administration server responding an address of the linking server for establishing a link with the specified remote device; the proximal device linking with the linking server through the address responded from the administration server to find out the specified remote device via the linking server; and the linking server establishing a link between the proximal device and the specified remote device.

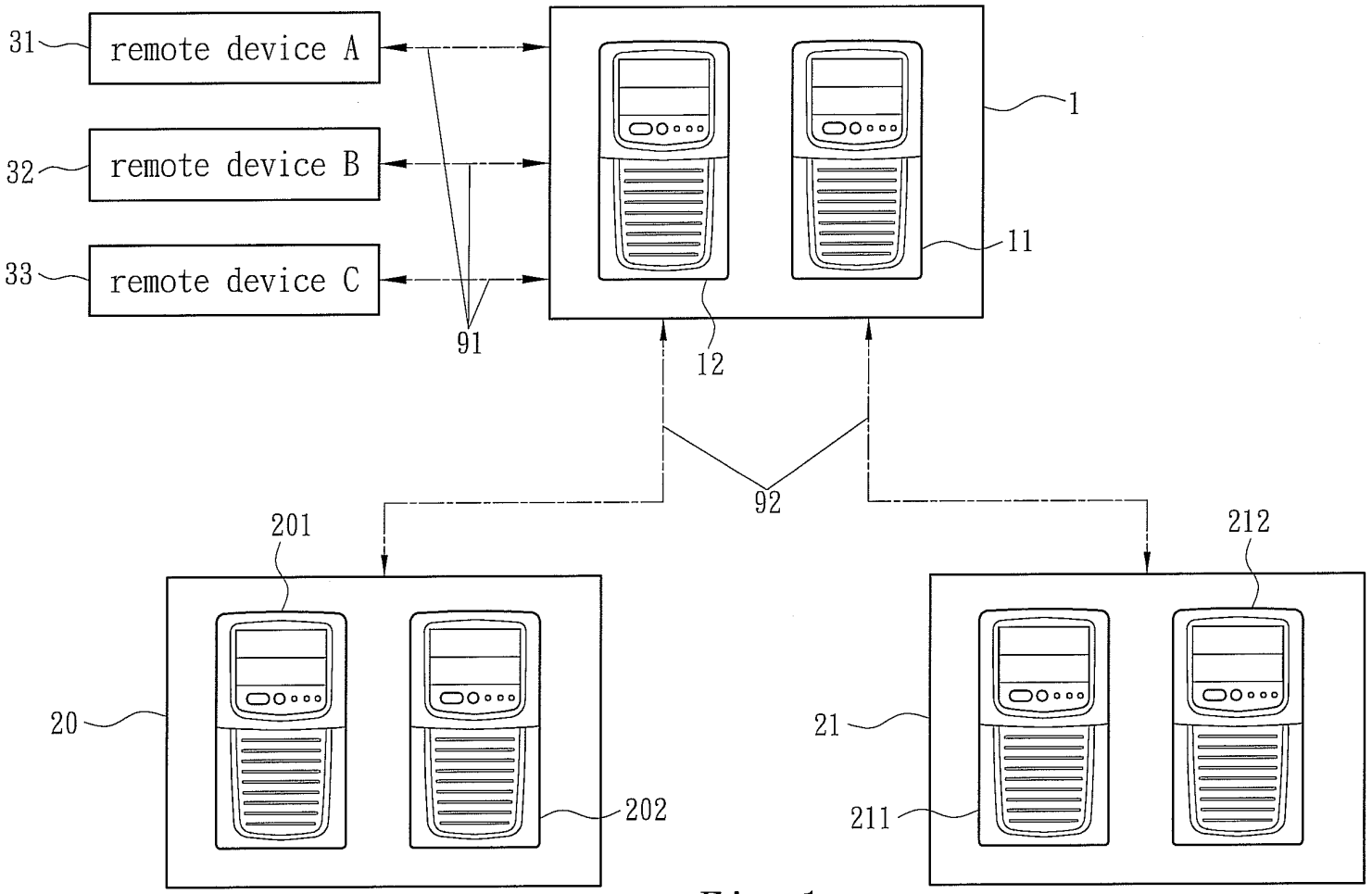

31
remote device A
32
remote device B
33
remote device C
91
1
11
12
92
201
20
202
212
21
211

Fig. 1

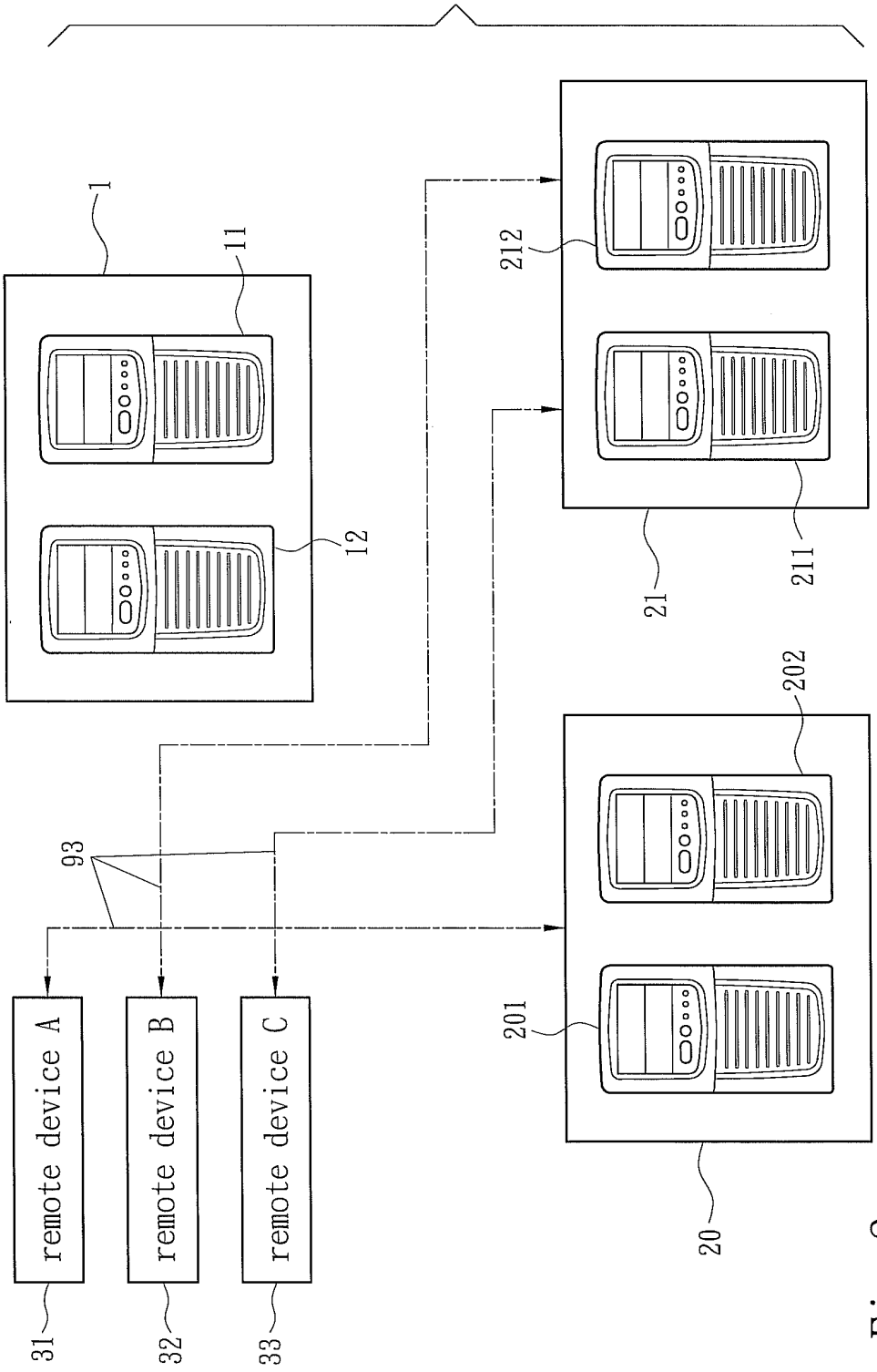

1
11
12
212
21
211
202
93
201
20
remote device A
remote device B
remote device C
31
32
33

Fig. 2

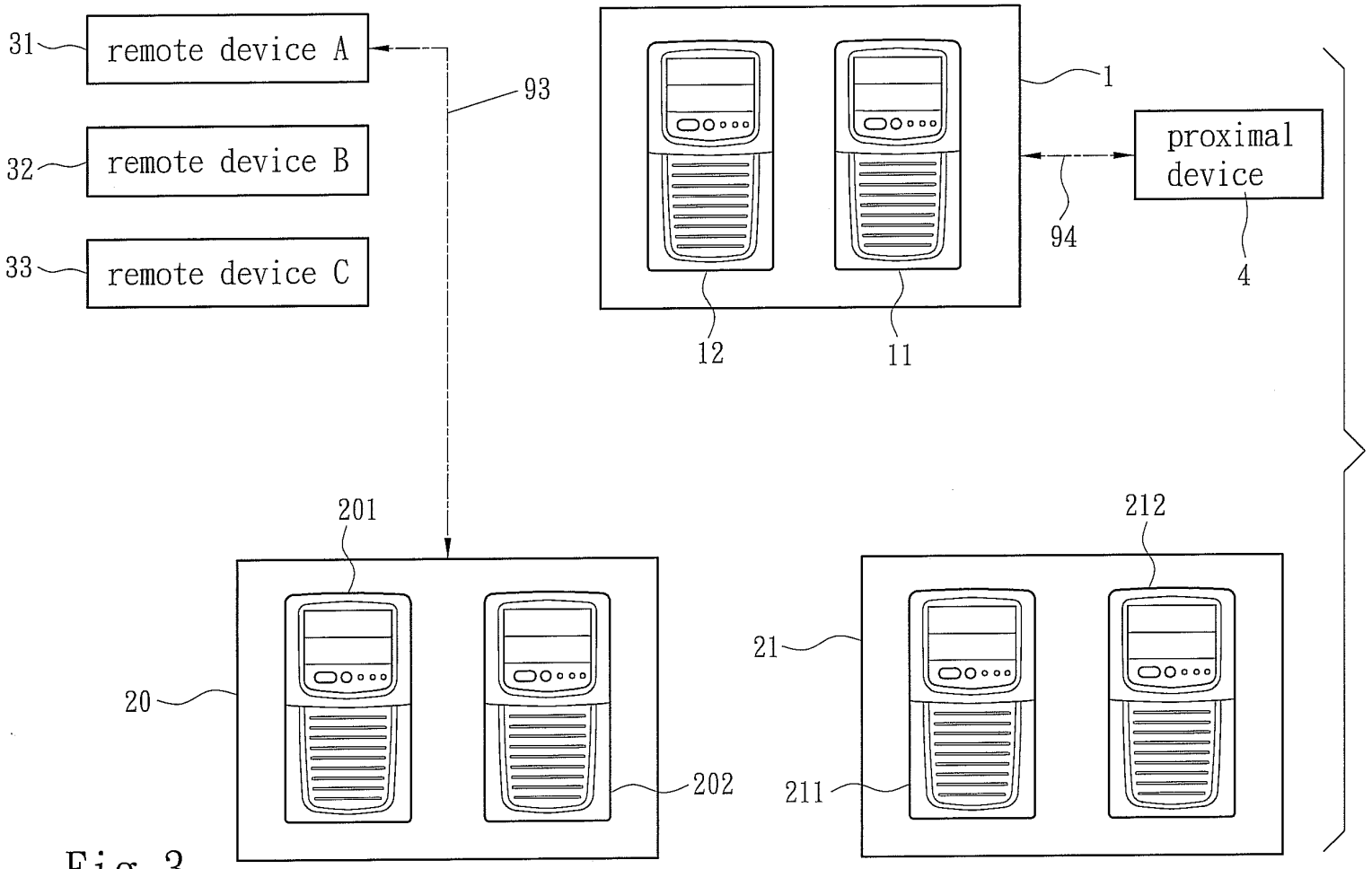

31
remote device A
32
remote device B
33
remote device C
93
1
proximal device
94
4
12
11
201
20
202
212
21
211

Fig. 3

356

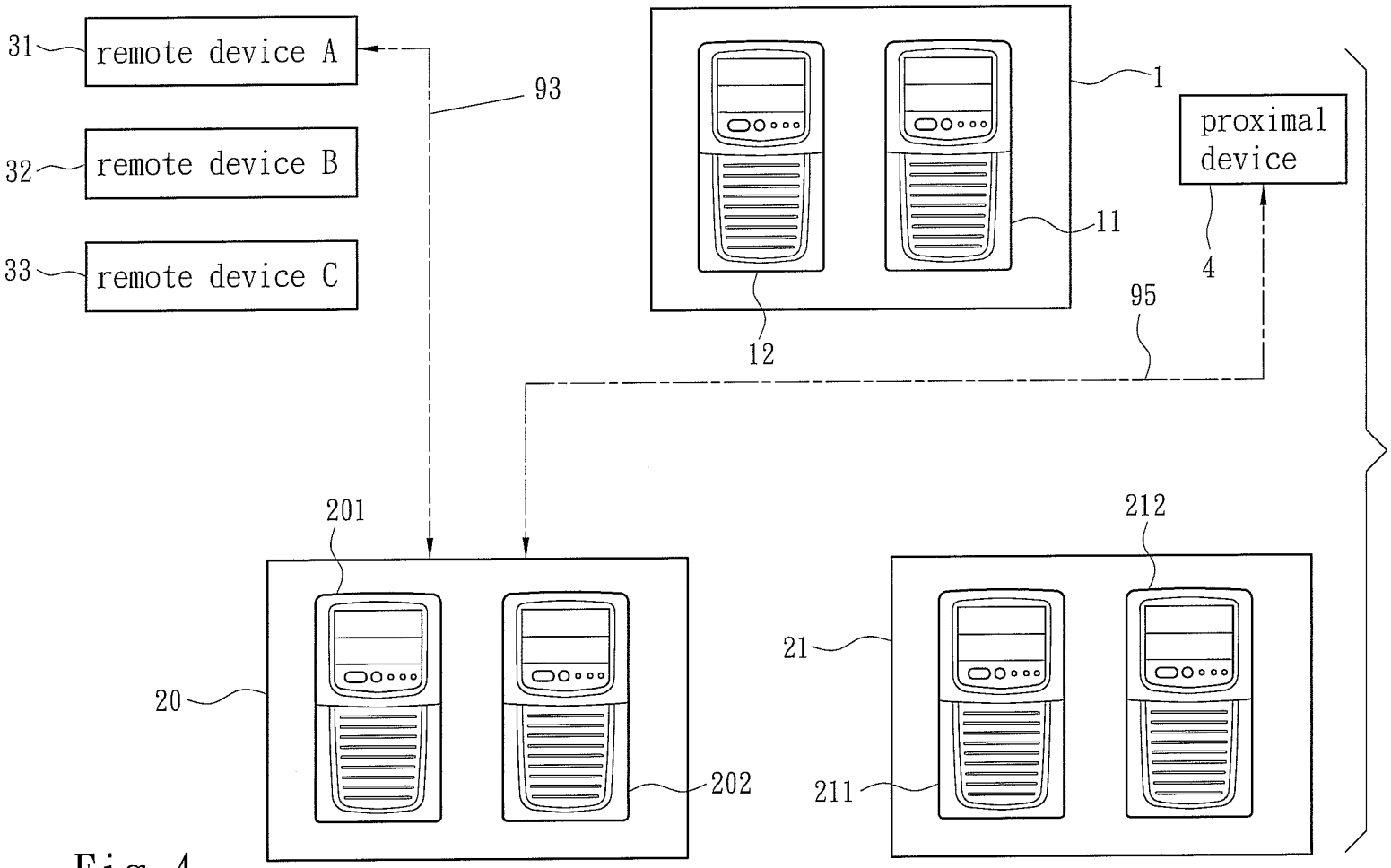

31
remote device A
93
32
remote device B
33
remote device C
1
proximal device
4
11
12
95
201
212
20
21
202
211

Fig. 4

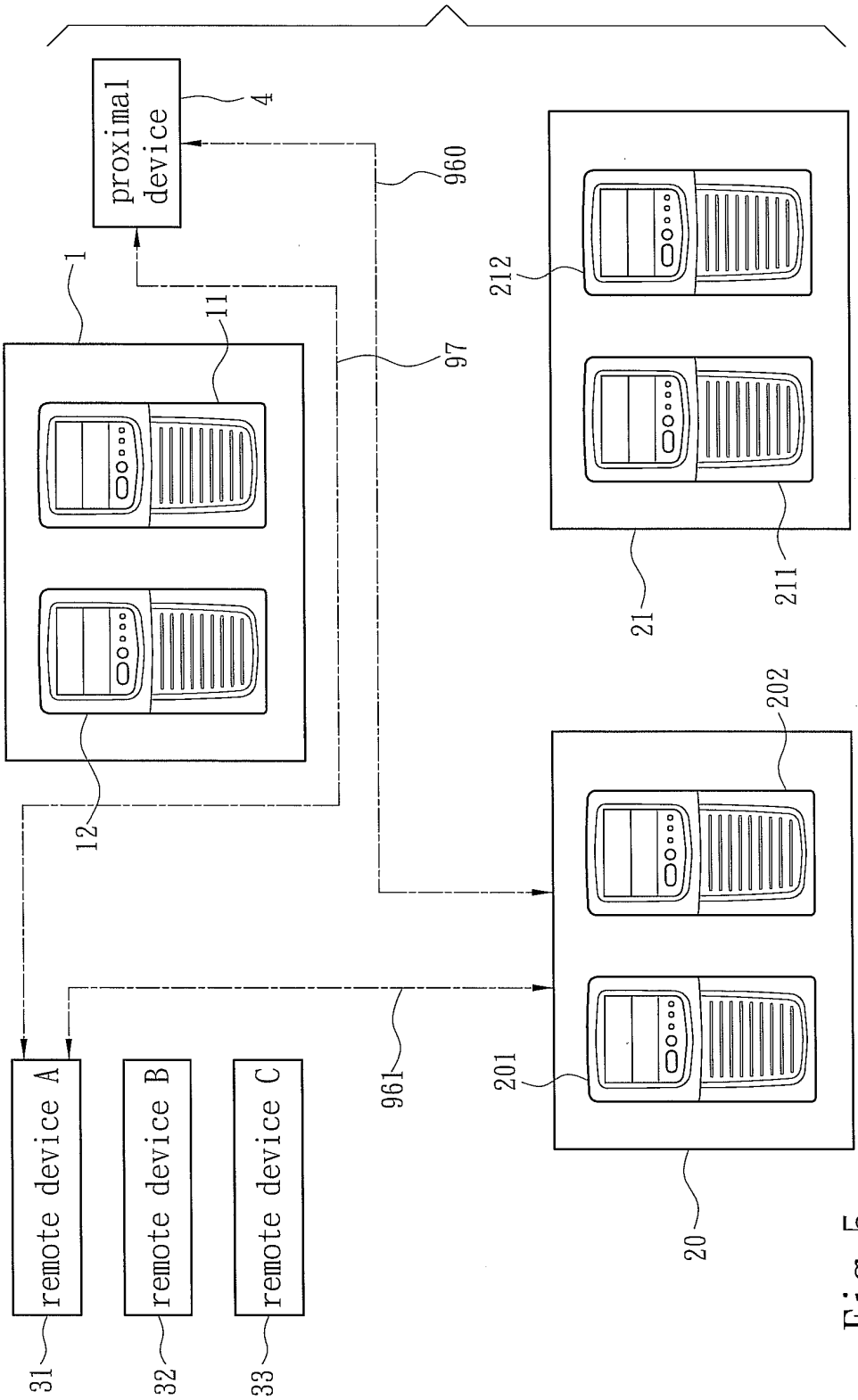

proximal device
4
960
1
11
97
212
12
21
211
202
961
201
20
remote device A
remote device B
remote device C
31
32
33

Fig. 5

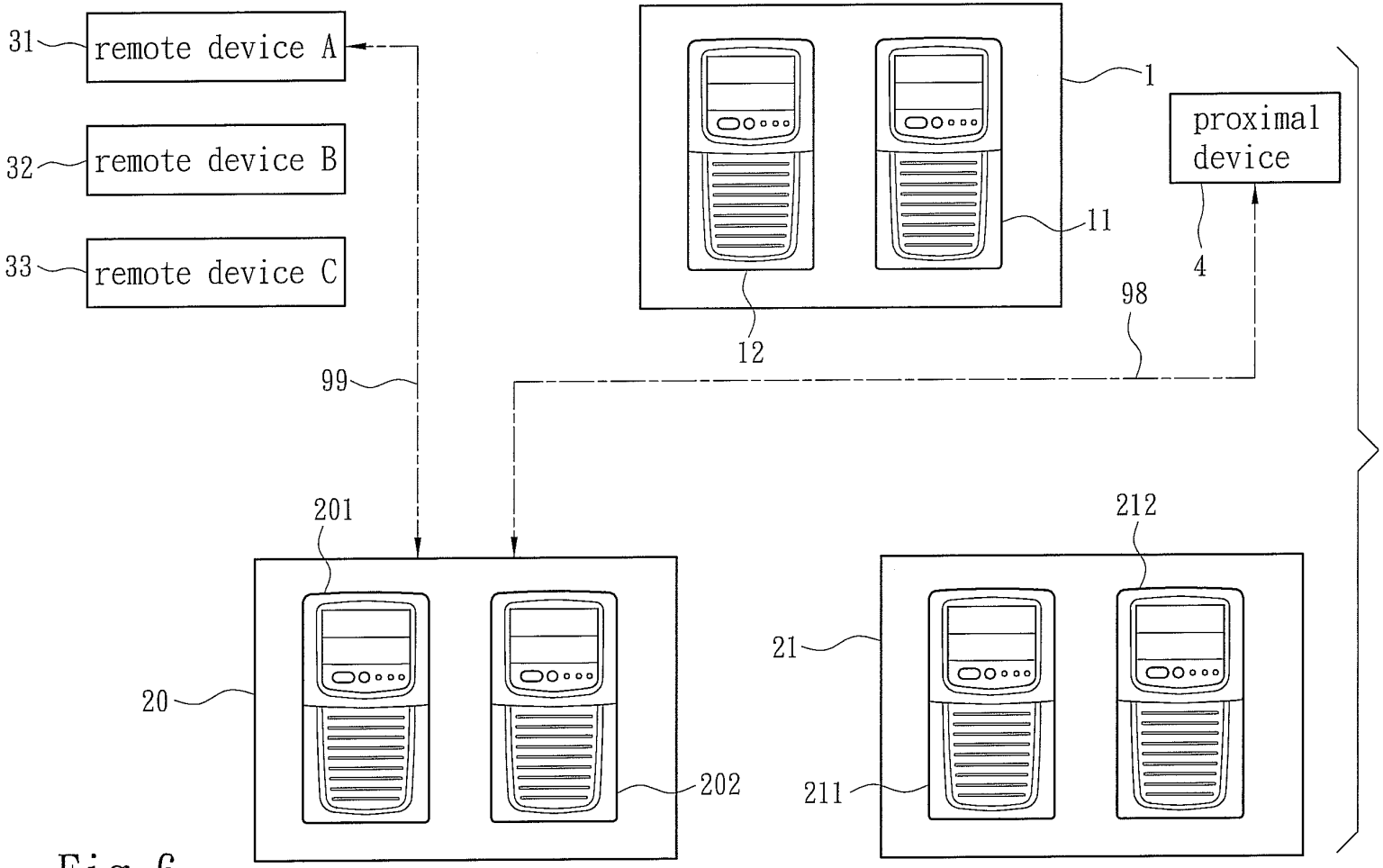

31
remote device A
32
remote device B
33
remote device C
1
11
12
proximal device
4
98
99
201
202
20
212
21
211

Fig. 6

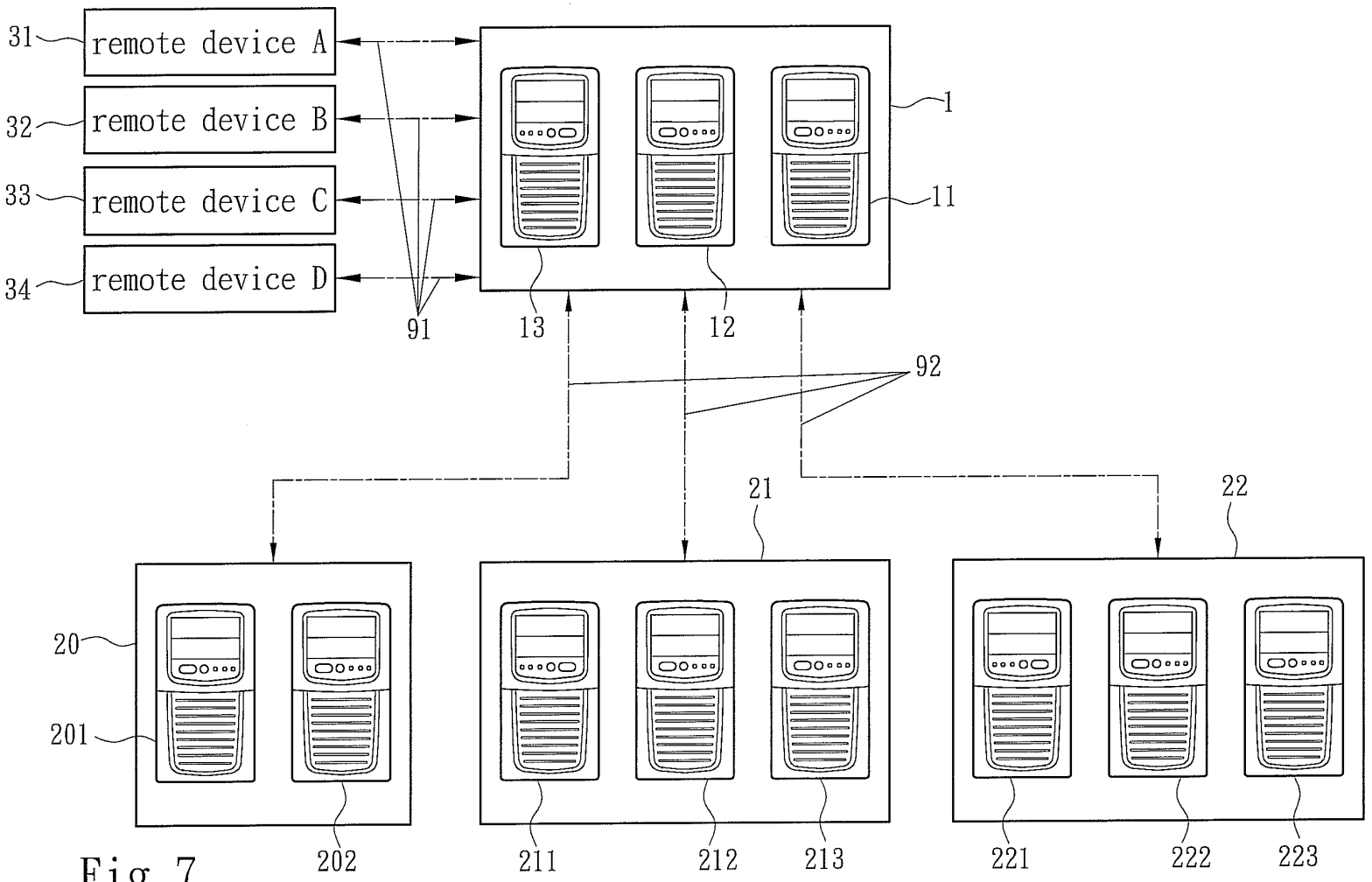

31
remote device A
32
remote device B
33
remote device C
34
remote device D
91
13
12
1
11
92
21
22
20
201
202
211
212
213
221
222
223

Fig. 7

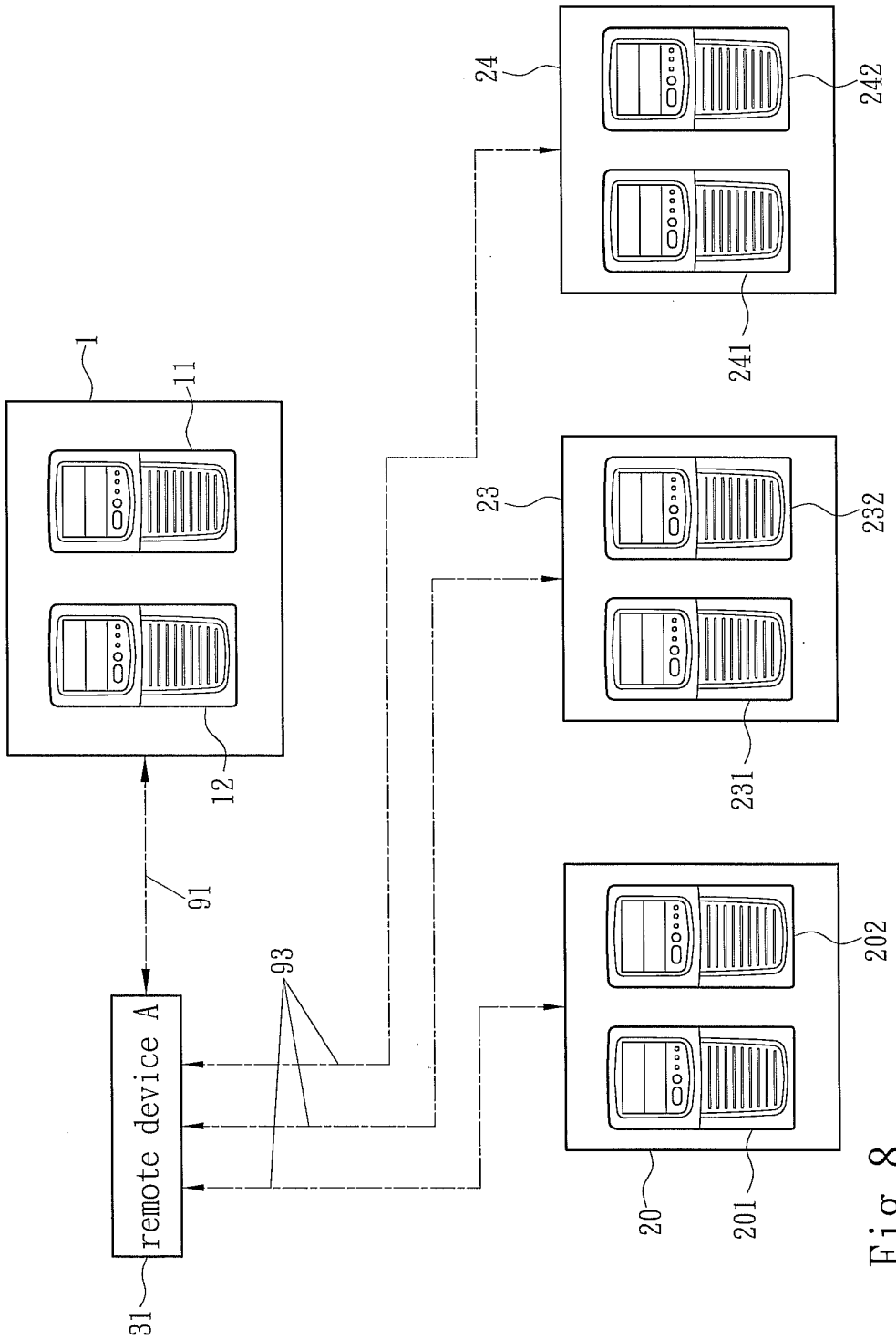


Fig. 8

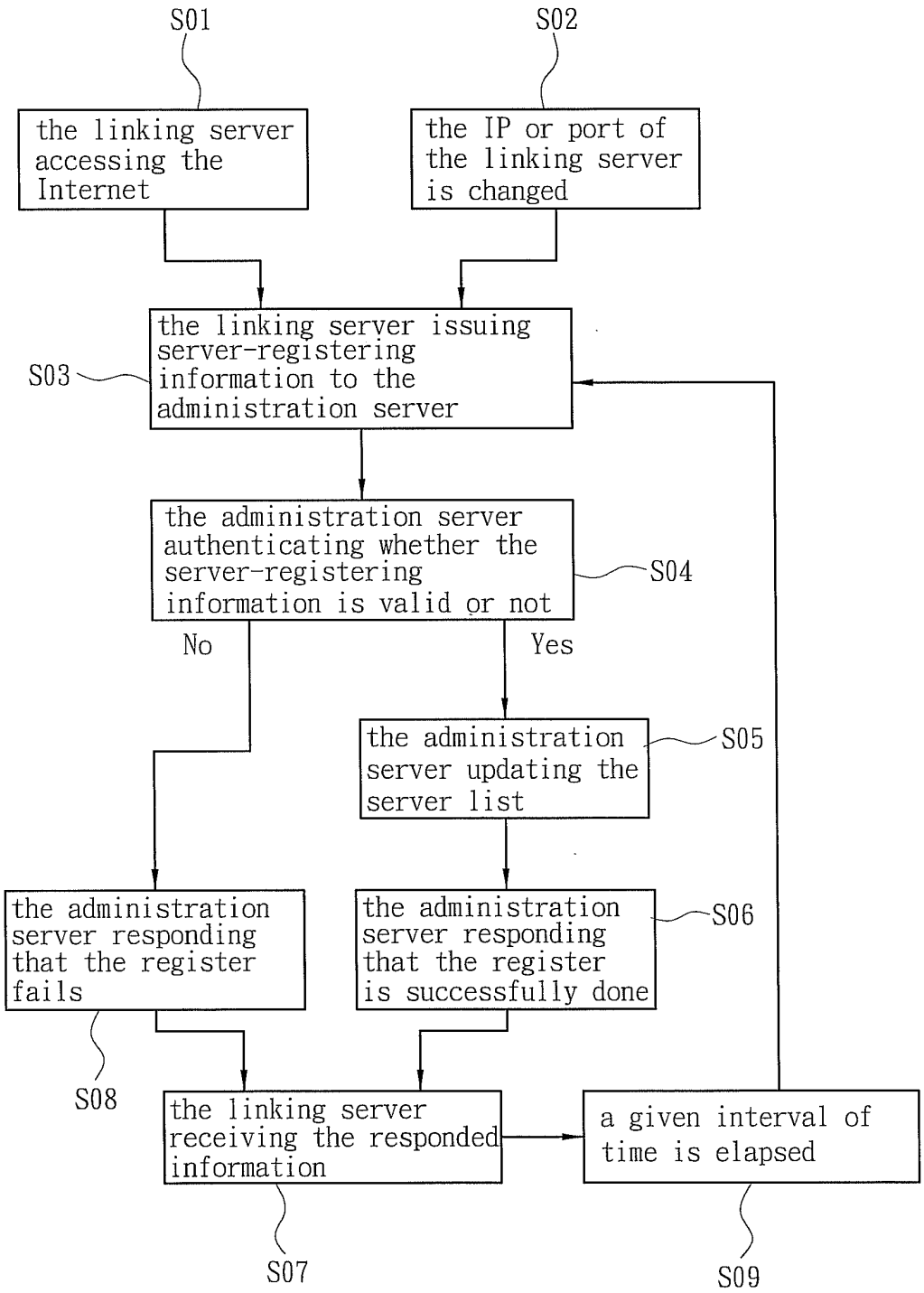

S01
S02
the linking server accessing the Internet
the IP or port of the linking server is changed
the linking server issuing server-registering information to the administration server
S03
the administration server authenticating whether the server-registering information is valid or not
S04
No
Yes
the 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

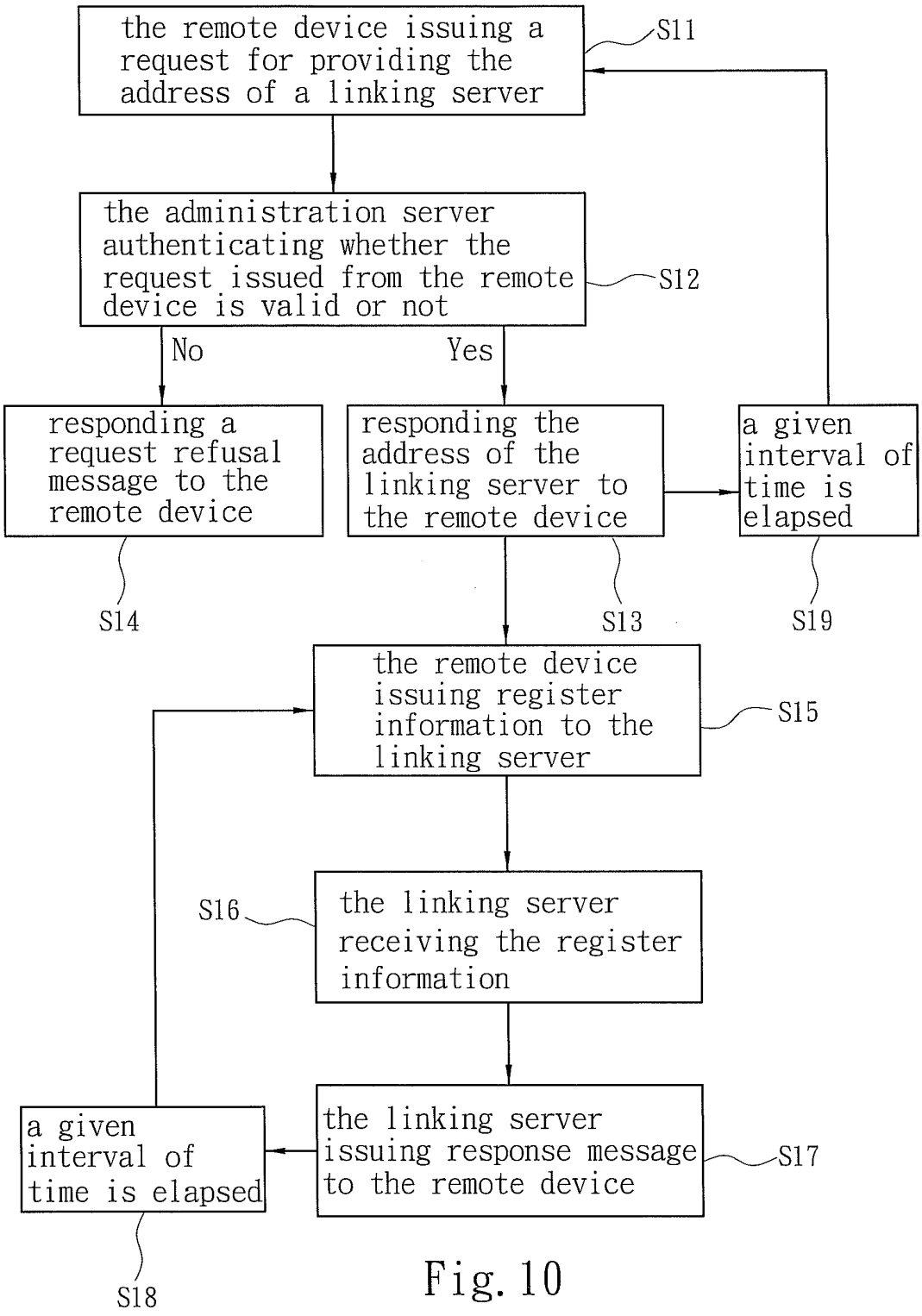

the remote device issuing a request for providing the address of a linking server
S11
the administration server authenticating whether the request issued from the remote device is valid or not
S12
No
Yes
responding a request refusal message to the remote device
responding the address of the linking server 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

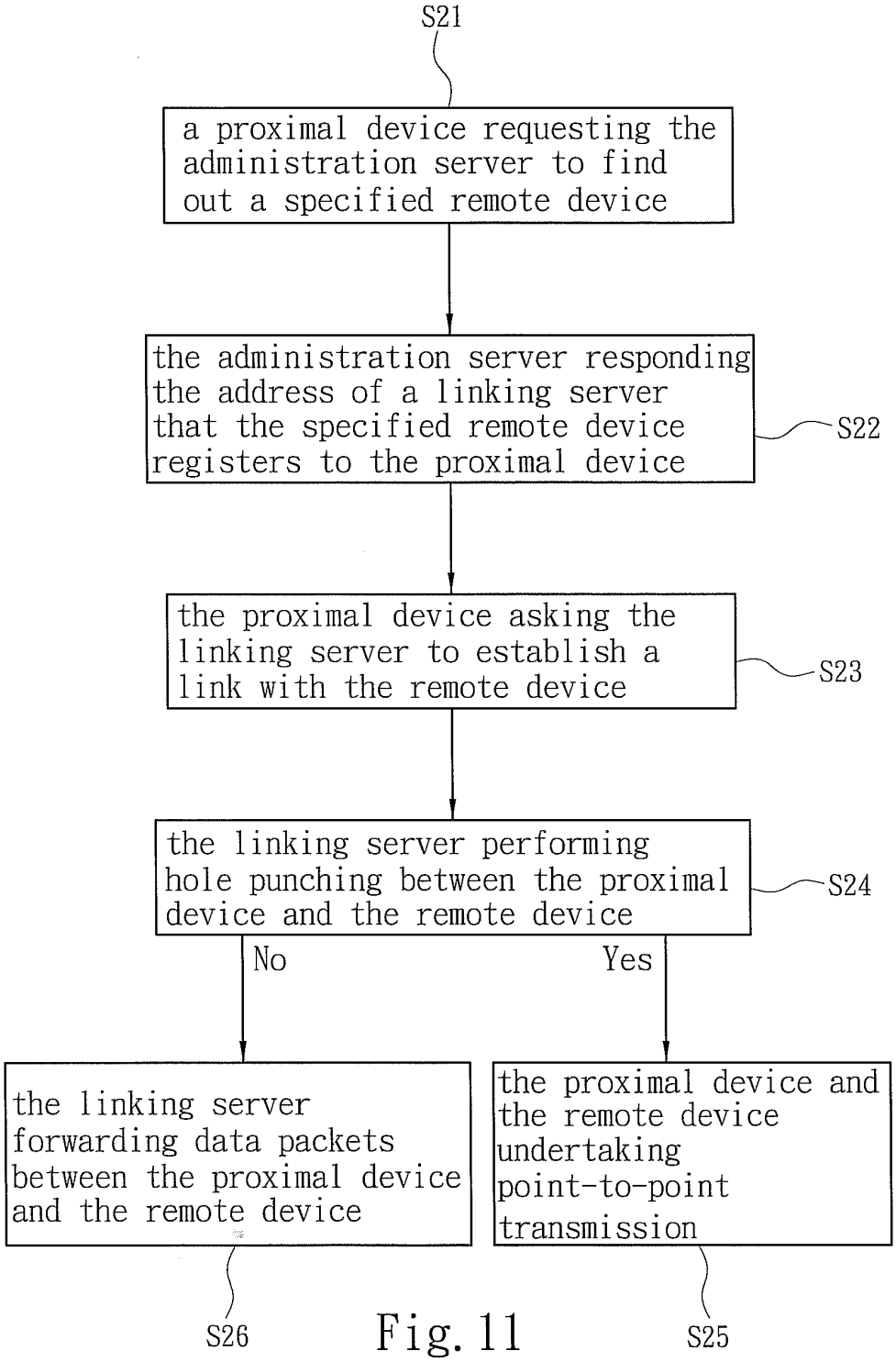

S21
a proximal device requesting the administration server to find out a specified remote device
the administration server responding the address of a linking server that the specified remote device registers to the proximal device
S22
the proximal device asking the linking server to establish a link 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

Attorney Docket No.

MUNCY, GEISSLER, OLDS &LOWE, PLLC

P.O. Box 1364 • Fairfax, Virginia 22038-13647
Telephone: (703) 621-7140 • Facsimile: (703) 621-7155

PLEASE NOTE: YOU MUST COMPLETE THE FOLLOWING

COMBINED DECLARATION AND POWER OF ATTORNEY FOR PATENT AND DESIGN APPLICATIONS

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated next to my name; that I verily believe that I am the original, first and sole inventor (if only one inventor is named below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Insert Title: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF

Fill in Appropriate Information - For Use Without Specification Attached:

the specification of which is attached hereto. If not attached hereto, the application is identified by the attorney docket number as set forth above and/or the following:

The specification was filed on _____ as United States Application Number _____; and amended on _____ (if applicable) and/or the specification was filed on _____ as PCT International Application Number _____; and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representative or assigns more than twelve months (six months for designs) prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as follows.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Insert Priority Information: (if appropriate)

Prior Foreign Application(s)			Priority Claimed
100129888 (Number)	Taiwan, R.O.C. (Country)	Jan. 28, 2011 (Month/Day/Year Filed)	☑ Yes ☐ No
100201960 (Number)	Taiwan, R.O.C. (Country)	Jan. 28, 2011 (Month/Day/Year Filed)	☑ Yes ☐ No
(Number)	(Country)	(Month/Day/Year Filed)	☐ Yes ☐ No
(Number)	(Country)	(Month/Day/Year Filed)	☐ Yes ☐ No

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional applications(s) listed below.

Insert Provisional Application(s): (if any)

(Application Number) (Filing Date)

(Application Number) (Filing Date)

All Foreign Applications, if any, for any Patent or Inventor's Certificate Filed More than 12 Months (6 Months for Designs) Prior to the Filing Date of This Application:

Insert Requested Information: (if appropriate)

Country	Application Number	Date of Filing (Month/Day/Year)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States and/or PCT application(s), including for continuation-in-part application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States and/or PCT application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to the patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

Insert Prior U.S. Application(s): (if any)

(Application Number) (Filing Date) (Status - patented, pending, abandoned)

(Application Number) (Filing Date) (Status - patented, pending, abandoned)

Attorney Docket No.

I hereby appoint the practitioners at **CUSTOMER NO. 60601** as my attorneys or agents to prosecute this application and/or an international application based on this application and to transact all business in the United States Patent and Trademark Office connected therewith and in connection with the resulting patent based on instructions received from the entity who first sent the application papers to the practitioners, unless the inventor(s) or assignee provides said practitioners with a written notice to the contrary:

Send Correspondence to:

CUSTOMER NO. 60601 (MUNCY, GEISSLER, OLDS & LOWE, PLLC)
Telephone: (703) 621-7140 • Facsimile: (703) 621-7155

PLEASE NOTE: YOU MUST COMPLETE THE FOLLOWING:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First or Sole Inventor: Insert Name of Inventor → Insert Date This Document is Signed GIVEN NAME/FAMILY NAME Chi-Ming KUO	INVENTOR'S SIGNATURE Chi-Ming Kuo	DATE* Aug. 4, 2011
Insert Residence Insert Citizenship → Residence (City, State & Country) Taipei City, Taiwan, R.O.C.		CITIZENSHIP Taiwan, R.O.C.
Insert Post Office Address → MAILING ADDRESS (Complete Street Address including City, State & Country) 4F., No.221, Chongyang Rd., Nangang District, Taipei City, Taiwan, R.O.C.		
Full Name of Second Inventor, if any: see above GIVEN NAME/FAMILY NAME Yu-Li KAO	INVENTOR'S SIGNATURE Yu-Li Kao	DATE* Aug. 4, 2011
Residence (City, State & Country) Taipei City, Taiwan, R.O.C.		CITIZENSHIP Taiwan, R.O.C.
MAILING ADDRESS (Complete Street Address including City, State & Country) 4F., No.221, Chongyang Rd., Nangang District, Taipei City, Taiwan, R.O.C.		
Full Name of Third Inventor, if any: see above GIVEN NAME/FAMILY NAME Chien-Chih YANG	INVENTOR'S SIGNATURE Chien-Chih Yang	DATE* Aug. 4, 2011
Residence (City, State & Country) Taipei City, Taiwan, R.O.C.		CITIZENSHIP Taiwan, R.O.C.
MAILING ADDRESS (Complete Street Address including City, State & Country) 4F., No.221, Chongyang Rd., Nangang District, Taipei City, Taiwan, R.O.C.		
Full Name of Fourth Inventor, if any: see above GIVEN NAME/FAMILY NAME Sheng-Fu CHANG	INVENTOR'S SIGNATURE Chang SF	DATE* Aug. 4, 2011
Residence (City, State & Country) Taipei City, Taiwan, R.O.C.		CITIZENSHIP Taiwan, R.O.C.
MAILING ADDRESS (Complete Street Address including City, State & Country) 4F., No.221, Chongyang Rd., Nangang District, Taipei City, Taiwan, R.O.C.		
Full Name of Fifth Inventor, if any: see above GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		
Full Name of Sixth Inventor, if any: see above GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

*DATE OF SIGNATURE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): KUO, Chi-Ming Application No.: NEW Filed: 10 Nov 2011 Title: REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF Attorney Docket No.: 2450/2455PUS1	Examiner: Art Unit: Confirmation Number:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

This Information Disclosure Statement is submitted:

☒ under 37 CFR 1.97(b), or
(within three months of filing national application or date of entry of international application; before mailing date of first office action on the merits; or before the mailing of a first Office action after the filing of a request for continued examination)

☐ under 37 CFR 1.97(c) together with either a:
- ☐ statement under 37 CFR 1.97(e), **or**
- ☐ a $180.00 fee under 37 CFR 1.17(p),

(after the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with a:
- ☐ statement under 37 CFR 1.97(e), **and**
- ☐ a $180.00 fee set forth in 37 CFR 1.17(p).

(filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

Statement under 37 CFR 1.97(e) (if applicable):

☐ Each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not

more than three months prior to the filing of the information disclosure statement (37 CFR 1.97(e)(1)).

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

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on the PTO/SB/08 attached hereto.

II. COPIES (check at least one box)

a. ☒ Submitted herewith is a legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.

b. ☐ Submitted herewith is a legible copy of the International Search Report and each foreign patent or publication cited therein.

c. ☒ Some or all of the documents listed on the PTO/SB/08 are not enclosed because they are either U.S. Patents or Published Applications.

d. ☐ As provided in 37 CFR 1.98(d), some or all of the documents listed on the PTO/SB/08 are not enclosed because they were cited in the parent application(s). Accordingly, copies are not submitted herewith.

III. CONCISE EXPLANATION OF THE RELEVANCE
(check at least one box)

a. ☒ DOCUMENTS IN THE ENGLISH LANGUAGE
The attached patents, publications, or other information in the English language do not require a statement of relevancy.

b. ☒ DOCUMENTS NOT IN THE ENGLISH LANGUAGE
A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows: An English abstract of the foreign reference; CN-100389602C is discussed on page 3 of the specification.

c. ☐ ENGLISH LANGUAGE SEARCH REPORT

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(III)(A)(3).

d. ☐ OTHER
The following additional information is provided for the Examiner's consideration.

It is requested that the information disclosed herein be made of record in this application. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account **50-3828** and please credit any excess fees to such deposit account.

Date: November 10, 2011

Respectfully submitted,

Muncy, Geissler, Olds & Lowe, PLLC
4000 Legato Road, Suite 310
Fairfax, VA 22033
Tel. 703.621.7140
mailroom@mg-ip.com

Joe McKinney Muncy
Attorney/Agent for Applicant(s)
Reg. No. 32334
ROBERT F. GNUSE
Registration #27295

PTO/SB/08a (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.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	NEW
Filing Date	11/10/2011
First Named Inventor	KUO, Chi-Ming
Art Unit	
Examiner Name	
Attorney Docket Number	2450/2455PUS1

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 6,373,851 B1	04-16-2002	F R ALEMAN & ASSOCIATES, INC.	
		US- 2009/0100309 A1	04-16-2009	ZHENG	
		US- 2005/0047379 A1	03-03-2005	BOYDEN et al.	
		US- 2004/0186908 A1	09-23-2004	AMDAHL et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]
		GB-2475279	05-18-2011	THROUGHTEK CO LTD		
		CN-100389602C	05-21-2008	CHINESE MOBILE COMM		✓

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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 (1-800-786-9199) and select option 2.

(12) UK Patent Application (19) GB (11) 2475279 (13) A

(43) Date of A Publication 18.05.2011

(21) Application No: 0919805.2

(22) Date of Filing: 13.11.2009

(71) Applicant(s):
Throughtek Co.,Ltd
(Incorporated in China)
10F., No.2, Baosheng Rd., Yonghe City, 23444,
Taipei County, Taiwan

(72) Inventor(s):
Yu-Li Kao

(74) Agent and/or Address for Service:
Alban Patent Agency
The Old Pump House, 1a Stonecross, ST ALBANS,
Herts, AL1 4AA, United Kingdom

(51) INT CL:
H04L 29/08 (2006.01) ***H04B 3/54*** (2006.01)
H04L 29/06 (2006.01) ***H04N 7/18*** (2006.01)

(56) Documents Cited:
EP 2023609 A1 **WO 2004/063843 A2**
US 20090074184 A1 **US 20090051769 A1**
US 20080186150 A1 **US 20080091802 A1**
US 20050018766 A1
Ford, B et al, "Peer-to-Peer Communication Across Network Address Translators", Proc of USENIX Annual Technical Conference, 10-15 April 2005.

(58) Field of Search:
INT CL **H04B, H04L, H04N**
Other: **Online: WPI, EPODOC, TXTE**

(54) Title of the Invention: **Surveillance device for power line peer-to-peer signal transmission**
Abstract Title: **Transmitting a camera signal over a power line and a peer-to-peer internet connection**

(57) A surveillance system for power line peer-to-peer signal transmission includes a camera 1 capable of transmitting a video signal over a power line 4, a power line network bridge 11 for extracting video signals from the power line, a surveillance device 2 for monitoring the camera output and optionally also controlling the camera, and a server 3. The server is used in setting up a peer-to-peer (p2p) internet connection between the network bridge and the surveillance device, preferably using hole punching technology. The power line network bridge and surveillance device are each connected to the internet via routers 12. 21. The use of p2p technology in this way allows an ordinary person to easily monitor and control images and electric equipment at home through internet, without carrying out network wiring or knowing how to set up an IP.

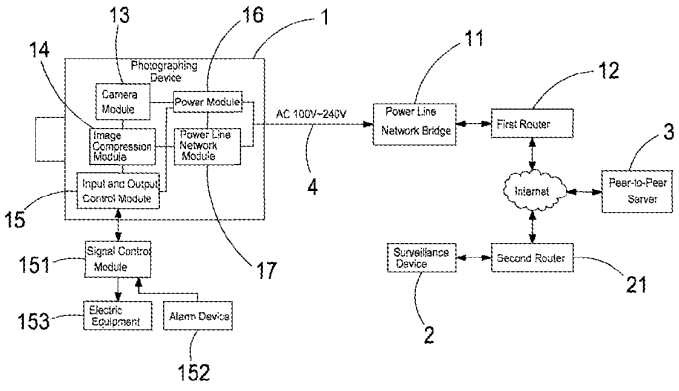


FIG.1

GB 2475279 A

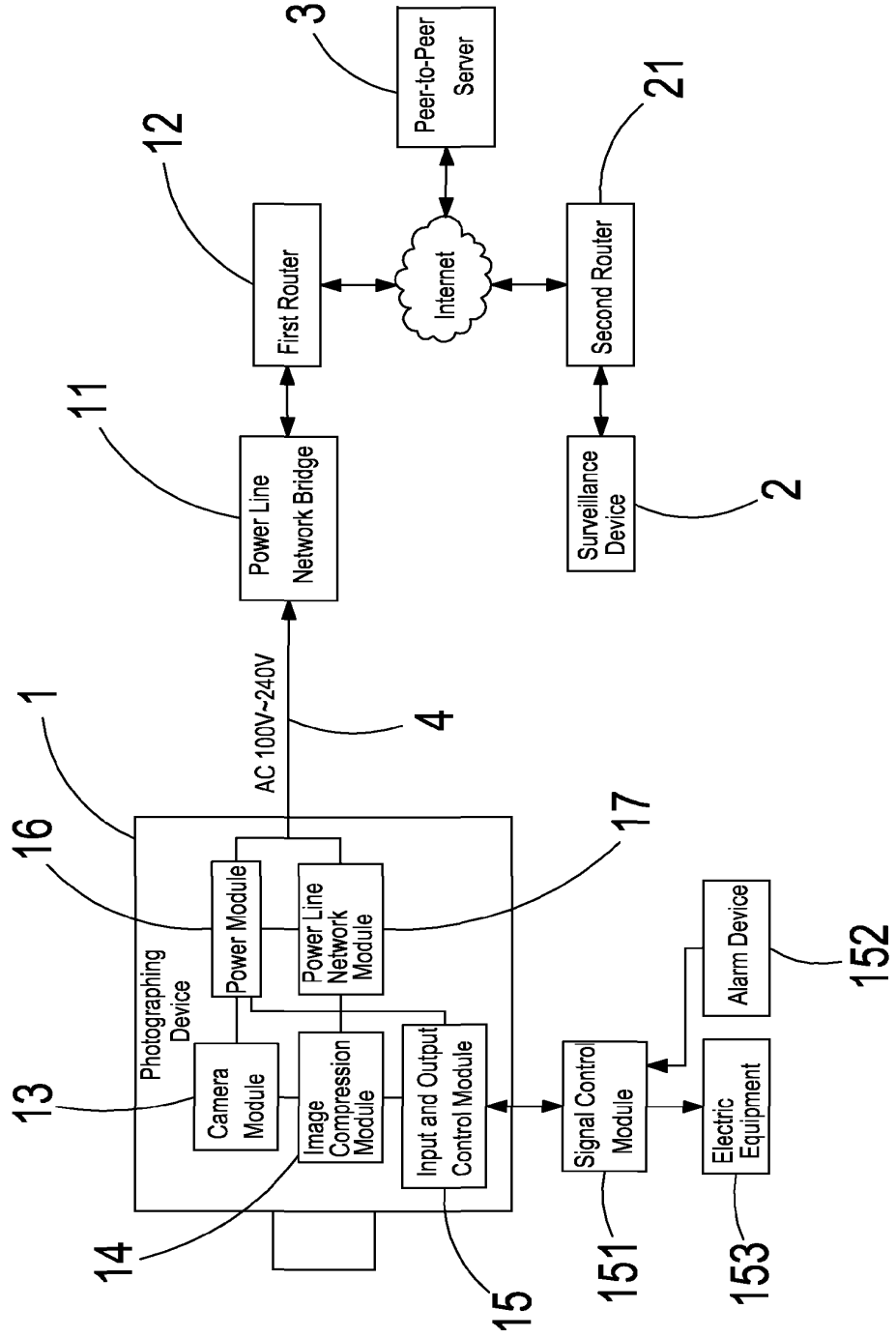

Peer-to-Peer Server
3
First Router
12
Internet
Second Router
21
Power Line Network Bridge
11
Surveillance Device
2
AC 100V~240V
4
1
16
17
Photographing Device
Power Module
Power Line Network Module
13
Camera Module
Image Compression Module
Input and Output Control Module
Signal Control Module
Alarm Device
152
Electric Equipment
14
15
151
153

FIG.1

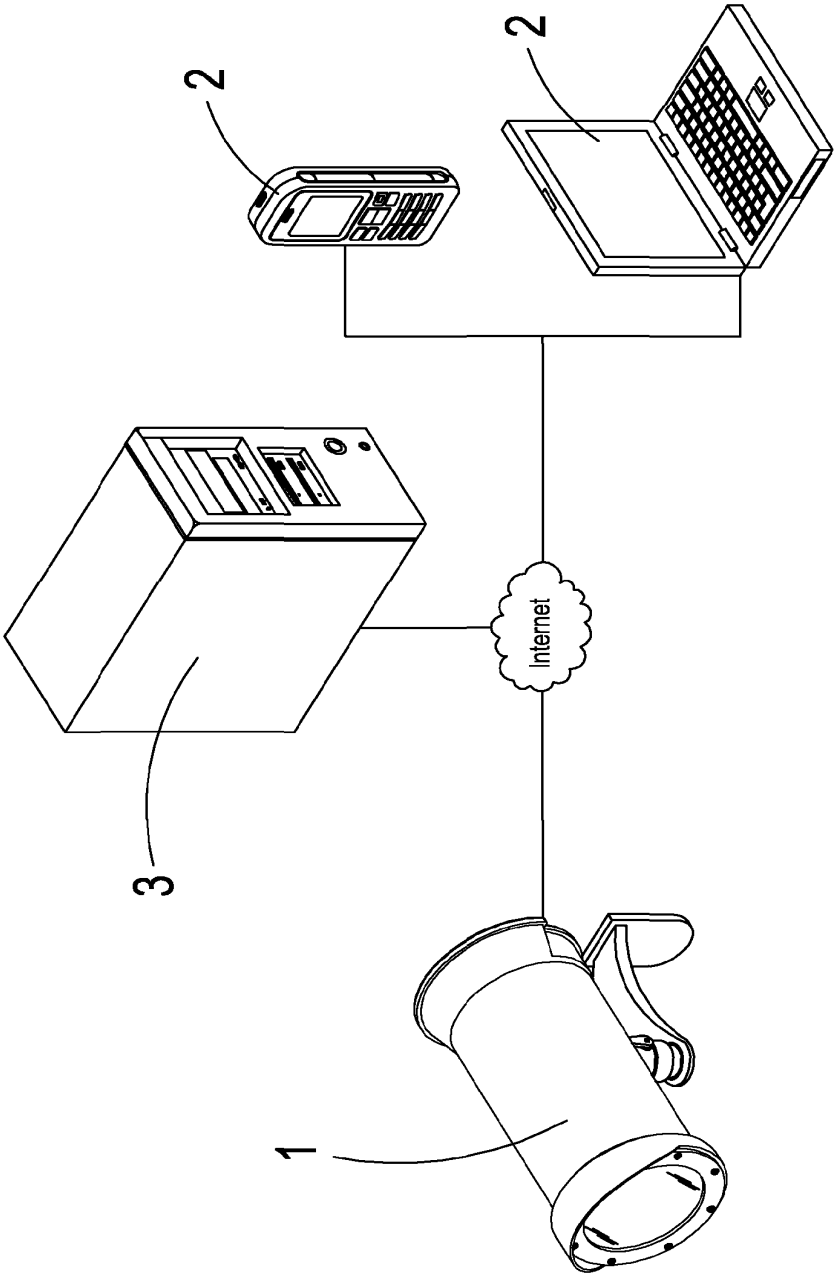


FIG.2

SURVEILLANCE DEVICE FOR POWER LINE PEER-TO-PEER SIGNAL TRANSMISSION

BACKGROUND OF THE INVENTION

(a) Field of the Invention

The present invention relates to a network image surveillance and equipment control system, and more particularly to a surveillance device for power line peer-to-peer signal transmission, which utilizes a power line network to connect a network and applies a peer-to-peer technology to carry out signal transmission.

(b) Description of the Prior Art

As advancement of technology and popularity of internet, a user is able to install a photographing device at a place to be monitored in advance, then monitor at any time images of an IP (Internet Protocol) camera through internet, and at a mean time, control electric equipment and receive an alarm signal detected by alarm equipment. This application actually has brought convenience in living to fight crimes and secure evidences.

However, when the aforementioned surveillance and photographing equipment is used, following issues and shortcomings actually exist to

be improved:

1. If the conventional photographing device is an IP camera, then network wiring is required, which not only wastes time and labor works, but also costs a lot.
2. If the conventional photographing device is an IP camera, then connection can only be made through internet after a complicated network IP setup, and this cannot be easily done by an ordinary user.

Accordingly, how to solve the aforementioned issues and shortcomings of the prior art is a direction of research and development for improvement by the present inventor and related vendors.

SUMMARY OF THE INVENTION

The primary object of the present invention is to provide a surveillance device which uses a power line network to connect a network and applies a peer-to-peer technology to conduct signal transmission.

To achieve the aforementioned object, the surveillance photographing device of the present invention includes a photographing device, a surveillance device and a peer-to-peer server. The photographing device includes a power line network bridge and a first

router, and can be connected to internet through the first router, the power line network bridge and a first power line. The surveillance device includes a second router and is connected to internet through the second router. The peer-to-peer server connects the first router and the second router through internet.

In general, the user must accomplish the time and labor works consuming network wiring and complicated IP setup that images of the IP camera can be seen or electric equipment can be controlled, through internet. As the photographing device of the present invention includes the power line network bridge, the user can use a PLC (Power Line Communication) technology to save a trouble of network wiring. In addition, as the present invention includes the peer-to-peer server, a P2P (Peer to Peer) technology can be used to avoid setting up an IP. As a result, an ordinary person does not need to do the network wiring, or to know how to set up an IP. On the other hand, the surveillance device of the present invention can be a mobile phone or a computer and the user just only uses the computer or the mobile phone that he or she can easily monitor images at home or control the electric equipment, and at a same time, receive the alarm signal detected by the alarm equipment, through internet.

To enable a further understanding of the said objectives and the technological methods of the invention herein, the brief description of the drawings below is followed by the detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a block diagram of a preferred embodiment of the present invention.

FIG. 2 shows a schematic view of an implementation of the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIG. 1, it shows a block diagram of a preferred embodiment of the present invention. As shown in the drawing, the present invention comprises a photographing device 1, a surveillance device 2 and a peer-to-peer server 3.

The photographing device 1 includes a power line network bridge 11 and a first router 12 and can be connected to internet through the first router 12, the power line network bridge 11 and a power line 4. An interior of the photographing device 1 is provided with a storage device, such as a hard drive or a memory, such that when image files are recorded by the photographing device 1, the image files can be saved in

the storage device. In addition, the interior of the photographing device 1 also includes a camera module 13, an image compression module 14, an input and output control module 15, a power module 16 and a power line network module 17, to accomplish photographing and transmission functions. The input and output control module 15 can be further connected with a signal control module 151 which is connected respectively with an alarm device 152 and electric equipment 153; whereas, the photographing device 1 is an IP camera.

The surveillance device 2 includes a second router 21 and can be connected to internet through the second router 21. The surveillance device 2 can be a computer or a mobile phone and can be located at a central control center or a monitoring station; therefore, by watching the surveillance device 2, the user can look at the images that are recorded by the photographing device 1.

The peer-to-peer server 3 can connect the first router 12 with the second router 21 through internet.

The photographing device 1 and the surveillance device 2 utilize a hole punching technology to carry out peer-to-peer transmission through the first router 12 and the second router 21, by the peer-to-peer server 3.

Referring to FIG. 1 and FIG. 2, it shows the block diagram and a

schematic view of an implementation, of the preferred embodiment of the present invention. As shown in the drawings, when the photographing device 1 of the present invention is connected to internet, images are first recorded by the camera module 13 of the photographing device 1. After recording, image signals will be transmitted by the camera module 13 to the image compression module 14 to compress into digital image signals. Next, the digital image signals are transmitted through the power line network module 17 and the power line 4 (AC 100V~240V) to the power line network bridge 11 and connected to internet through the first router 12. These are the processes that the photographing device 1 is connected to internet.

After being connected to internet, the photographing device 1 is automatically connected to the peer-to-peer server 3 which will make a hole punching to the first router 12 that is connected with the photographing device 1. On the other hand, after being connected to internet, the surveillance device 2 is also automatically connected to the peer-to-peer server 3 which will make a hole punching to the second router 21 that is connected with the surveillance device 2. At this time, the photographing device 1 can transmit the image signals to the surveillance device 2 without going through the peer-to-peer server 3.

After the photographing device 1 has been connected to the surveillance device 2, the surveillance device 2 (e.g., a computer or a mobile phone) can control the connected electric equipment 153 and receive the signals that are transmitted from the alarm device 152 to provide an alarm effect, through the signal control module 151. Whereas, the user can monitor the images shot by the photographing device 1 at any time through the computer or the mobile phone.

Referring to all the drawings, the present invention is actually provided with following advantages when compared with the prior art.

By the aforementioned structures, an ordinary person does not need to do the network wiring or to know how to set up a network IP. In addition, the surveillance device 2 of the present invention can be a computer or a mobile phone. Therefore, the user can use the computer or the mobile phone to monitor at any time, such that he or she can easily monitor and control the images and the electric equipment 153 at home through internet.

It is of course to be understood that the embodiments described herein is merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as

set forth in the following claims.

What is claimed is:

1. A surveillance device for power line peer-to-peer signal transmission, comprising:

a photographing device which includes a power line network bridge and a first router, and is connected to internet through the first router, the power line network bridge and a power line;

a surveillance device which includes a second router and is connected to internet through the second router; and

a peer-to-peer server which connects the first router with the second router through internet;

wherein, the photographing device and the surveillance device carry out peer-to-peer transmission through the first router and the second router, by the peer-to-peer server.

2. The surveillance device for power line peer-to-peer signal transmission according to claim 1, wherein the first router and the second router utilize a hole punching technology to carry out peer-to-peer transmission.

3. The surveillance device for power line peer-to-peer signal transmission according to claim 1, wherein the photographing device is an IP (Internet Protocol) camera.

4. The surveillance device for power line peer-to-peer signal transmission according to claim 1, wherein the photographing device includes a camera module, an image compression module, an input and output control module, a power module and a power line network module.

5. The surveillance device for power line peer-to-peer signal transmission according to claim 4, wherein the input and output control module is further connected with a signal control module which is connected respectively to an alarm device and electric equipment.

6. The surveillance device for power line peer-to-peer signal transmission according to claim 1, wherein the surveillance device is a computer or a mobile phone.

7. Surveillance device for power line peer-to-peer signal transmission substantially as herein described above and illustrated in the accompanying drawings.

Application No:	GB0919805.2	**Examiner:**	Dr John Cullen
Claims searched:	1-7	**Date of search:**	23 February 2010

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1-6	EP2023609 A1 (CHINA MOBILE)
Y	1-6	US2008/091802 A1 (WHAN) Figs. 1 and 2, and Paras 26 to 35
Y	1-6	WO2004/063843 A2 (MATSUSHITA) See Figs. 7A-7C and line 12 of p26 to line 5 of p28.
Y	1-6	US2009/074184 A1 (BAUM) See Figs 5 and 13, and Paras 176, 177, 201-208, 218 and 219.
Y	1-6	US2008/186150 A1 (KAO) see Fig. 5.
Y	1-6	US2009/051769 A1 (KUO) See Fig. 3 and Para 26.
Y	1-6	US2005/018766 A1 (IWAMURA) See Paras 17, 52, 55 and 92.
A	---	Ford, B et al, "Peer-to-Peer Communication Across Network Address Translators", Proc of USENIX Annual Technical Conference, 10-15 April 2005.

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

Worldwide search of patent documents classified in the following areas of the IPC

H04B; H04L; H04N

The following online and other databases have been used in the preparation of this search report

Online: WPI, EPODOC, TXTE

International Classification:

Subclass	Subgroup	Valid From
H04L	0029/08	01/01/2006
H04B	0003/54	01/01/2006
H04L	0029/06	01/01/2006
H04N	0007/18	01/01/2006

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.
H04N 5/232 (2006.01)
H04N 5/225 (2006.01)

[12] 发明专利说明书

专利号 ZL 200610081578.X

[45] 授权公告日 2008 年 5 月 21 日

[11] 授权公告号 CN 100389602C

[22] 申请日 2006.5.29
[21] 申请号 200610081578.X
[73] 专利权人 中国移动通信集团公司
地址 100032 北京市西城区金融大街 29 号
[72] 发明人 刘璋鲁 欧阳聪星 李 晗 张光海
[56] 参考文献
US2005/0047379A1 2005.3.3
CN1691810A 2005.11.2
CN1610282A 2005.4.27
CN1497951A 2004.5.19
审查员 兰 霞

[74] 专利代理机构 北京同立钧成知识产权代理有限公司
代理人 刘 芳

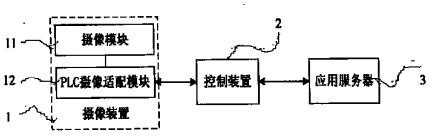
权利要求书 8 页 说明书 15 页 附图 9 页

[54] 发明名称

摄像系统及摄像控制方法

[57] 摘要

本发明提供了摄像系统，包括依次连接的摄像装置、控制装置与应用服务器，摄像装置包括摄像模块及 PLC 摄像适配模块，用于摄制音/视频信息，对音/视频信息进行调制后发送，对电源线中传输来的调制信号进行解调获得控制信号，利用该控制信号调整摄像参数；控制装置，与 PLC 摄像适配模块通过电源线连接，用于对接收到的音/视频信息的调制信号进行解调并发送，根据接收到的控制指示信息产生控制信号，对该控制信号进行调制并控制像模块；应用服务器，用于存储、提供音/视频信息、摄像装置信息及摄像装置的控制权限信息，及产生、下发控制指示信息。 本发明还提供了摄像控制方法。 本发明可免除专用的信号线连接，并可对摄像装置进行远程控制。



1、一种摄像装置，包括摄像模块，其特征在于，所述摄像模块连接一电力线通信摄像适配模块，用于接收摄像模块摄制的音/视频信息，并将该音/视频信息进行调制后输入电源线进行传输，同时，对电源线中传输的控制信号的调制信号进行解调获得控制信号，并利用该控制信号对所述摄像模块进行控制；所述电力线通信摄像适配模块包括：

摄像信号处理单元，与所述摄像模块连接，用于将音/视频信息转换成数字多媒体信号；

数字多媒体信息压缩处理单元，与所述摄像信号处理单元连接，用于对数字多媒体信号进行压缩；

以太网适配单元，与所述数字多媒体信息压缩处理单元及所述摄像模块连接，用于将数字多媒体压缩信号转换成以太网信号发送出去，以及用于将接收到的控制信号发送给摄像模块；

第一电力线通信调制解调单元，与所述以太网适配单元连接，用于对所述以太网适配单元发送的以太网信号进行调制，将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述以太网适配单元。

2、根据权利要求 1 所述的摄像装置，其特征在于，还包括一录音模块，与所述摄像信号处理单元及所述以太网适配单元连接。

3、根据权利要求 1 所述的摄像装置，其特征在于，所述摄像模块与所述电力线通信摄像适配模块均设有 USB 接口。

4、根据权利要求 3 所述的摄像装置，其特征在于，所述设有 USB 接口的电力线通信摄像适配模块包括：

USB 总线适配单元，与 USB 摄像模块连接，用于将 USB 总线信号与 USB 电源复合/分离，所述 USB 总线信号包括音/视频信息与控制信号；

第一 USB 信号以太网适配单元，与 USB 总线适配单元连接，用于对 USB

总线信号与以太网信号进行互转换;

USB 电源适配单元，与所述 USB 总线适配单元连接，用于对 USB 电源与交流电源进行互转换;

第一电力线通信调制解调单元，与所述第一 USB 信号以太网适配单元及所述 USB 电源适配单元连接，用于对所述第一 USB 信号以太网适配单元发送的以太网信号进行调制，将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述第一 USB 信号以太网适配单元。

5、根据权利要求根据权利要求 4 所述的摄像装置，其特征在于，所述 USB 总线适配单元还连接一录音模块。

6、一种摄像系统，其特征在于，包括:

摄像装置，由摄像模块及电力线通信摄像适配模块构成，所述摄像模块用于摄制音/视频信息，所述电力线通信摄像适配模块用于接收摄像模块摄制的音/视频信息，并将该音/视频信息进行调制后输入电源线进行传输，同时，对电源线中传输的控制信号的调制信号进行解调获得控制信号，并利用该控制信号对所述摄像模块进行控制;

控制装置，与所述电力线通信摄像适配模块通过电源线连接，用于对接收到的音/视频信息的调制信号进行解调，并发送解调后获得的音/视频信息，同时，根据接收到的控制指示信息产生控制信号，对该控制信号进行调制并通过电源线将所述控制信号的调制信号发送给所述电力线通信摄像适配模块以控制所述摄像模块;

应用服务器，与所述控制装置连接，用于存储、提供所述音/视频信息、所述摄像装置信息及摄像装置的控制权限信息，并向所述控制装置下发控制指示信息; 所述电力线通信摄像适配模块包括:

摄像信号处理单元，与所述摄像模块连接，用于将音/视频信息转换成数字多媒体信号;

数字多媒体信息压缩处理单元，与所述摄像信号处理单元连接，用于对数字多媒体信号进行压缩；

以太网适配单元，与所述数字多媒体信息压缩处理单元及所述摄像模块连接，用于将数字多媒体压缩信号转换成以太网信号发送出去，以及用于将接收到的控制信号发送给摄像模块；

第一电力线通信调制解调单元，与所述以太网适配单元连接，用于对所述以太网适配单元发送的以太网信号进行调制，将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述以太网适配单元。

7、根据权利要求 6 所述的摄像系统，其特征在于，所述摄像装置还包括一录音模块，与所述摄像信号处理单元及所述以太网适配单元连接。

8、根据权利要求 7 所述的摄像系统，其特征在于，所述控制装置包括：

主处理单元，与所述应用服务器连接，用于接收与发送音/视频信息，以及根据应用服务器下发的控制指示信息产生并发送控制信号；

以太网信号处理单元，与所述主处理单元连接，用于将接收到的以太网信号转换为数字音/视频信息发送给所述主处理单元，以及将所述主处理单元发送的控制信号转换为以太网信号发送出去；

第二电力线通信调制解调单元，与所述以太网信号处理单元连接，用于以太网信号中的控制信号进行调制，将该控制信号加载到载波上进行传输，以及对接收到的音/视频信息的调制信号进行解调，并将解调后的现场信号转换成以太网信号发送给所述以太网信号处理单元。

9、根据权利要求 6－8 所述的任一摄像系统，其特征在于，所述应用服务器包括：

信息数据库，用于存储所述摄像装置摄制的音/视频信息；

信息处理模块，与所述信息数据库及所述主处理单元连接，用于将主处理单元上报的音/视频信息存储在所述信息数据库中，以及发布所述音/视频信

息，同时，根据接收到的请求信息产生并向控制装置发送控制指示信息。

10、根据权利要求 6 所述的摄像系统，其特征在于，所述摄像模块与所述电力线通信摄像适配模块均设有 USB 接口。

11、根据权利要求 10 所述的摄像系统，其特征在于，所述设有 USB 接口的电力线通信摄像适配模块包括:

USB 总线适配单元，与 USB 摄像模块连接，用于将 USB 总线信号与 USB 电源复合/分离，所述 USB 总线信号包括音/视频信息与控制信号;

第一 USB 信号以太网适配单元，与 USB 总线适配单元连接，用于对 USB 总线信号与以太网信号进行互转换;

USB 电源适配单元，与所述 USB 总线适配单元连接，用于对 USB 电源与交流电源进行互转换;

第一电力线通信调制解调单元，与所述第一 USB 信号以太网适配单元及所述 USB 电源适配单元连接，用于对所述第一 USB 信号以太网适配单元发送的以太网信号进行调制，将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述第一 USB 信号以太网适配单元。

12、根据权利要求 11 所述的摄像系统，其特征在于，所述 USB 总线适配单元还连接一录音模块。

13、根据权利要求 12 所述的摄像系统，其特征在于，所述控制装置包括:

主处理单元，与所述应用服务器连接，用于接收与发送音/视频信息，以及根据应用服务器下发的控制指示信息产生并发送控制信号;

第二 USB 信号以太网适配单元，与所述主处理单元连接，用于对 USB 总线信号与以太网信号进行互转换;

第二电力线通信调制解调单元，与所述第二 USB 信号以太网适配单元连接，用于对 USB 总线信号中的控制信号进行调制，将该控制信号加载到载波上进行传输，以及对接收到的音/视频信息的调制信号进行解调，并将解调后

的现场信号转换成以太网信号发送给所述第二 USB 信号以太网适配单元。

14、根据权利要求 6、10－13 所述的任一摄像系统，其特征在于，所述应用服务器包括:

信息数据库，用于存储所述摄像装置摄制的音/视频信息，所述摄像装置的信息以及该摄像装置的控制权限信息;

信息处理模块，与所述信息数据库及所述主处理单元连接，用于将主处理装置上报的音/视频信息存储在所述信息数据库中，以及发布所述音/视频信息，同时，根据接收到的请求信息产生并向控制装置发送控制指示信息。

15、一种摄像控制方法，其中，包括以下步骤:

步骤 1、移动终端向应用服务器发送对摄像装置的摄像参数进行调整的请求信息，该请求信息中携带了所述摄像装置的标识信息与所述移动终端的号码信息;

步骤 2、应用服务器根据所述请求信息产生控制指示信息，并将该控制指示信息以及所述标识信息发送给控制装置;

步骤 3、控制装置根据控制指示信息产生控制信号，对该控制信号进行调制，将调制后生成的控制信号的调制信号发送给第一电力线通信调制解调单元; 第一电力线通信调制解调单元对接收到的控制信号的调制信号进行解调得到控制信号，将该控制信号转换为以太网信号发送给以太网适配单元; 以太网适配单元从以太网信号中获取控制信号，并利用该控制信号对摄像模块的摄像参数进行调整。

16、根据权利要求 15 所述的摄像控制方法，其中，所述步骤 1 之前还执行以下操作:

应用服务器接收到所述移动终端发送的用于获取所述摄像参数的获取请求信息后，将所述摄像参数以及对该摄像参数进行修改的操作链接地址发送给所述移动终端。

17、根据权利要求 16 所述的摄像控制方法，其中，所述步骤 1 中，移动

终端通过所述操作链接地址向应用服务器发送对摄像装置的摄像参数进行调整的请求信息。

18、根据权利要求 15 所述的摄像控制方法，其中，所述步骤 1 中，发送所述请求信息具体为：移动终端向应用服务器中的信息处理模块发送对摄像装置的摄像参数进行调整的请求信息。

19、根据权利要求 18 所述的摄像控制方法，其中，所述步骤 1 中，移动终端采用会话发起协议向应用服务器中的信息处理模块发送对摄像装置的摄像参数进行调整的请求信息。

20、根据权利要求 15 所述的摄像控制方法，其中，所述步骤 2 具体为：所述应用服务器中的信息处理模块根据所述请求信息产生控制指示信息，并将该控制指示信息以及所述标识信息发送给控制装置。

21、根据权利要求 20 所述的摄像控制方法，其中，所述步骤 2 中，所述信息处理模块将控制指示信息以及所述标识信息发送给控制装置中的主处理单元。

22、根据权利要求 21 所述的摄像控制方法，其中，所述步骤 3 包括：

步骤 311、主处理单元根据所述控制指示信息产生控制信号，将该控制信号发送给以太网信号处理单元；

步骤 312、以太网信号处理单元将所述控制信号转换成以太网信号发送给第二电力线通信调制解调单元；

步骤 313、第二电力线通信调制解调单元对以太网信号中的控制信号进行调制，将该控制信号加载到载波上，并用调制后生成的控制信号的调制信号对所述摄像装置的摄像参数进行调整。

23、根据权利要求 21 所述的摄像控制方法，其中，所述步骤 3 包括：

步骤 321、主处理单元根据所述控制指示信息产生控制信号，将该控制信号加载在 USB 总线信号中发送给第二 USB 信号以太网适配单元；

步骤 322、第二 USB 信号以太网适配单元将 USB 总线信号转换成以太

网信号发送给第二电力线通信调制解调单元;

步骤 323、第二电力线通信调制解调单元对以太网信号中的控制信号进行调制，将该控制信号加载到载波上，并用调制后生成的控制信号的调制信号对所述摄像装置的摄像参数进行调整。

24、根据权利要求 23 所述的摄像控制方法，其中，所述步骤 323 包括:

步骤 3421、第二电力线通信调制解调单元将控制信号的调制信号发送给第一电力线通信调制解调单元;

步骤 3422、第一 USB 信号以太网适配单元将以太网信号转换成 USB 总线信号发送给 USB 总线适配单元;

步骤 3423、USB 总线适配单元从 USB 总线信号中获取控制信号，并利用该控制信号对摄像模块的摄像参数进行调整。

25、根据权利要求 15 所述的摄像控制方法，其中，所述步骤 1 与所述步骤 2 之间还包括:

步骤 11、根据所述移动终端的号码信息判断该移动终端是否具有对所述摄像装置的控制权限，是，执行步骤 2; 否则，结束操作。

26、根据权利要求 25 所述的摄像控制方法，其中，所述步骤 11 具体为:

所述应用服务器中的信息处理模块接收到对摄像装置的摄像参数进行调整的请求信息后，根据摄像装置的标识信息从所述信息数据库中查询所述摄像装置的控制权限信息中是否包含所述移动终端的号码信息，是，执行步骤 2; 否则，结束操作。

27、根据权利要求 15－26 所述的任一摄像控制方法，其中，还包括从应用服务器中获取音/视频信息的操作。

28、根据权利要求 27 所述的摄像控制方法，其中，从应用服务器获取音/视频信息的操作包括:

移动终端向信息处理模块发送获取所述摄像装置摄制的音/视频信息的获取请求信息; 所述信息处理模块根据摄像装置的标识信息从所述信息数据

库中查询所述摄像装置的控制权限信息中是否包含所述移动终端的号码信息，是，从所述信息数据库中获取与摄像装置的标识信息相应的音/视频信息，发送给所述移动终端；否则，结束操作。

29、根据权利要求 28 所述的摄像控制方法，其中，移动终端采用 SIP 协议向信息处理模块发送获取所述摄像装置摄制的音/视频信息的获取请求信息。

30、根据权利要求 29 所述的摄像控制方法，其中，信息处理模块采用 SIP 协议向移动终端发送音/视频信息。

摄像系统及摄像控制方法

技术领域

本发明涉及一种摄像系统及摄像控制方法，尤其是一种可由移动终端进行远程控制并免除专用信号线的摄像装置，由该摄像装置构成的摄像系统，以及利用移动终端对摄像装置进行远程控制的方法。

背景技术

随着数码产品的普及，摄像装置已经成为家庭与集团记录、存储信息的首选媒体，用户可以通过摄像装置记录视频、音频或者音、视频混合信息，非常方便。现有的摄像系统通常由处于摄像现场的摄像装置与控制该摄像装置的控制装置构成，这二者之间通过通常通过两种方式连接：一是同时通过电源线与专用的信号线（如视频线缆）连接，二是通过具有供电功能的专用信号线（如USB线缆）连接，用户通过控制装置来控制摄像装置的摄像参数，例如，摄像角度、焦距、感光度、摄制的媒体类型等，以满足用户的需求。

现有的摄像系统及其控制方法存在着以下缺陷与不足：

1、摄像装置与控制装置之间必须连接专用的信号线，而在摄像装置与控制装置之间相距较远时，例如：不在同一个房间，不便于部署专用的信号线，给用户带来了极大的不便；

2、因摄像装置与控制装置之间必须连接专用的信号线，因此二者的距离受到限制，若需改变摄像角度、焦距、感光度、摄制的媒体类型等摄像参数，用户就必须亲自到摄像现场操作控制装置，而无法实现对摄像装置进行远程操作与控制，同样给用户带来极大不便。

发明内容

本发明所要解决的技术问题在于，针对现有技术中需通过专用的信号线连接摄像装置与控制装置，以及无法对摄像装置进行远程控制的缺陷与不足，提供一种摄像装置、由该摄像装置构成的摄像系统，以及利用该摄像系统控制摄像装置的摄像控制方法，可以免除摄像装置与控制装置之间的信号线连接、同时，能够实现对摄像装置的远程控制，极大地方便了用户。

本发明提供的一种摄像装置，包括摄像模块，该摄像模块连接一电力线通信（Power Line Communication，PLC）摄像适配模块，用于接收摄像模块摄制的音/视频信息，并将该音/视频信息进行调制后输入电源线进行传输，同时，对电源线中传输的控制信号的调制信号进行解调获得控制信号，并利用该控制信号对所述摄像模块进行控制。

其中，所述 PLC 摄像适配模块包括:

摄像信号处理单元，与所述摄像模块连接，用于将音/视频信息转换成数字多媒体信号;

数字多媒体信息压缩处理单元，与所述摄像信号处理单元连接，用于对数字多媒体信号进行压缩;

以太网适配单元，与所述数字多媒体信息压缩处理单元及所述摄像模块连接，用于将数字多媒体压缩信号转换成以太网信号发送出去，以及用于将接收到的控制信号发送给摄像模块;

第一电力线通信调制解调单元，与所述以太网适配单元连接，用于对所述以太网适配单元发送的以太网信号进行调制、将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述以太网适配单元。

本发明提供的一种摄像系统，包括:

摄像装置，由摄像模块及电力线通信摄像适配模块构成，所述摄像模块用于摄制音/视频信息、所述电力线通信摄像适配模块用于接收摄像模块摄制的音/视频信息、并将该音/视频信息进行调制后输入电源线进行传输、同时，

对电源线中传输的控制信号的调制信号进行解调获得控制信号，并利用该控制信号对所述摄像模块进行控制；

控制装置，与所述电力线通信摄像适配模块通过电源线连接，用于对接收到的音/视频信息的调制信号进行解调，并发送解调后获得的音/视频信息，同时，根据接收到的控制指示信息产生控制信号，对该控制信号进行调制并通过电源线将所述控制信号的调制信号发送给所述电力线通信摄像适配模块以控制所述摄像模块；

应用服务器，与所述控制装置连接，用于存储、提供所述音/视频信息、所述摄像装置信息及摄像装置的控制权限信息，并向所述控制装置下发控制指示信息。

其中，所述电力线通信摄像适配模块包括：

摄像信号处理单元，与所述摄像模块连接，用于将音/视频信息转换成数字多媒体信号；

数字多媒体信息压缩处理单元，与所述摄像信号处理单元连接，用于对数字多媒体信号进行压缩；

以太网适配单元，与所述数字多媒体信息压缩处理单元及所述摄像模块连接，用于将数字多媒体压缩信号转换成以太网信号发送出去，以及用于将接收到的控制信号发送给摄像模块；

第一电力线通信调制解调单元，与所述以太网适配单元连接，用于对所述以太网适配单元发送的以太网信号进行调制，将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述以太网适配单元。

所述控制装置包括：

主处理单元，与所述应用服务器连接，用于接收与发送音/视频信息，以及根据应用服务器下发的控制指示信息产生并发送控制信号；

以太网信号处理单元，与所述主处理单元连接，用于将接收到的以太网信号转换为数字音/视频信息发送给所述主处理单元，以及将所述主处理单元发送的控制信号转换为以太网信号发送出去；

第二电力线通信调制解调单元，与所述以太网信号处理单元连接，用于以太网信号中的控制信号进行调制，将该控制信号加载到载波上进行传输，

以及对接收到的音/视频信息的调制信号进行解调，并将解调后的现场信号转换成以太网信号发送给所述以太网信号处理单元。

当所述摄像装置中的所述摄像模块及电力线通信摄像适配模块设有USB接口时，所述设有USB接口的电力线通信摄像适配模块包括:

USB总线适配单元,与USB摄像模块连接,用于将USB总线信号与USB电源复合/分离，所述USB总线信号包括音/视频信息与控制信号;

第一USB信号以太网适配单元，与所述USB总线适配单元连接，用于对USB总线信号与以太网信号进行互转换;

USB电源适配单元，与所述USB总线适配单元连接，用于对USB电源与交流电源进行互转换;

第一电力线通信调制解调单元,与所述第一USB信号以太网适配单元及所述USB电源适配单元连接，用于对所述第一USB信号以太网适配单元发送的以太网信号进行调制，将该以太网信号加载到载波上进行传输，以及对接收到的控制信号的调制信号解调并转换为以太网信号发送给所述第一USB信号以太网适配单元。

当所述摄像装置中的所述摄像模块及电力线通信摄像适配模块设有USB接口时，所述控制装置包括:

主处理单元，与所述应用服务器连接，用于接收与发送音/视频信息，以及根据应用服务器下发的控制指示信息产生并发送控制信号;

第二USB信号以太网适配单元，与所述主处理单元连接，用于对USB总线信号与以太网信号进行互转换;

第二电力线通信调制解调单元,与所述第二USB信号以太网适配单元连接，用于对USB总线信号中的控制信号进行调制，将该控制信号加载到载波上进行传输，以及对接收到的音/视频信息的调制信号进行解调，并将解调后的现场信号转换成以太网信号发送给所述第二USB信号以太网适配单元。

所述应用服务器包括:

信息数据库，用于存储所述摄像装置摄制的音/视频信息，所述摄像装置的信息以及该摄像装置的控制权限信息;

信息处理模块，与所述信息数据库及所述主处理单元连接，用于将主处理装置上报的音/视频信息存储在所述信息数据库中,以及发布所述音/视频信

息，同时，根据接收到的请求信息产生并向控制装置发送控制指示信息。

本发明提供的一种摄像控制方法，其中，包括以下步骤：

步骤 1、移动终端向应用服务器发送对摄像装置的摄像参数进行调整的请求信息，该请求信息中携带了所述摄像装置的标识信息与所述移动终端的号码信息；

步骤 2、应用服务器根据所述请求信息产生控制指示信息，并将该控制指示信息以及所述标识信息发送给控制装置；

步骤 3、控制装置根据控制指示信息产生控制信号，对该控制信号进行调制，将调制后生成的控制信号的调制信号发送给第一电力线通信调制解调单元；第一电力线通信调制解调单元对接收到的控制信号的调制信号进行解调得到控制信号，将该控制信号转换为以太网信号发送给以太网适配单元；以太网适配单元从以太网信号中获取控制信号，并利用该控制信号对摄像模块的摄像参数进行调整。

基于上述技术方案，本发明具有以下优点：

1、摄像装置中的第一 PLC 调制解调单元可以对摄像头摄制的音/视频信息进行调制，将其加载到电源线中传送给控制装置，同时，控制装置中的第二 PLC 调制解调单元可以对控制信号进行调制，将其加载到电源线中传送给摄像装置，因此，摄像装置与控制装置之间无需连接专用的信号线，节省了信号线，并且免去了安装信号线的繁琐操作；同时，电源线与电源插座是家庭或者集团中分布最普遍的线缆系统，使得摄像装置与控制装置之间的位置相对灵活，从一定程度上方便了用户；

2、在通信技术飞速发展的今天，移动终端的使用已经非常的普遍，将移动通信技术与摄像技术相结合，通过移动终端实现对摄像装置的远程控制与操作，例如，用户可以通过移动终端远程对摄像装置的摄像参数进行调整与控制，极大地方便了用户。

下面通过附图和实施例，对本发明的技术方案做进一步的详细描述。

附图说明

图 1 为本发明摄像装置第一实施例的结构示意图；

图 2 为本发明摄像装置第二实施例的结构示意图；

图 3 为本发明摄像装置第三实施例的结构示意图；

图 4 为本发明摄像装置第四实施例的结构示意图；

图 5 为本发明摄像装置第五实施例的结构示意图；

图 6 为本发明摄像装置第六实施例的结构示意图；

图 7 为本发明摄像系统第一实施例的结构示意图；

图 8 为本发明摄像系统第二实施例的结构示意图；

图 9 为本发明摄像系统第三实施例的结构示意图；

图 10 为本发明摄像系统第四实施例的结构示意图；

图 11 为本发明摄像系统第五实施例的结构示意图；

图 12 为本发明摄像控制方法的基本流程图；

图 13 为本发明摄像控制方法的第一实施例的流程图；

图 14 为本发明摄像控制方法的第二实施例的流程图。

具体实施方式

图 1 所示为本发明摄像装置第一实施例的结构示意图，该摄像装置包括摄像模块 11 与 PLC 摄像适配模块 12。其中，摄像模块 11 用于摄制包括音频、视频、图像等的音/视频信息，PLC 摄像适配模块 12 用于接收摄像模块 11 摄制的音/视频信息，即对摄像模块 11 摄制的音/视频信息进行调制，将其加载到电源线中发送给控制该摄像装置的控制装置，同时，对控制装置通过电源线发送的控制信号的调制信号进行解调，用解调后获得的控制信号控制摄像模块 11 的摄像参数，例如：摄像角度、焦距、感光度，以及摄制的媒体类型如视频、图片、音频或音/视频组合信息。

图 2 所示为本发明摄像装置第二实施例的结构示意图，该摄像装置中，PLC 摄像适配模块 12 具体由依次连接的摄像信号处理单元 121、数字多媒体信息压缩处理单元 122、以太网适配单元 123 与第一 PLC 调制解调单元 124 构成。其中，摄像信号处理单元 121 与摄像模块 11 连接，用于将摄像模块 11 摄制的音/视频信息转换成数字多媒体信号并发送给数字多媒体信息压缩处理单元 122；数字多媒体信息压缩处理单元 122 用于对数字多媒体信号进行压缩后发送给以太网适配单元 123；以太网适配单元 123 还与摄像信号处

理单元 121 连接，用于将压缩后形成的数字多媒体压缩信号转换成以太网信号发送给第一 PLC 调制解调单元 124，同时，将第一 PLC 调制解调单元 124 发送的控制信号发送给摄像模块 11，以调整摄像模块 11 的摄像参数；第一 PLC 调制解调单元 124 用于对接收到的以太网信号进行调制，将该以太网信号加载到载波上，通过电源线传输给控制该摄像装置的控制装置，同时，对控制装置通过电源线发送过来的控制信号的调制信号进行解调，并将解调后获得的控制信号转换为以太网信号发送给以太网适配单元 123 音/视频信息。

摄像装置中摄制了 PLC 调制解调单元，可以将摄像头摄制的现场信号加载到电源线中传送给控制装置，与控制装置之间无需连接专用的信号线，节省了信号线，并且免去了安装信号线的繁琐操作；同时，电源线与电源插座是家庭或者集团中分布最普遍的线缆系统，使得摄像装置与控制装置之间的位置相对灵活，从一定程度上方便了用户。

图 3 所示为本发明摄像装置第三实施例的结构示意图，该摄像装置中还包括一录音模块 13，该录音模块 13 与 PLC 摄像适配模块 12 中的摄像信号处理单元 121 以及以太网适配单元 123 连接，用于摄制现场的音频信息并发送给摄像信号处理单元 121。

图 4 所示为本发明摄像装置第四实施例的结构示意图，该摄像装置中，对摄像模块 11 与 PLC 摄像适配模块 12 均增设了 USB 接口，为与未设有 USB 接口的摄像模块 11 与 PLC 摄像适配模块 12 相区分，将增设了 USB 接口的摄像模块与 PLC 摄像适配模块分别称为 USB 摄像模块 110 及 USB 总线 PLC 摄像适配模块 120。

图 5 所示为本发明摄像装置第五实施例的结构示意图，该摄像装置中的 USB 总线 PLC 摄像适配模块 120 具体包括依次连接的 USB 总线适配单元 1201、第一 USB 信号以太网适配单元 1202 与第一 PLC 调制解调单元 124，另外，还包括一 USB 电源适配单元 1203，该 USB 电源适配单元 1203 分别与 USB 总线适配单元 1201 及第一 PLC 调制解调单元 124 连接。其中，USB 总

线适配单元 1201 与摄像模块 11 连接，用于将包括音/视频信息与控制信号的 USB 总线信号与 USB 电源复合/分离，将摄像模块 11 摄制的音/视频信息发送给第一 USB 信号以太网适配单元 1202，将以太网适配单元 1202 发送的的控制信号发送给摄像模块 11，以调整摄像模块 11 的摄像参数；第一 PLC 调制解调单元 124 用于对接收到的以太网信号进行调制，将该以太网信号加载到载波上，通过电源线传输给控制该摄像装置的控制装置，同时，对控制装置通过电源线发送过来的控制信号的调制信号进行解调，并将解调后获得的控制信号转换为以太网信号发送给以太网适配单元 123；音/视频信息 USB 电源适配单元 1203 用于对 USB 电源与交流电源进行互转换。

图 6 所示为本发明摄像装置第六实施例的结构示意图，该摄像装置中还包括一录音模块 13，该录音模块 13 与 USB 总线 PLC 摄像适配模块 120 中的 USB 总线适配单元 1201 连接，用于摄制现场的音频信息并发送给摄像信号处理单元 121。

图 7 所示为本发明摄像系统第一实施例的结构示意图，该摄像系统包括依次连接的摄像装置 1、控制装置 2 与应用服务器 3。其中摄像装置 1 由图 1 所示的摄像模块 11 与 PLC 摄像适配模块 12 构成，用于摄制音/视频信息，将该音/视频信息进行调制后通过电源线传输给控制装置 2，同时，对控制装置 2 通过电源线发送过来的控制信号的调制信号进行解调获得控制信号，并利用该控制信号对摄像参数进行调整、控制；控制装置 2 接收到 PLC 摄像适配模块 12 通过电源线发送的音/视频信息的调制信号后，对该调制信号进行解调获得音/视频信息，并将该音/视频信息发送给应用服务器 3；同时，根据接收到的控制指示信息产生控制信号，对该控制信号进行调制，将调制后获得的控制信号地调制信号通过电源线发送给 PLC 摄像适配模块 12，以控制所述摄像装置 1；应用服务器 3 用于存储、提供摄像装置 1 摄制的音/视频信息，摄像装置 1 的信息及摄像装置 1 的控制权限信息，并根据移动终端的请求信息向控制装置 2 下发控制指示信息。另外，作为附加功能，应用服务器 3 还

可以通过控制装置 2 实时获取并显示摄像装置 1 的状态信息，例如：摄像装置 1 是否处于工作状态以及摄像装置 1 在当前工作状态下的摄像参数，例如：摄像角度、焦距、感光度，以及当前可摄制的媒体类型如视频、图片、音频或音/视频组合信息。

另外，该摄像系统中的摄像装置 1 还可以采用图 2－图 5 任一实施例所提供的摄像装置，控制装置 2 相应的与摄像装置 1 中的 USB 总线 PLC 摄像适配模块 120 连接，或者进一步与第一 PLC 滤波单元 125 连接，不再赘述。

将移动通信技术与摄像技术相结合，引入应用服务器存储、提供摄像装置 1 摄制的音/视频信息以及管理控制装置，便可通过移动终端登录应用服务器获取摄像装置信息及音/视频信息，向应用服务器发送改变摄像装置的摄像参数的请求信息，从而实现对摄像装置的远程控制与操作，极大地方便了用户。

图 8 所示为本发明摄像系统第二实施例的结构示意图，当摄像装置 1 采用图 1－图 3 所示的任一摄像装置时，该摄像系统中的控制装置 2 由依次连接的主处理单元 21、以太网信号处理单元 22、第二 PLC 调制解调单元 23 构成。其中，主处理单元 21 用于将以太网信号处理单元 22 发送的音/视频信息上报给应用服务器 3，同时，根据应用服务器 3 下发的控制指示信息产生控制信号并发送给以太网信号处理单元 22；以太网信号处理单元 22 用于将主处理单元 21 发送的控制信号转换成以太网信号发送给第二 PLC 调制解调单元 23，将第二 PLC 调制解调单元 23 发送的以太网信号转换成数字音/视频信息发送给主处理单元 21；第二 PLC 调制解调单元 23 用于对以太网信号中的控制信号进行调制，将该调制信号加载到载波上，通过电源线传输给摄像装置 1；同时，对摄像装置 1 通过电源线传输过来的音/视频信息的调制信号进行解调，并将解调后的现场信号转换成以太网信号发送给以太网信号处理单元 22。具体的，第二 PLC 调制解调单元 23 与摄像装置 1 中的 PLC 摄像适配模块 12 或者其中的第一 PLC 调制解调单元 124 交互信息。

控制装置中的PLC调制解调单元将控制信号加载到电源线中传送给摄像装置，免除了摄像装置与控制装置之间无需连接专用的信号线，方便了用户。

图 9 所示为本发明摄像系统第三实施例的结构示意图，该摄像系统中的控制装置 2 由依次连接的主处理单元 21、第二 USB 信号以太网适配单元 24 与第二 PLC 调制解调单元 23 构成。其中，主处理单元 21 用于将第二 USB 信号以太网适配单元 24 发送的音/视频信息上报给应用服务器 3，同时，根据应用服务器 3 下发的控制指示信息产生控制信号并发送给第二USB信号以太网适配单元 24; 第二 USB 信号以太网适配单元 24 用于将主处理单元 21 发送的 USB 总线信号转换成以太网信号发送给第二 PLC 调制解调单元 23，将第二 PLC 调制解调单元 23 发送的以太网信号转换成 USB 总线信号发送给主处理单元 21; 第二 PLC 调制解调单元 23 用于对 USB 总线信号中的控制信号进行调制，将该调制信号加载到载波上，通过电源线传输给控制装置 1，同时对控制装置 1 通过电源线发送的音/视频信息的调制信号进行解调，并将解调后的现场信号转换成以太网信号发送给第二 USB 信号以太网适配单元 24。具体的，第二 PLC 调制解调单元 23 与摄像装置 1 中的 USB 总线 PLC 摄像适配模块 120 或者其中的第一 PLC 滤波单元 125 交互信息。

图 10 所示为本发明摄像系统第四实施例的结构示意图，该摄像系统中的应用服务器 3 包括相互连接的信息数据库 31 与信息处理模块 32，其中，信息处理模块 32 与主处理单元 21 连接，用于将控制装置 1 上报的音/视频信息存储在信息数据库 31 中，另外还存储有预先设置的各摄像装置的信息，例如：摄像装置的地址信息、标识信息等，以及各摄像装置的控制权限信息，即哪些移动终端拥有对该摄像装置的控制权限，该控制权限信息中记录了拥有对该摄像装置 2 的控制权限的移动终端的号码信息，以及实时发布信息数据库 31 中存储的音/视频信息同时，根据移动终端发送的请求信息产生控制指示信息并发送给控制装置 2 中的主处理单元 21。该实施例选用了图 3 所示的摄像装置与图 8 所示的控制装置。

将摄制的音/视频信息存储在信息数据库 31 中以后，用户可通过移动终端登录应用服务器来选择符合特定历史条件的由特定的摄像装置摄制的信息，非常方便。

另外，也可分别以图 6 所示的摄像装置与图 9 所示的控制装置代替图 10 中的摄像装置于控制装置，由此构成的摄像系统的第五实施例的结构示意图颗参见图 11。

信息处理模块 32 发布摄像装置 1 摄制的音/视频信息后，用户可以通过移动终端以上网或播打可视电话的方式登录应用服务器 3 查看摄制的音/视频信息，并根据需要对摄像装置 1 的摄像参数进行调整、控制。

上述图 7－图 11 所示实施例中的任一系统都可以是基于 IMS (IP Multimedia Subsystem，IP 多媒体子系统)的即时通信系统，控制装置 2 与应用服务器 3 之间通过 IP 网络通信，摄像系统中的各装置之间采用基于 SIP（Session Initiation Protocol，会话发起协议）的即时通信方式进行信息交互。在该即时通信系统中，若移动终端拥有对该摄像装置 2 的控制权限，则当移动终端登录应用服务器 3 时，移动终端上便可显示用于标识摄像装置 1 的图像，为了形象，该图像可以显示为摄像头。

在本发明的摄像系统中，由于各装置之间采用基于 SIP 的即时通信方式进行信息交互，因此，时效性高，互通性强，便于运营商的管理，可由此降低管理费用，并且，在该即时通信系统中，摄像装置 2 在移动终端上以一标识图像标识，便于移动终端用户的管理与控制。

用户通过移动终端激活浏览器上显示的摄像装置 1 的图像时，移动终端便向应用服务器 3 中的信息处理模块 32 发送获取摄像装置 1 的摄像参数的获取请求信息，该获取请求信息中携带有摄像装置 1 的标识信息；信息处理模块 32 根据标识信息从信息数据库 31 中获取摄像装置 1 的摄像参数，同时生成用于对各摄像参数进行修改的操作链接地址，移动终端用户便可以通过该操作链接地址修改摄像装置 1 的摄像参数，从而对摄像装置 1 进行远程控制。

图 12 所示为本发明摄像控制方法的一基本流程图，其中，包括以下步骤：

步骤 1、移动终端向应用服务器 3 发送对摄像装置 1 的摄像参数进行调整的请求信息，例如，请求将摄像焦距调整为 5m，该请求信息中携带了摄像装置 1 的标识信息，例如 XXX；

步骤 2、应用服务器 3 根据请求信息产生控制指示信息，并将该控制指示信息以及标识信息发送给控制装置 2；

步骤 3、控制装置 2 根据控制指示信息产生控制信号，对该控制信号进行调制、同时，根据标识信息查找到摄像装置 1，将调制后生成的控制信号地调制信号通过电源线发送给所述标识信息标识的摄像装置 1，利用该控制信号对摄像装置 1 的摄像参数进行相应调整。

用户可以通过移动终端远程控制摄像装置，极大地方便了用户。

在该实施例中，步骤 1 中，移动终端具体通过操作链接地址将请求信息发送给应用服务器 3 中的信息处理模块 32，具体可以通过基于 SIP 的即时消息方式发送请求信息。步骤 2 中，信息处理模块 31 根据请求信息产生控制指示信息，并将该控制指示信息以及标识信息发送给控制装置 2。具体的，信息处理模块 32 采用 SIP 将控制指示信息以及标识信息发送给控制装置 2 中的主处理单元 21。

另外，步骤 1 与步骤 2 之间还设有根据移动终端的号码信息判断该移动终端是否具有对摄像装置 1 的控制权限的操作，是，执行步骤 2；否则，结束操作。具体判断过程为：信息处理模块 32 接收到对摄像装置 1 的摄像参数进行调整的请求信息后，根据摄像装置的标识信息从信息数据库 31 中查询摄像装置 1 的控制权限信息中是否包含该移动终端的号码信息，是，则说明该移动终端拥有对摄像装置的控制权限，执行步骤 2；否则，结束操作。

通过对移动终端的鉴权，没有权限的移动终端无法对摄像装置进行控制，避免了一些恶意破坏事件的发生，提高了摄像系统的安全性。而采用基于 SIP 的即时通信方式对摄像装置 1 进行控制，操作方便，时效性高，方便了用护

与运营商。

图 13 所示为本发明摄像控制方法的第一实施例的流程图，该实施例可通过图 10 所示的摄像系统对摄像参数进行调整，步骤 1、步骤 2 与图 11 所述相同，步骤 3 包括：

步骤 311、主处理单元 21 根据控制指示信息产生控制信号，将该控制信号发送给太网信号处理单元 22；

步骤 312、以太网信号处理单元 22 将控制信号转换成以太网信号发送给第二 PLC 调制解调单元 23；

步骤 313、第二 PLC 调制解调单元 23 对以太网信号中的控制信号进行调制，将以太网信号中的控制信号加载到载波上，通过电源线传输给控制装置 1，对标识信息所标识的摄像装置 1 的摄像参数进行调整。

步骤 313 中，对标识信息所标识的摄像装置 1 的摄像参数进行调整的操作包括以下步骤：

步骤 3131、第二 PLC 调制解调单元 23 将控制信号的调制信号发送给标识信息所标识的摄像装置 1 中的第一 PLC 调制解调单元 124；

步骤 3132、第一 PLC 调制解调单元 124 将接收到的调制信号进行解调得到控制信号，将该控制信号转换为以太网信号发送给以太网适配单元 123；

步骤 3133、以太网适配单元 123 从以太网信号中获取控制信号，并利用该控制信号对摄像模块 11 的摄像参数进行调整。

图 14 所示为本发明摄像控制方法的第二实施例的流程图，该实施例可通过图 11 所示的摄像系统对摄像参数进行调整，步骤 1、步骤 2 与图 11 所述相同，步骤 3 包括：

步骤 321、主处理单元 21 根据控制指示信息产生控制信号，将该控制信号加载在 USB 总线信号中发送给第二 USB 信号以太网适配单元 24；

步骤 322、第二 USB 信号以太网适配单元 24 将 USB 总线信号转换成以太网信号发送给第二 PLC 调制解调单元 23；

步骤 323、第二 PLC 调制解调单元 23 对以太网信号中的控制信号进行调制，将以太网信号中的控制信号加载到载波上，通过电源线传输给控制装置 1，对标识信息所标识的摄像装置 1 的摄像参数进行调整。

步骤 323 中，对标识信息所标识的摄像装置 1 的摄像参数进行调整的操作包括以下步骤:

步骤 3421、第二 PLC 调制解调单元 23 将接收到的调制信号进行解调得到控制信号，将该控制信号转换为以太网信号发送给第一 USB 信号以太网适配单元 1203;

步骤 3422、第一 USB 信号以太网适配单元 1203 将以太网信号转换成 USB 总线信号发送给 USB 总线适配单元 1201，

步骤 3423、USB 总线适配单元 1201 从 USB 总线信号中获取控制信号，并利用该控制信号对摄像模块 11 的摄像参数进行调整。

另外，利用本发明提供的上述摄像系统，还可以从应用服务器 3 中获取音/视频信息。获取音/视频信息的操作包括:

移动终端通过操作链接地址向信息处理模块 32 发送获取摄像装置 1 摄制的音/视频信息的获取请求信息；信息处理模块 32 根据摄像装置 1 的标识信息 XXX 从信息数据库 31 中查询 XXX 摄像装置的控制权限信息中是否包含该移动终端的号码信息，是，则说明该移动终端拥有对摄像装置 1 的控制权限，有权获取该摄像装置 1 的历史信息，便从所述信息数据库中获取与摄像装置的标识信息相应的音/视频信息，发送给所述移动终端；否则，结束操作。移动终端向信息处理模块 32 发送获取摄像装置 1 摄制的音/视频信息的获取请求信息时，还可以发送请求获取的音/视频信息条件，比如，日期，则当移动终端通过鉴权后，信息处理模块 32 便会从信息数据库 31 中查询符合条件的音/视频信息并返回给移动终端。具体地，移动终端可以采用 SIP 发送获取请求信息；相应的，信息处理模块 32 也可以采用 SIP 将音/视频信息发送给移动终端。

用户通过移动终端可以从应用服务器获取由特定摄像装置摄制的符合特定条件的信息，极大地方便了用户。

最后所应说明的是：以上实施例仅用以说明本发明的技术方案,而非对本发明作限制性理解。尽管参照上述较佳实施例对本发明进行了详细说明，本领域的普通技术人员应当理解：其依然可以对本发明的技术方案进行修改或者等同替换，而这种修改或者等同替换并不脱离本发明技术方案的精神和范围。


11
摄像模块
PLC摄像适配模块
12

图 1

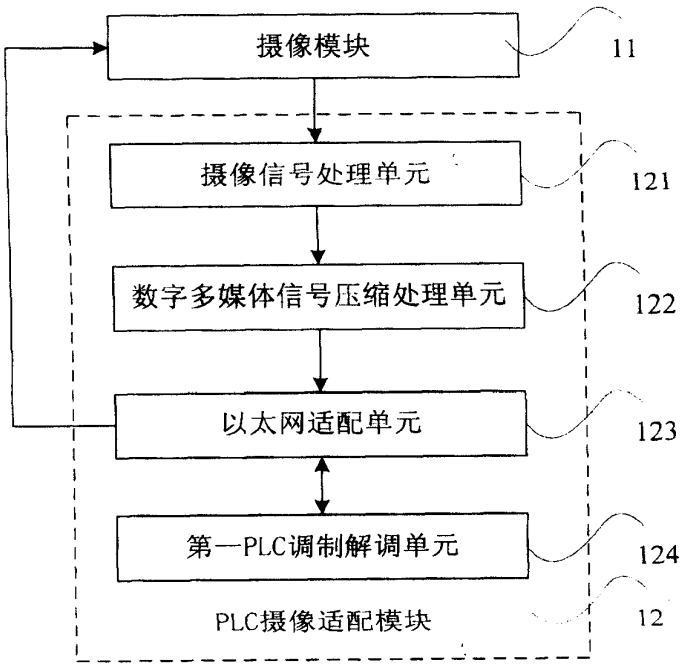

摄像模块
11
摄像信号处理单元
121
数字多媒体信号压缩处理单元
122
以太网适配单元
123
第一PLC调制解调单元
124
PLC摄像适配模块
12

图 2

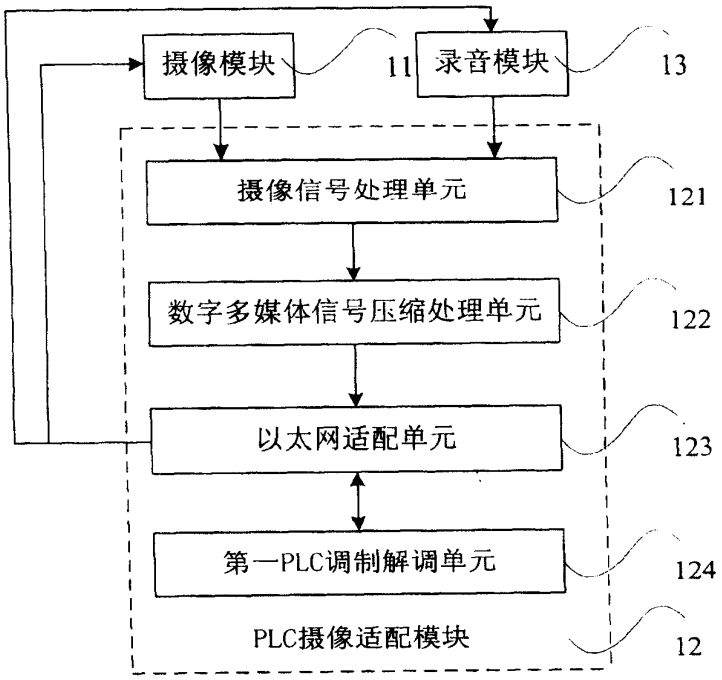

摄像模块
11
录音模块
13
摄像信号处理单元
121
数字多媒体信号压缩处理单元
122
以太网适配单元
123
第一PLC调制解调单元
124
PLC摄像适配模块
12

图 3

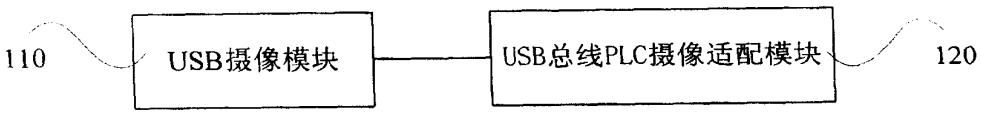

110
USB摄像模块
USB总线PLC摄像适配模块
120

图 4

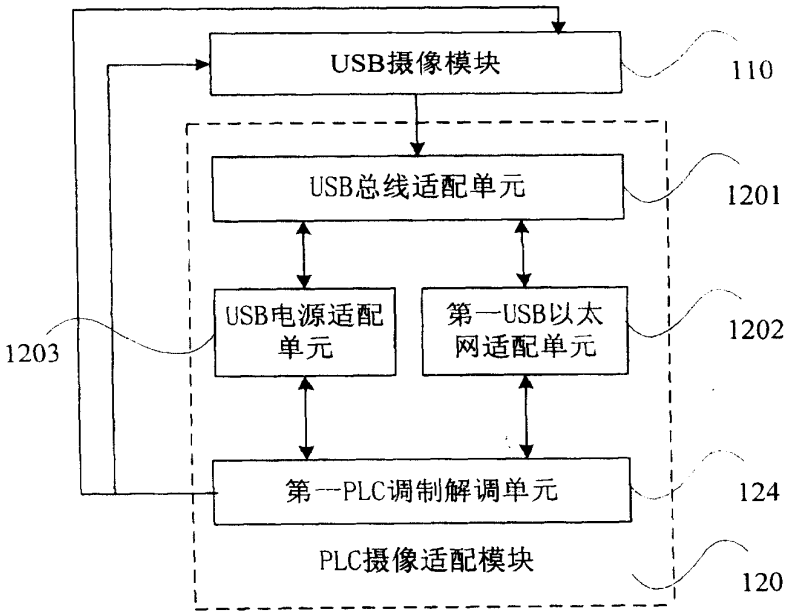

USB摄像模块
110
USB总线适配单元
1201
USB电源适配单元
1203
第一USB以太网适配单元
1202
第一PLC调制解调单元
124
PLC摄像适配模块
120

图 5

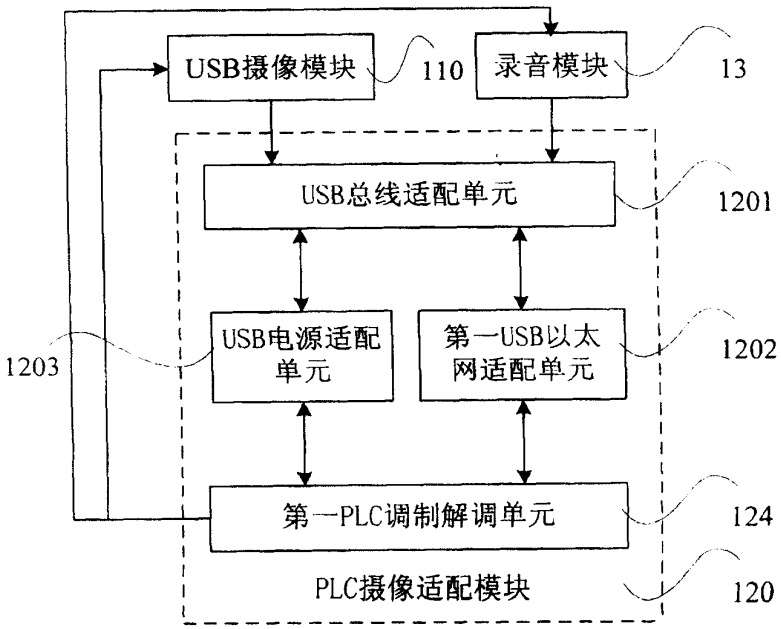

USB摄像模块
110
录音模块
13
USB总线适配单元
1201
USB电源适配单元
1203
第一USB以太网适配单元
1202
第一PLC调制解调单元
124
PLC摄像适配模块
120

图 6

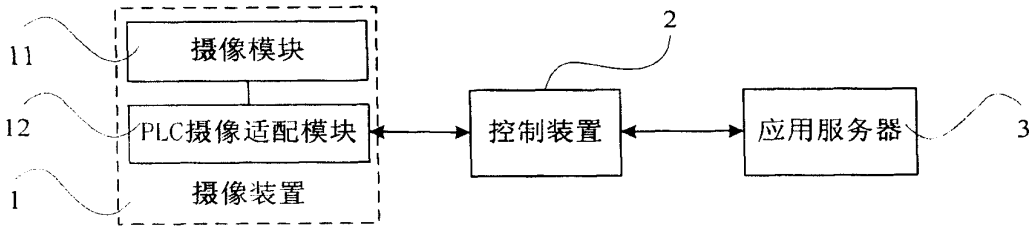

11
摄像模块
12
PLC摄像适配模块
1
摄像装置
2
控制装置
应用服务器
3

图 7

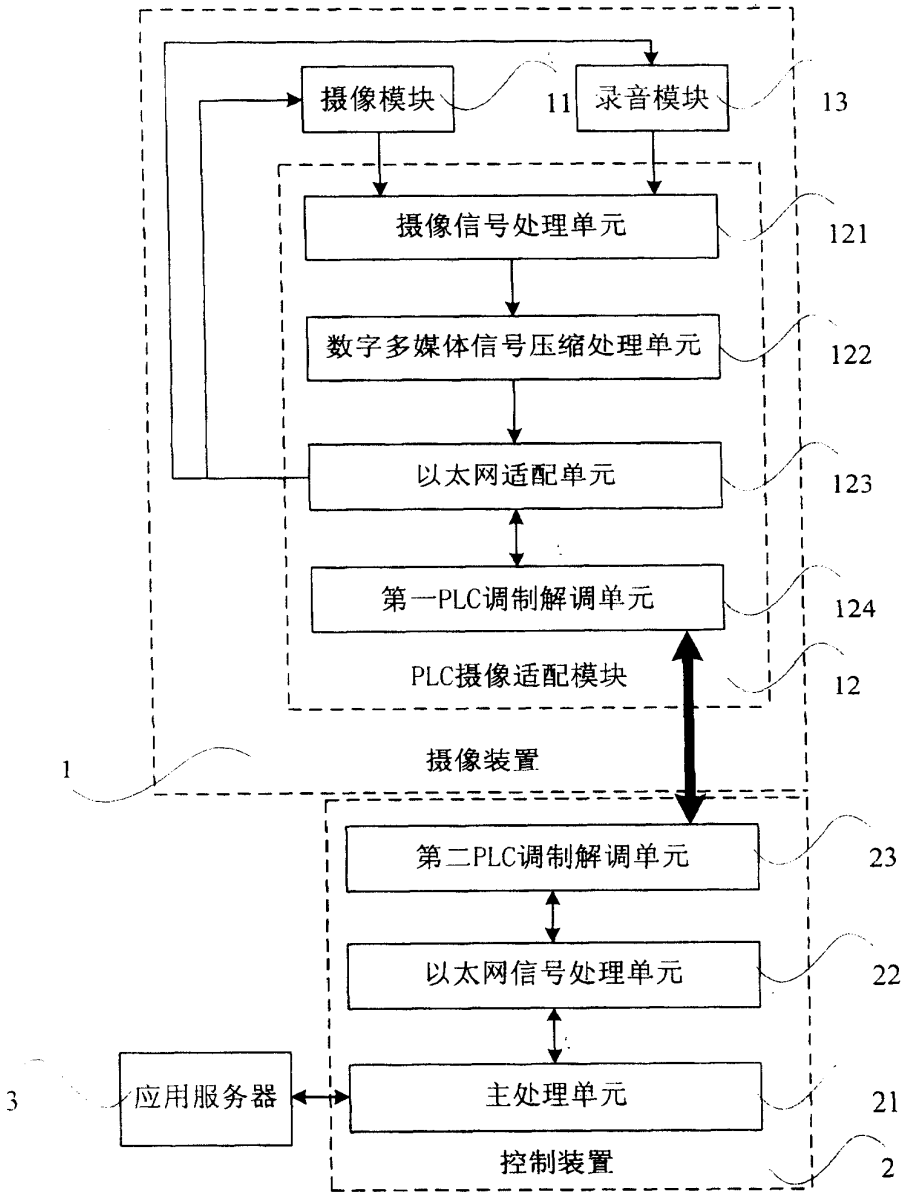

摄像模块
11
录音模块
13
摄像信号处理单元
121
数字多媒体信号压缩处理单元
122
以太网适配单元
123
第一PLC调制解调单元
124
PLC摄像适配模块
12
1
摄像装置
第二PLC调制解调单元
23
以太网信号处理单元
22
3
应用服务器
主处理单元
21
控制装置
2

图 8

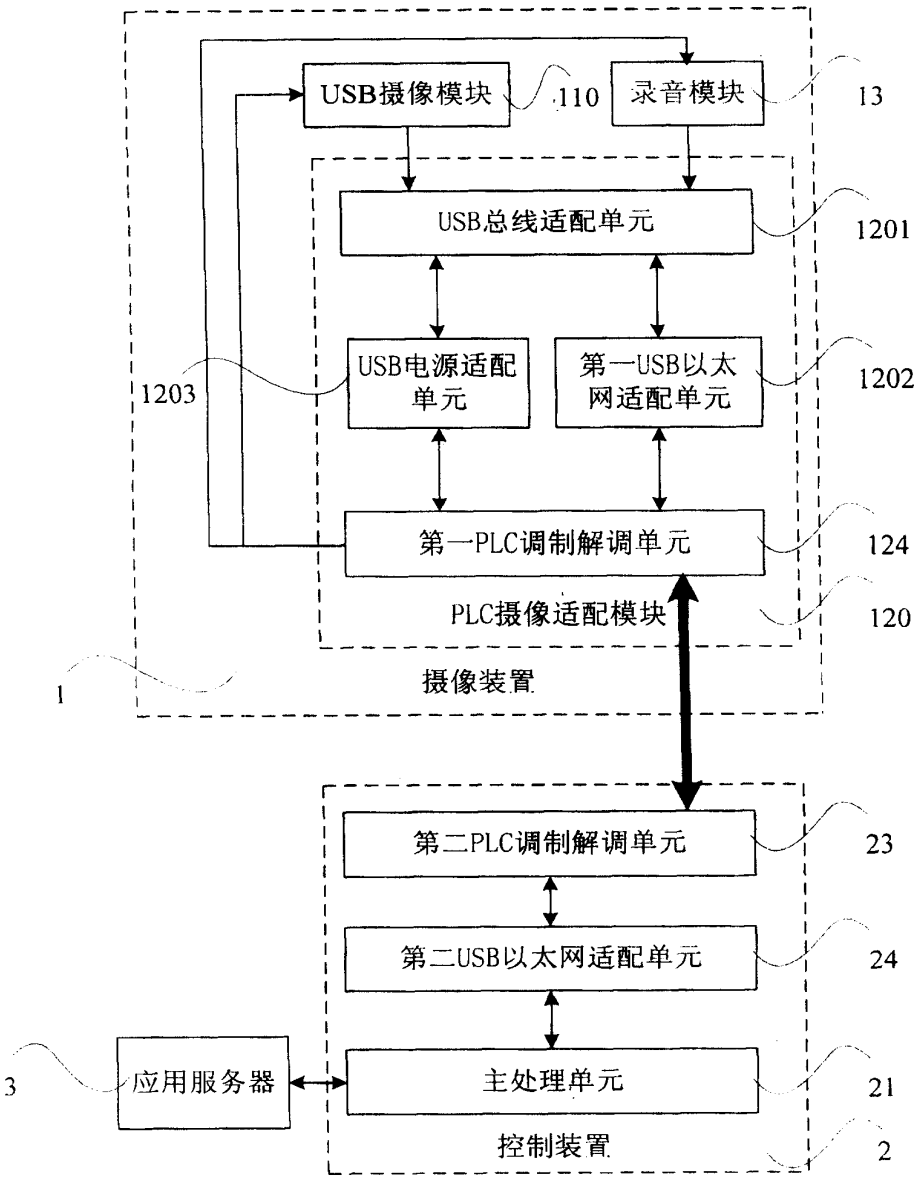

USB摄像模块
110
录音模块
13
USB总线适配单元
1201
USB电源适配单元
1203
第一USB以太网适配单元
1202
第一PLC调制解调单元
124
PLC摄像适配模块
120
摄像装置
1
第二PLC调制解调单元
23
第二USB以太网适配单元
24
应用服务器
3
主处理单元
21
控制装置
2

图 9

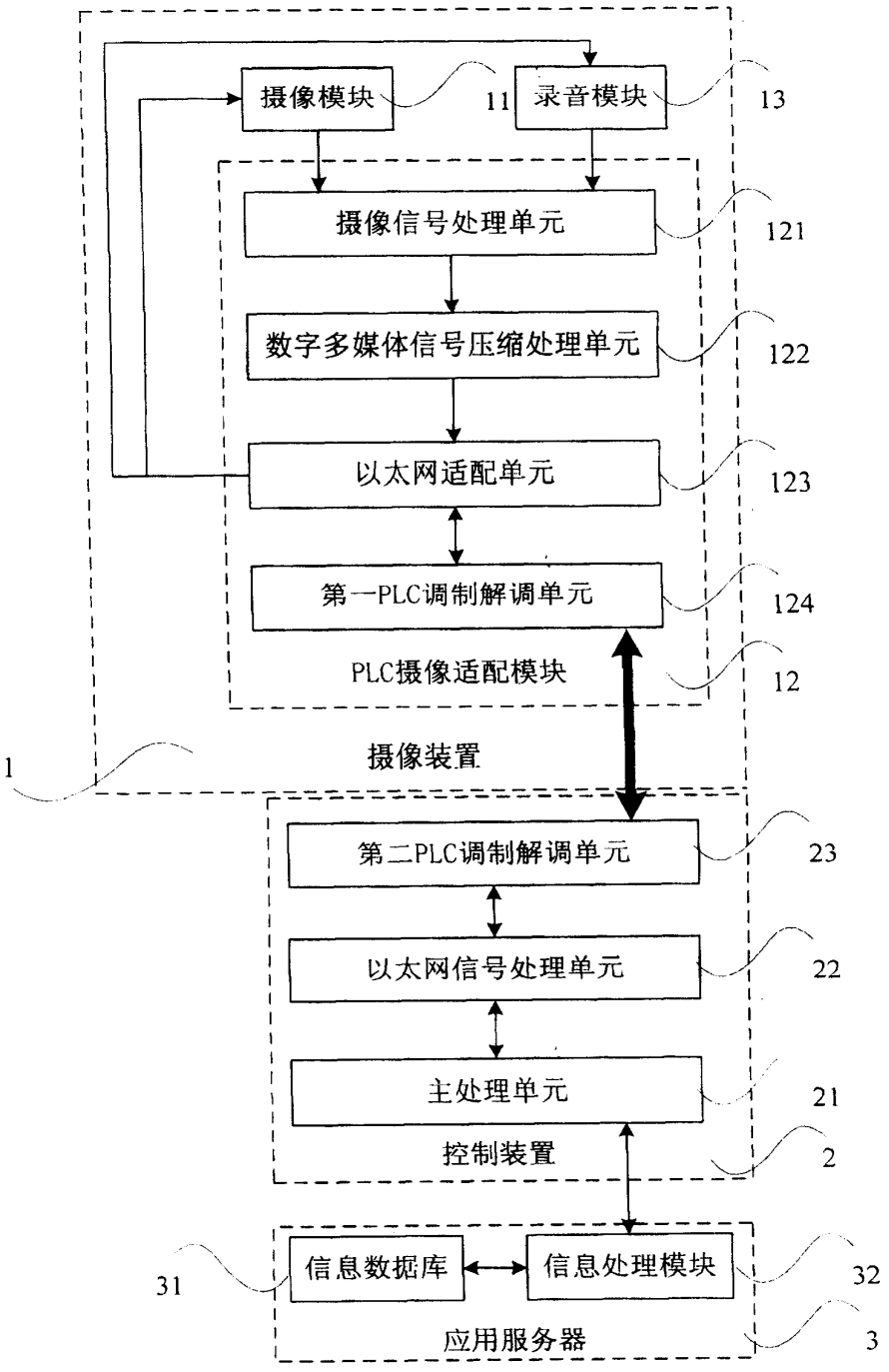

摄像模块
11
录音模块
13
摄像信号处理单元
121
数字多媒体信号压缩处理单元
122
以太网适配单元
123
第一PLC调制解调单元
124
PLC摄像适配模块
12
摄像装置
1
第二PLC调制解调单元
23
以太网信号处理单元
22
主处理单元
21
控制装置
2
信息数据库
31
信息处理模块
32
应用服务器
3

图 10

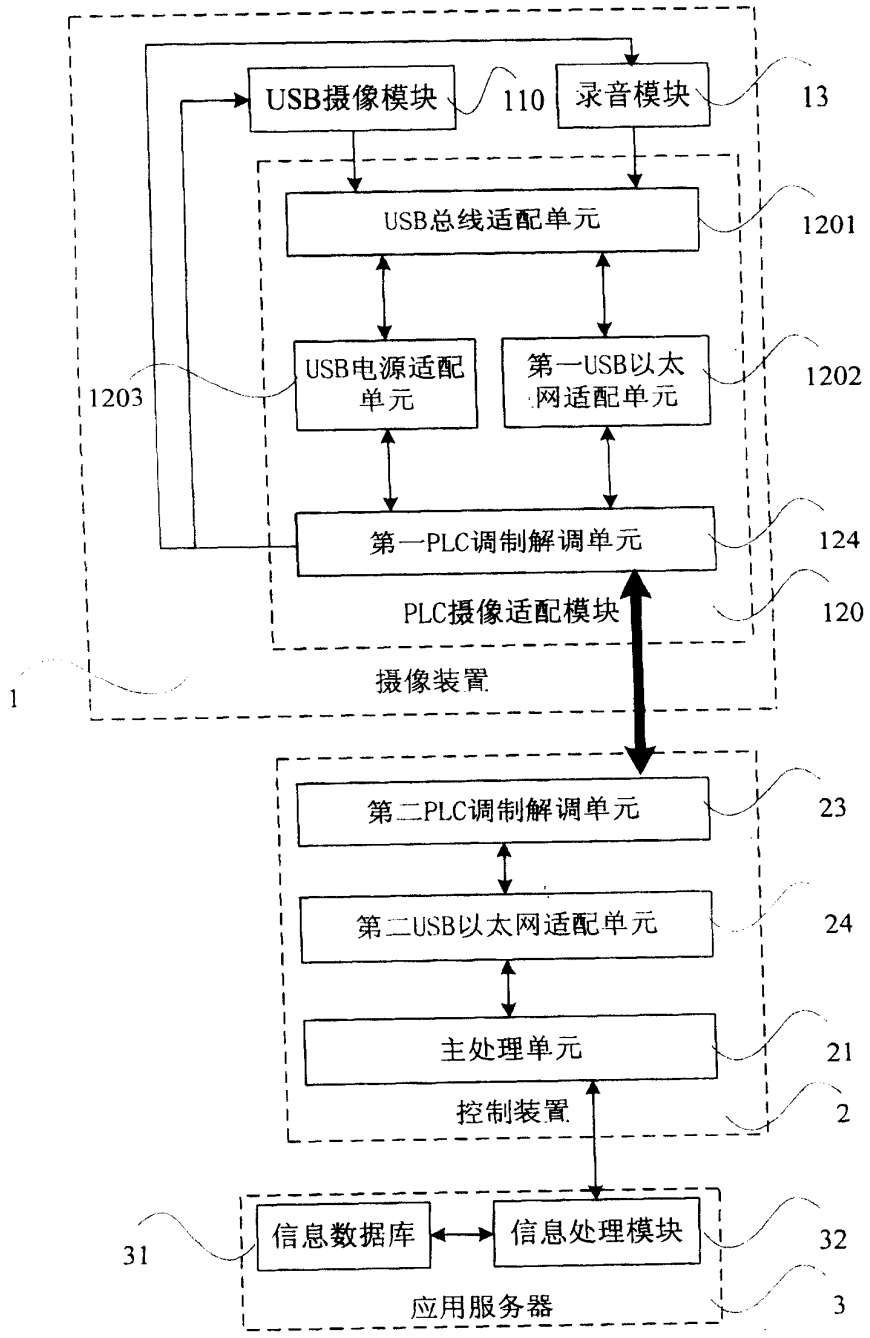

USB摄像模块
110
录音模块
13
USB总线适配单元
1201
USB电源适配单元
1203
第一USB以太网适配单元
1202
第一PLC调制解调单元
124
PLC摄像适配模块
120
摄像装置
1
第二PLC调制解调单元
23
第二USB以太网适配单元
24
主处理单元
21
控制装置
2
信息数据库
31
信息处理模块
32
应用服务器
3

图 11

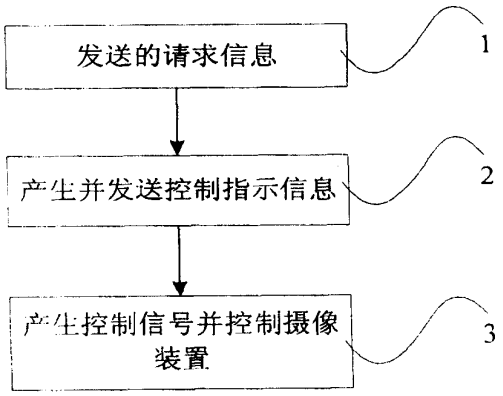

发送的请求信息
1
产生并发送控制指示信息
2
产生控制信号并控制摄像装置
3

图 12

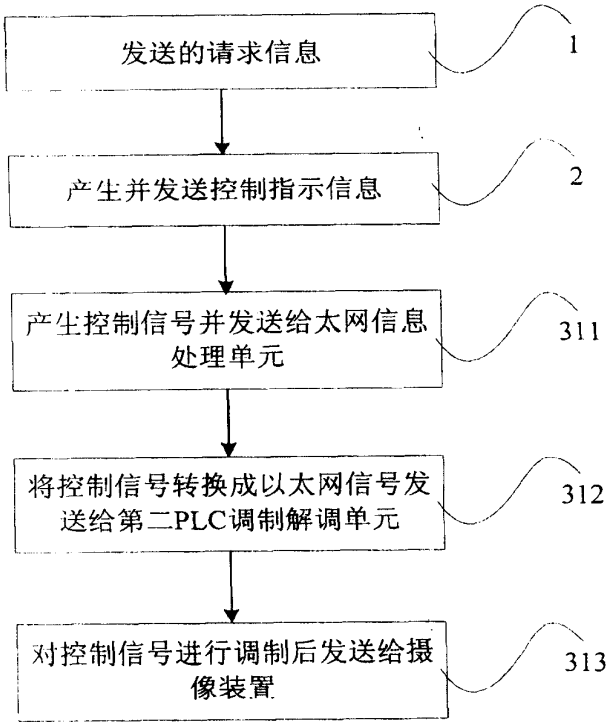

发送的请求信息
1
产生并发送控制指示信息
2
产生控制信号并发送给太网信息处理单元
311
将控制信号转换成以太网信号发送给第二PLC调制解调单元
312
对控制信号进行调制后发送给摄像装置
313

图 13

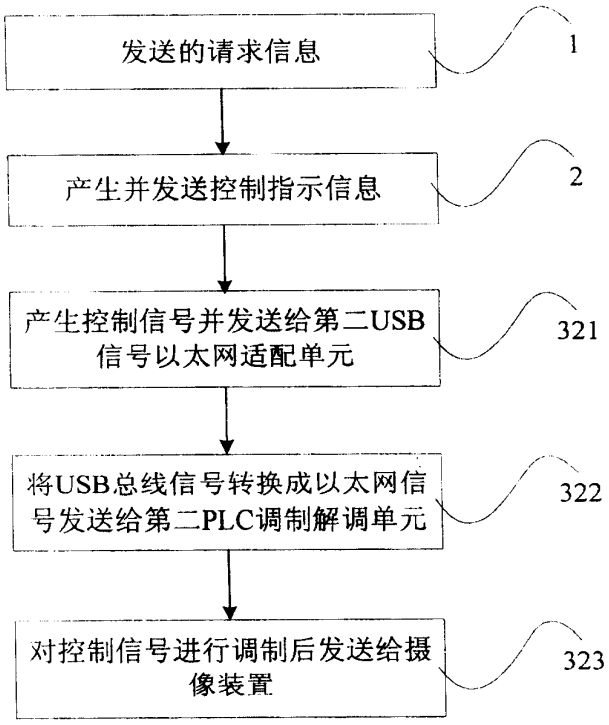

发送的请求信息
1
产生并发送控制指示信息
2
产生控制信号并发送给第二USB信号以太网适配单元
321
将USB总线信号转换成以太网信号发送给第二PLC调制解调单元
322
对控制信号进行调制后发送给摄像装置
323

图 14

Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Filer:	Joe McKinney Muncy/Idris Patterson
Attorney Docket Number:	2450/2455PUS1
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	95	95
Utility Search Fee	2111	1	310	310
Utility Examination Fee	2311	1	125	125
Pages:				
Claims:				
Claims in excess of 20	2202	8	30	240
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	770

Electronic Acknowledgement Receipt	
EFS ID:	11379680
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	60601
Filer:	Joe McKinney Muncy/Idris Patterson
Filer Authorized By:	Joe McKinney Muncy
Attorney Docket Number:	2450/2455PUS1
Receipt Date:	10-NOV-2011
Filing Date:	
Time Stamp:	14:26:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$770
RAM confirmation Number	826
Deposit Account	503828
Authorized User	MUNCY,JOE MCKINNEY
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2011-11-10-New-App-Trans-Actual.pdf	1746504 fcb1d875064d33660a81712f032c5f03aa6c3875	yes	45

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal of New Application	1	1
Fee Worksheet (SB06)	2	2
Specification	3	25
Claims	26	31
Abstract	32	32
Drawings-only black and white line drawings	33	43
Oath or Declaration filed	44	45

Warnings:

Information:

2		2011-11-10-IDS-Docs-Actual.pdf	183054 a4ff04b07820aa5d2c37d896e82e4b0fc58028e1e	yes	4

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal Letter	1	3
Information Disclosure Statement (IDS) Form (SB08)	4	4

Warnings:

Information:

3	Foreign Reference	2011-11-10-IDS-GB2475279A.pdf	373959 962299d0106aa3816227726a8d0afbd2dc39b1b3	no	15

Warnings:

Information:

4	Foreign Reference	2011-11-10-IDS-CN200610081578X.pdf	1625021 8b75dfb6620e9d5e182de020f6c5fe8957c63d4d	no	33

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	36422 7ae343cd4d309ec4a81bdc19bfafecbb26639dac	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	3964960	

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.

Electronic Acknowledgement Receipt	
EFS ID:	11379680
Application Number:	13293506
International Application Number:	
Confirmation Number:	1121
Title of Invention:	REMOTE INFORMATION COMMUNICATION SYSTEM AND LINKING METHOD THEREOF
First Named Inventor/Applicant Name:	Chi-Ming KUO
Customer Number:	60601
Filer:	Joe McKinney Muncy/Idris Patterson
Filer Authorized By:	Joe McKinney Muncy
Attorney Docket Number:	2450/2455PUS1
Receipt Date:	10-NOV-2011
Filing Date:	
Time Stamp:	14:26:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$770
RAM confirmation Number	826
Deposit Account	503828
Authorized User	MUNCY,JOE MCKINNEY
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2011-11-10-New-App-Trans-Actual.pdf	1746504 fcb1d875064d33660a81712f032c5f03aa6c3875	yes	45

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal of New Application	1	1
Fee Worksheet (SB06)	2	2
Specification	3	25
Claims	26	31
Abstract	32	32
Drawings-only black and white line drawings	33	43
Oath or Declaration filed	44	45

Warnings:

Information:

2		2011-11-10-IDS-Docs-Actual.pdf	183054 a4ff04b07820aa5d2c37d896e82e4b0fc58028e1e	yes	4

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal Letter	1	3
Information Disclosure Statement (IDS) Form (SB08)	4	4

Warnings:

Information:

3	Foreign Reference	2011-11-10-IDS-GB2475279A.pdf	373959 962299d0106aa3816227726a8d0afbd2dc39b1b3	no	15

Warnings:

Information:

4	Foreign Reference	2011-11-10-IDS-CN200610081578X.pdf	1625021 8b75dfb6620e9d5e182de020f6c5fe8957c63d4d	no	33

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	36422 7ae343cd4d309ec4a81bdc19bfafecbb26639dac	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	3964960	

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.