

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter.

- ☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

84956

OR

- ☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

Name	Registration Number	Name	Registration Number

Please recognize or change the correspondence address for the application identified in the attached transmittal letter to:

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

OR

- ☐ The address associated with Customer Number:

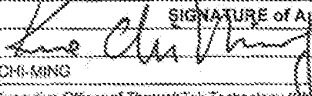
OR

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

I am the Applicant:

- ☐ Inventor or Joint Inventor
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

SIGNATURE of Applicant for Patent

Signature		Date	
Name	KUO, CHI-MING	Telephone	
Title and Company	Chief Executive Officer of ThroughTek Technology (Shenzhen) Co., Ltd.		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below.

- ☐ *Total of _____ 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.

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- ☒ 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 Joint Inventor

- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor

- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign

- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

SIGNATURE of Applicant for Patent

Signature

Name

KUO, CHI-MING

Date

3/1/2014

Telephone

+886-2-2653-5111

Title and Company

Chief Executive Officer of ThroughTek Co., Ltd

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below *.

- ☐ *Total of _____ 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.

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Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		
First Named Inventor/Applicant Name:		Hsin-Tai Wu		
Filer:		Chun-Ming Shih/Pin Pin Huang		
Attorney Docket Number:		TUTK-1405-003US		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				730

Electronic Acknowledgement Receipt	
EFS ID:	21430582
Application Number:	14616478
International Application Number:	
Confirmation Number:	9534
Title of Invention:	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
First Named Inventor/Applicant Name:	Hsin-Tai Wu
Customer Number:	84956
Filer:	Chun-Ming Shih/Pin Pin Huang
Filer Authorized By:	Chun-Ming Shih
Attorney Docket Number:	TUTK-1405-003US
Receipt Date:	06-FEB-2015
Filing Date:	
Time Stamp:	18:36:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$730
RAM confirmation Number	5703
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS-TUTK1405003US.pdf	1068901	no	6
			8076b83c2d595050ad9ea65da4b7a393cc0bcb27		
Warnings:					
Information:					
2		FILE-TUTK1405003US.pdf	2930304	yes	30
			db0f9083f3c76c2142a982565e8f3d53a3bcded0		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	13	
	Claims		14	17	
	Abstract		18	18	
	Drawings-only black and white line drawings		19	26	
	Oath or Declaration filed		27	28	
	Power of Attorney		29	30	
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	35070	no	2
			acebc8ad39283da660dbe697f406e37cebcd1afe		
Warnings:					
Information:					
Total Files Size (in bytes):			4034275		

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.

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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	TUTK-1405-003US
		Application Number	
Title of Invention	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--

Inventor Information:

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Hsin-Tai		Wu		
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service					
City	TAIPEI CITY	Country of Residence	i	TW	
Mailing Address of Inventor:					
Address 1		9F, No.364, Sec. 1, Nangang Rd., Nangang Dist.,			
Address 2					
City	TAIPEI CITY	State/Province			
Postal Code	115	Country	i	TW	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	84956		
Email Address	hdsipr@gmail.com	Add Email	Remove Email

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	TUTK-1405-003US
		Application Number	
Title of Invention	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		

Application Information:

Title of the Invention	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		
Attorney Docket Number	TUTK-1405-003US	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	8	Suggested Figure for Publication (if any)	2

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One: ☒ Customer Number ☐ US Patent Practitioner ☐ Limited Recognition (37 CFR 11.9)			
Customer Number	84956		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.			
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	TUTK-1405-003US
		Application Number	
Title of Invention	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		
This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).			
			Remove
Application Number	Country i	Filing Date (YYYY-MM-DD)	Priority Claimed
103134585	TW	2014-10-03	☒ Yes ☐ No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices
If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	TUTK-1405-003US
		Application Number	
Title of Invention	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		

Applicant 1	
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.	
Remove	

☒ Assignee	☐ Legal Representative under 35 U.S.C. 117
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:	

Name of the Deceased or Legally Incapacitated Inventor :	
If the Assignee is an Organization check here. ☒	
Organization Name	ThroughTek Technology (ShenZhen) Co., Ltd.

Mailing Address Information:			
Address 1	Room 201, Chaohui Building, No.173 Baohua Rd.,		
Address 2	Longhua Street, Longhua New District,		
City	Shenzhen	State/Province	
Country ⁱ	CN	Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.	Add
--	---------------------

Applicant 2	
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.	
Remove	

☒ Assignee	☐ Legal Representative under 35 U.S.C. 117
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:	

Name of the Deceased or Legally Incapacitated Inventor :	
--	--

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	TUTK-1405-003US
		Application Number	
Title of Invention	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		

If the Assignee is an Organization check here. ☒			
Organization Name	ThroughTek Co., Ltd.		
Mailing Address Information:			
Address 1	9F, No.364, Sec. 1, Nangang Rd., Nangang Dist.,		
Address 2			
City	Taipei City	State/Province	
Country ⁱ	TW	Postal Code	115
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button. Add			

Signature:Remove

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications					
Signature	/Jimmy Shih/			Date (YYYY-MM-DD)	2015-02-06
First Name	Chun-Ming	Last Name	Shih	Registration Number	64041
Additional Signature may be generated within this form by selecting the Add button. Add					

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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.

SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This non-provisional application claims priority claim under 35 U.S.C. §119(a) on Taiwan Patent Application No. 103134585 filed October 03, 2014, the entire contents of which are incorporated herein by reference.

BACKGROUND

Technical Field

[0002] The present disclosure relates to a searching system, searching method, and devices and, more particularly, to a searching system, searching method, and P2P devices for a P2P device community.

Description of Related Art

[0003] A central server functioning as a storage, provider, exchanging, or searching of data is desirable for conventional network data and multimedia storage systems. The central server, however, has a fixed processing performance and storage capacity and therefore is not adapted to fit into various requirements, either causing the systems to perform low in network transmission or leading to excess resources.

[0004] Referring to FIG. 1 there is shown a schematic view of a searching system for network devices in prior arts. The centralized network system includes a central server 10 provided with a file data 15, and the file data includes an indexed data 151 and a content data 153. When any one of the user's devices 171, 172, 173, 174, 175, and 176 requests data, the user's device communicates with the central server 10 so as to download or upload the file data 15 stored therein.

[0005] The central server 10 is provided with a search engine 11, and the search engine 11 creates the indexed data 151 corresponding to the content data 153. When users request to search the content data 153, the user's devices 171~176 request a search request to the central server 10, and the search engine 11 of the central server 10 searches the indexed data 151 based on the search criteria requested by the user's devices 171~176 and generates a search result. The search result is then

returned to the user's devices 171~176 by the central server 10.

[0006] A P2P (peer to peer) device community has been employed to solve the limitation on the utilization of resources and performance for the central server 10 in prior arts. It is desirable that the data searching in the P2P device community should be further improved, for example, such as increasing searching efficiency and speed while effectively improving searching accuracy.

SUMMARY

[0007] An object of the present disclosure is to provide a novel data searching system and searching method for a P2P device community so as to effectively increase the efficiency and speed of data searching.

[0008] To achieve the aforementioned object, the present disclosure provides a searching system for a P2P device community. The searching system receives a search request sent from at least one user's device and includes: at least one P2P device community, each of the P2P device communities includes at least one P2P device; at least one online server connecting to the P2P device community, each of the online servers includes a topology data table, the topology data table being recorded with a link data of between each of the P2P devices of the P2P device community; and at least one content management server connecting to the P2P device community and the online server, respectively, each of the content management servers includes a search engine, an index database, and a user's device management unit, the index database being recorded with an indexed data of each of the P2P devices of the P2P device community, the user's device management unit receiving the search request requested by a user's device, the search engine searching the index database to generate a search result based on the search request and returning the search result to the user's device.

[0009] To achieve the aforementioned object, the present disclosure further provides a searching method for a P2P device community. The searching method is applicable to a searching system for a P2P device community, in which the searching system includes at least one P2P device, an online server, and a content management server, and the searching method includes the steps of: recording a link data of each of the P2P devices to generate a topology data table and storing the topology data table in the online server; creating an indexed data of each of the P2P devices and storing the indexed data in an index database of the content management server; receiving by the content management server a search request sent from a user's device and generating a search result by

searching the index database based on the search request; and returning the search result to the user's device.

[0010] In one embodiment of this disclosure, each of the P2P devices includes a weighted data, and the content management server is provided with a sorting algorithm module creating the weighted data based on the link data associated with the P2P devices, the search result being sorted by the order of the weighted data of the P2P devices so as to generate a sorted search result.

[0011] In one embodiment of this disclosure, the searching system further includes a weight look-up table recorded with the weighted data of each of the P2P devices, in which the weight look-up table may be stored in the content management server, the online server, or a storage device.

[0012] In one embodiment of this disclosure, the sorting algorithm module performs a function operation based on the search result and the weighted data corresponding to the P2P devices to generate a weighted search result, and the weighted search result is sorted by the order of the weighted search results so as to generate a weighted and sorted search result.

[0013] In one embodiment of this disclosure, the user's device management unit includes a user-charge module. Upon confirming that the user's device has been charged, the content management server provides the search result, or the online server provides at least one of the link data of the P2P devices, to the user's device.

[0014] In one embodiment of this disclosure, the user-charge module receives a user's identity data, a pricing data, a charging-mode data, or a payment confirmation data, all of which are sent from the user's device.

[0015] In one embodiment of this disclosure, the indexed data can be created by the P2P devices themselves, or the indexed data can be created by the content management server gathering from the P2P devices via a network gathering module.

[0016] In one embodiment of this disclosure, each of the P2P devices includes at least one file data. When the user's device selects the P2P device to be connected based on the search result, the online server provides the link data of the P2P device, and the user's device connects to the selected P2P device based on the link data and downloads the file data.

[0017] In one embodiment of this disclosure, the user's device selects the P2P device to be connected based on the search result, and the online server provides the link data of the P2P device, so

as for the user's device to connect to the selected P2P device based on the link data.

[0018] In one embodiment of this disclosure, the P2P device includes: at least one file data, each of the file data includes an indexed data; and a control unit controlling the file data being an open state or a hidden state.

[0019] In one embodiment of this disclosure, the searching method further includes the steps of: the content management server creating a weighted data associated with each of the P2P devices based on the link data of the P2P devices; performing a function operation based on the search result and the weighted data corresponding to the P2P devices to generate a weighted search result; and sorting the weighted search result based on the order of the weighted search results to generate a weighed and sorted search result.

[0020] In one embodiment of this disclosure, the searching method further includes the steps of: recording the weighted data of the P2P devices to generate a weight look-up table; and storing the weight look-up table in the content management server, the online server, or a storage device.

[0021] In one embodiment of this disclosure, the searching method further includes the steps of: providing the search result by the content management server, or providing at least one link data of the P2P devices by the online server, to the user's device after the content management server confirming that the user's device has been charged.

[0022] In one embodiment of this disclosure, the confirmation of payment from the user's device by the user-charge module includes the steps of: confirming a user's identity data of the user's device; receiving a charge-mode data sent from the user's device; confirming a payment confirmation data sent from the user's device; and recording a pricing data required for connection or downloading requested by the user's device.

[0023] In one embodiment of this disclosure, the searching method further includes the step of: controlling a file data of each of the P2P devices being an open state or a hidden state.

[0024] In one embodiment of this disclosure, the searching method further includes the steps of: selecting the P2P device to be connected by the user's device based on the search result; providing the link data of the P2P device to the user's device by the online server; and connecting to the selected P2P device and downloading the file data by the user's device based on the link data.

[0025] In one embodiment of this disclosure, the searching method further includes the steps of:

selecting the P2P device to be connected by the user's device based on the search result; providing the link data of the P2P device to the user's device by the online server; and connecting to the selected P2P device by the user's device based on the link data.

BRIEF DESCRIPTION OF THE DRAWING

[0026] An illustrative embodiment of the present disclosure will be further discussed with reference to the accompanying drawing, in which:

[0027] FIG. 1 is a schematic view of a searching system for network devices in prior arts;

[0028] FIG. 2 is a schematic view of a searching system for a P2P device community and the P2P devices in accordance with an embodiment of the present disclosure;

[0029] FIG. 3 is a schematic view of a searching system for a P2P device community and the P2P devices in accordance with another embodiment of the present disclosure;

[0030] FIG. 4 is a schematic view of a searching system for a P2P device community and the P2P devices in accordance with another embodiment of the present disclosure;

[0031] FIG. 5 is a flowchart of the searching method for a P2P device community in accordance with an embodiment of the present disclosure;

[0032] FIG. 6 is a flowchart of the searching method for a P2P device community in accordance with another embodiment of the present disclosure;

[0033] FIG. 7 is a flowchart of the searching method for a P2P device community in accordance with another embodiment of the present disclosure; and

[0034] FIG. 8 is a flowchart of payment confirmation of the searching method for a P2P device community in accordance with the present disclosure.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0035] In order to further understand the present disclosure, preferred embodiments are to be described such that variations and alterations thereto are readily apparent to a person skilled in the art. However, it will be realized that the scope of this disclosure is not confined or restricted to the details

of the embodiments described below. Identical reference numerals always designate the same elements throughout all the figures of the drawing.

[0036] First, referring to FIG. 2 there is shown a schematic view of a searching system for a P2P device community and the P2P devices in accordance with an embodiment of the present disclosure. As shown, the searching system of the P2P device community includes: a P2P device community 40, an online server 20, and a content management server 30. The online server 20 connects to the content management server 30 and the P2P device community 40, respectively, and the content management server 30 also connects to the P2P device community 40 and the online server 20, respectively. There exist multiple P2P devices 41, 42, 43, 44, 45, 46 within the P2P device community 40. The online server 20 is provided with a topology data table 21. The content management server 30 is provided with a search engine 31, an index database 33, and a user's device management unit 35.

[0037] The topology data table 21 of the online server 20 is mainly recorded with a link data 49 between each of the P2P devices 41~46 within the P2P device community. The link data 49 refers to the connection relationship between the P2P devices 41~46, which includes, but is not limited to, the connection structure, connection data and/or locations of connection.

[0038] The index database 33 of the content management server 30 records and manages all the indexed data 4113, 4213, 4313, 4413, 4513, and 4613 of the P2P devices 41~46 within the P2P device community 40. The indexed data 4113~4613 can be provided to the content management server 30 voluntarily by the P2P devices 41~46, or the indexed data 4113~4613 can be obtained by the content management server 30 gathering from the P2P devices 41~46 via a network gathering module (e.g., a network crawler), and recording them in the index database 33.

[0039] The searching system for the P2P device community 40 of this disclosure can receive a search request 351 requested and sent from one or more user's devices 51, 52, 53, 54, 55, and 56. The user's device management unit 35 records and manages the user's devices 51~56 (or referred to as each user). When a user requests a data search, the user can use the user's device 51, 52, 53, 54, 55, or 56 to connect to the user's device management unit 35 of the content management server 30 and/or the online server 20, and request the search request 351 to the user's device management unit 35 of the content management server 30 (as shown in dashed lines). The search engine 31 of the content management server 30 then search the index database 33 based on the search request 351 so as to generate a search result 311. The search result 311 is returned to the user's devices 51, 52, 53, 54, 55,

and 56 who requested the search request 351. Based on the search result 311, the user's devices 51~56 can obtain the link data 49 or locations of the connection of the P2P devices 41~46 within the P2P device community 40 via the topology data table 21 of the online server 20, and select from the P2P devices 41, 42, 43, 44, 45, and/or 46 the device to communicate with and to obtain data from there.

[0040] In one embodiment, each of the P2P devices 41~46 is respectively provided with at least one file data 411, 421, 431, 441, 451, or 461, and each of the file data 411~461 further includes a content data 4111, 4211, 4311, 4411, 4511, 4611 and/or an indexed data 4113, 4213, 4313, 4413, 4513, 4613. The file data 411~461 stored in the P2P devices 41~46 may be at least, but not limited to, one picture, video, music, journal paper and/or statistic data. The user's devices 51~56 can, after connecting to the P2P devices 41~46 selected, link or download the file data 411~461 selected, thereby achieving the object to fast search important data (i.e., file data 411~461) within the P2P device community 40.

[0041] The user's devices 51~56 may be but not limited to a smartphone, a tablet PC, a portable electronic and/or a computer system.

[0042] Further, referring to FIG. 3 there is shown a schematic view of a searching system for a P2P device community and the P2P devices in accordance with another embodiment of the present disclosure. The difference from the embodiment shown in FIG. 2 lies in: each of the P2P devices 41~46 in FIG. 3 is respectively provided with a weighted data 413, 423, 433, 443, 453, and 463, and the content management server 30 is further provided with a sorting algorithm module 32, in which the sorting algorithm module 32 creates the weighted data 413, 423, 433, 443, 453, and 463 of the respective P2P devices 41~46 based on the link data 49 of the P2P devices 41, 42, 43, 44, 45, and 46.

[0043] When a user needs to perform data searching, the user may request a search request 351 to the user's device management unit 35 of the content management server 30 via the user's device 51, 52, 53, 54, 55 or 56. The search engine 31 of the content management server 30 searches each of the indexed data 4113, 4213, 4313, 4413, 4513, and 4613 within the P2P device community 40 through the topology data table 21 of the online server 20, or the search engine 31 directly searches the index database 33 based on the search criterion of the search request 351 so as to generate a search result 311. The sorting algorithm module 32 sorts the search result 311 by the order of the weighted data 413, 423, 433, 443, 453, and 463 of the P2P devices 41~46 so as for the search engine 31 to further generate a sorted search result 335, as shown in dashed lines. The sorted search result 335 is returned to the

user's device 51, 52, 53, 54, 55, or 56 who requested the search request 351 via the user's device management unit 35, providing the user's devices 51~56 to select the requested file data 411~461, the content data 4111~4611 and/or the P2P device 41~46 to be connected, thereby achieving the object of fast searching for the most important data within the P2P device community 40.

[0044] In the embodiments of the present disclosure, the order of the weighed data 413~463 is used to sort the search result 311; however, it should not be construed as a limitation. Other criteria which provide comparison, for example, the search speed, may be used to sort the search result 311.

[0045] In one embodiment, the online server 20 or the content management server 30 may be provided with a weight look-up table 25, in which the weight look-up table 25 is recorded with the weighted data 413, 423, 433, 443, 453, 463 corresponding to each of the P2P devices 41, 42, 43, 44, 45, 46.

[0046] Further, in one embodiment, when the user and/or the user's device 51, 52, 53, 54, 55, or 56 requests a search request 351 to the user's device management unit 35 of the content management server 30, the search engine 31 of the content management server 30 can search each of the indexed data 4113, 4213, 4313, 4413, 4513 and 4613 within the P2P device community 40 based on the topology data table 21 of the online server 20. Since each of the P2P devices 41~46 may include one or more file data 411~461, or each of the indexed data 4113~4613 may include one or more content data 4111~4611 represented thereto, each of the indexed data 4113~4613 may generate one or more search results 311. A function operation is performed on the weighted data 413, 423, 433, 443, 453, and 463 corresponding to the P2P devices 41~46, a weighted search result 337, which represents the order of each of the search results 311, is generated. A sorting operation is performed on all the weighted search results 337 by the order of the weighted search results 337 and a weighted and sorted search result 339 is generated. The weighted and sorted search result 339 is then returned to the user's device 51~56 who requested the search request 351 via the user's device management unit 35, thereby achieving the object of fast searching for the most important data within the P2P device community 40.

[0047] In one embodiment, the above-mentioned function operation may be, but is not limited to, for example, a multiplication, an addition, a geometric progression, a PageRank, an HITS and/or a TrustRank, which can be performed to generate the weighted and sorted search result 339 representing each of the search results 311.

[0048] In one embodiment, the index database 33 may be used to record and store the indexed

data 4113~4613 of the P2P devices 41~46, in which the indexed data 4113~4613 may include, but not limited to, at least one metadata, at least one tag, at least one XML, at least one RSS, at least one database and/or at least one webpage.

[0049] In one embodiment, the user's device management unit 35 may be provided a user-charge module 355. After the user's devices 51~56 have made the payment process to the user's device management unit 35 of the content management server 30 and the process is confirmed, the content management server 30 is allowed to provide the search result 311, the sorted search result 335, the weighted search result 337, the weighted and sorted search result 339 and/or the online server 20 is allowed to provide the link data 49 of the P2P devices 41~46 to the user's devices 51~56.

[0050] In one embodiment, the indexed data 4113~4613 can be created by the search engine 31 based on the content data 4111~4611 of the P2P devices 41~46, or the indexed data 4113~4613 can be created by the P2P devices 41~46 themselves and the P2P devices 41~46 then voluntarily provide the indexed data to the content management server 30 for recording. Alternatively, the content management server 30 utilizes a network gathering module, for example, a network crawler, to gather data from the P2P devices 41~46 and record the data in the index database 33.

[0051] In one embodiment, there may be one or more online servers 20, content management servers 30 and/or P2P device communities 40, as shown in the dashed lines, to increase the number of objects to be searched or the searching speed.

[0052] In one embodiment, the P2P devices 41~46 are respectively provided with the control units 415, 425, 435, 445, and 465 and the file data 411, 421, 431, 441, 451, and 461. The file data 411~461 respectively include a content data 4111~4611. The control units 415~465 control and configure the file data 411~461 and the content data 4111~4611 of the P2P devices 41~46 as an open state or a hidden state. If configured as an open state, the search engine 31 is allowed to create the indexed data 4113~4613 to the content data 4111~4611 of the P2P devices 41~46, and the online server 20 is allowed to provide the link data 49 of the P2P devices 41~46 to the user's devices 51~56; if configured as a hidden state, the search engine 31 is not allowed to create the indexed data 4113~4612 to the content data 4111~4611 of the P2P devices 41~46, and the online server 20 is not allowed to provide the link data 49 of the P2P devices 41~46 to the user's devices 51~56.

[0053] In one embodiment, the user-charge module 355 includes a user's identity data 3551 for recording the identity or access permission, for example, the registered user, the unregistered user, the

user who pays for the service, or the user who uses the service free of charge, of the user's devices 51~56. The user-charge module 355 also records a charge-mode data 3553 allowing the user's devices 51~56 to select the payment plan which may be, for example, a monthly installment payment mode or pre-payment mode, where the pre-payment mode may be, for example, a down payment as the first installment and redeposit after no balance.

[0054] The user-charge module 355 also records a payment confirmation data 3555 which may be, for example, an SSL-based payment confirmation cooperating with a bank. The user-charge module 355 may be in communication with a bank to perform the payment checking: if the payment from the user's devices 51~56 has been confirmed, the user's device unit 35 allows the user's devices 51~56 to use the services; on the contrary, if the payment has not gone through, the user-charge module 355 provides the error messages to the user's devices 51~56 and requests payment confirmation before providing services. The user's devices 51~56 may communicate with the user-charge module 355 to perform online payment process through an application program or an exclusive webpage. Alternatively, the user-charge module 355 may record the link data 49 selected by the user's devices or the downloaded file data 411~461 and compute a charging (plan) data 3557 based on the amount of data transmission, the transmission bandwidth and/or the harddisk space being used. For example, the higher amount of data transmission, the higher the transmission bandwidth and the larger the harddisk space being used, and thus the higher the charge to the user's devices. The user's device management unit 35 may stop providing the file data when the amount of the recorded data has exceeded the predetermined baseline for the charge-mode data 3553.

[0055] Moreover, referring to FIG. 4, there is shown a schematic view of a searching system for a P2P device community and the P2P devices in accordance with another embodiment of the present disclosure. This embodiment differs from the embodiment shown in FIG. 3 in that the weight look-up table 25 may be provided in the online server 20, the content management server 30, and/or an independent storage device 60.

[0056] Referring to FIG. 5, there is shown a flowchart of the searching method for a P2P device community in accordance with an embodiment of the present disclosure. With reference to FIG. 3, the searching method of the present disclosure is applicable to a searching system of a P2P device community 40, and the searching system is provided with multiple P2P devices 41~46, an online server 20, and a content management server 30. The searching method includes the following steps. First, record the link data 49 of each of the P2P devices 41~46 within the P2P device community 40 in the

topology data table 21 of the online server 20, as shown in step S401. Next, as shown in step S402, create indexed data 4113~4613 corresponding to each of the P2P devices 41~46 within the P2P device community 40 and record the indexed data 4113~4613 in the index database 33 of the content management server 30. As shown in step S403, determine whether a user requests a search request 351 to the user's device management unit 35 of the content management server 30 from any of the user's devices 51~56? If no, then go back to the step S401; otherwise, if yes, then proceed to step S404. In the step S404, the search engine 31 of the content management server 30 searches the index database 33 based on the search request 351 and generates a search result 311. As shown in step S405, the content management server 30 returns the search result 311 to the user's devices 51~56 who requested the search request 351.

[0057] In one embodiment, the search method further includes the following steps. In step S406, the users or the user's device 51~56 select the P2P devices 41~46 to be connected or downloaded and/or the file data 411~461, and the online server 20 provides the link data 49 of each of the P2P devices 41~46 based on the search result 311. In step S407, the user's devices 51~56 connect to the P2P devices 41~46 selected and/or download the file data 411~461.

[0058] Referring to FIG. 6 with reference to FIG. 3, there is shown a flowchart of the searching method for a P2P device community in accordance with another embodiment of the present disclosure. The steps S501, S504, S505, S506, and S508 of this embodiment are identical to the steps S401, S402, S403, S404, and S405 shown in FIG. 5. In step S501, record the link data 49 of each of the P2P devices 41~46 within the P2P device community 40 in the topology data table 21 of the online server 20. In step S502, the sorting algorithm module 32 of the content management server 30 creates the weighted data 413~463 of each of the P2P devices 41~46 based on the link data 49 of each of the P2P devices 41~46. In step S503, record the weighted data 413~463 of each of the P2P devices 41~46 in the weight look-up table 25 of the online server 20. In step S504, the search engine 31 of the content management server 30 creates the indexed data 4113~4613 corresponding to the content data 4111~4611 of each of the P2P devices 41~46 within the P2P device community 40 and record the indexed data 4113~4613 in the index database 33 of the content management server 30.

[0059] In step S505, determine whether a user requests a search request 351 to the user's device management unit 35 of the content management server 30 from any of the user's devices 51~56? If no, then go back to the step S501; otherwise, if yes, then proceed to step S506. In the step S506, the search engine 31 of the content management server 30 searches the index database 33 based on the search

request 351 and generates a search result 311. As shown in step S507, the sorting algorithm module 32 performs a sorting operation on the search result 311 based on the order of the weighted data 413~461 of the P2P devices 41~46 and generates a sorted search result 335. Next, return the sorted search result 335 to the user's device 51~56 who requested the search request 351, as shown in step S508.

[0060] In one embodiment, the steps S406 and S407 shown in FIG. 5 may be performed after the step S508 without further description.

[0061] Referring to FIG. 7, there is shown a flowchart of the searching method for a P2P device community in accordance with another embodiment of the present disclosure. The steps S501~S505 of this embodiment are identical to that of the abovementioned embodiment shown in FIG. 6, but steps S606~S609 are different. In the step S606, the search engine 31 of the content management server 30 searches the indexed data 4113~4613 of each of the P2P devices 41~46 based on the search request 351, where each of the indexed data 4113~4613 can generate one or more search results 311. In the step S607, the sorting algorithm module 32 performs a function operation on the one or more search results 311 and the weighted data 413~463 of the P2P devices 41~46 and generates a weighted search result 337, where the function operation includes but not limited to a multiplication, an addition, a geometric progression, a PageRank, an HITS and/or a TrustRank. In the step S608, the sorting algorithm module 32 sorts the weighted search result 337 based on the order of the weighted search results so as to generate a weighted and sorted search result 339. Next, as shown in the step S609, the sorting algorithm module 32 returns the weighted and sorted search result 339 to the user's devices 51~56 who requested the search request 351.

[0062] In one embodiment, the content management server 30 confirms the identity of the user's devices 51~56 who requested the search request 351 and/or provides the search result 311 only after confirming the payment is completed, or the online server 20 provides the link data 49 of at least one P2P devices 41~46 to the user's devices 51~56. The payment confirmation process is shown in FIG. 8.

[0063] Referring to FIG. 8, there is shown a flowchart of payment confirmation of the searching method for a P2P device community in accordance with the present disclosure. The searching system and the P2P devices of this embodiment can be referred to FIG. 3. In step S701, the content management server 30 confirms that user's identity data 3551 of the user's devices 51~56 who requested the search request 351, where the user's identity data 3551 may be one of, for example, the

registered user, the unregistered user, the user who pays for the services, or the user who uses the services free of charge. Next, in step S702, the content management server 30 receives a charge-mode data 3553 selected by the user's devices 51~56, where the charge-mode data 3553 may be, for example, monthly installment payment mode or pre-payment mode.

[0064] In step S703, determine whether the payment confirmation data 3555 of the user's devices 51~56 has been gone through which, for example, can be confirmed by cooperating with a bank through SSL-based data transmission, and if yes, then proceed to step S704; if no, then proceed to step S714. In the step S714, the content management server 30 provides the error message to the user's devices 51~56 due to the uncompleted payment process of the user's devices 51~56, and therefore the service is not provided until the payment is cleared. In the step S704, the payment process is completed by the user's devices 51~56, and therefore the user's devices 51~56 can select the file data 411~461 to be linked or downloaded.

[0065] In step S705, the content management server 30 computes a usage charge (charging data 3557) based on the amount of data transmission, transmission bandwidth, and/or the harddisk space being used required to download the file data 411~461 selected by the user's devices 51~56, and the content management server 30 records the charging data 3557 derived from the data to be linked or downloaded by the user's devices 51~56.

[0066] In step S706, determine whether the remaining balance of the user's devices 51~56 is enough? If yes, then proceed to step S707; if not, then proceed to step S714. In the step S714, the content management server 30 provides error message to the user's devices 51~56 due to the uncompleted payment process of the user's devices 51~56, and therefore the service is not provided until the payment is cleared. In the step S707, the content management server 30 provides the search result 311, or the online server 20 provides at least one link data 49 of the P2P devices 41~46, to the user's devices 51~56.

[0067] The present disclosure, as discussed herein, is industrially applicable, novel, and of significant value in technology development. It is to be understood; however, that this disclosure is not limited to the embodiments set forth and illustrated hereinabove, but encompasses any and all variations falling within the spirit and scope of this disclosure as defined by the appended claims and their equivalents.

WHAT IS CLAIMED IS:

1. A searching system for a P2P (peer-to-peer) device community, for receiving a search request sent from at least one user's device, the searching system comprising:

at least one P2P device community, each said P2P device community includes at least one P2P device;

at least one online server connecting to the P2P device community, each said online server includes a topology data table, the topology data table being recorded with a link data between each of the P2P devices of the P2P device community; and

at least one content management server connecting to the P2P device community and the online server respectively, each said content management server includes a search engine, an index database, and a user's device management unit, the index database being recorded with an indexed data of each said P2P device of the P2P device community, the user's device management unit receiving the search request sent from the user's device, the search engine searching the index database to generate a search result based on the search request and then returning the search result to the user's device.

2. The searching system of claim 1, wherein each said P2P device includes a weighted data, and the content management server is provided with a sorting algorithm module creating the weighted data based on the link data associated with the P2P device, the search result being sorted by the order of the weighted data of the P2P device so as to generate a sorted search result.

3. The searching system of claim 2, further comprising:

a weight look-up table recorded with the weighted data of each said P2P device, wherein the weight look-up table is stored in the content management server, the online server, or a storage device.

4. The searching system of claim 2, wherein the sorting algorithm module performs a function operation based on the search result and the weighted data corresponding to the P2P device to generate a weighted search result, and the weighted search result is sorted by the

order of the weighted search results so as to generate a weighted and sorted search result.

5. The searching system of claim 1, wherein the user's device management unit includes a user-charge module, and wherein after confirming that the user's device has been charged, the content management server provides the search result, or the online server provides at least one of the link data of the P2P device, to the user's device.

6. The searching system of claim 5, wherein the user-charge module receives a user's identity data, a charging data, a charging-mode data, or a payment confirmation data, all of which being sent from the user's device.

7. The searching system of claim 1, wherein the indexed data can be created by the P2P devices themselves, or the indexed data can be created by the content management server gathering from the P2P devices via a network gathering module.

8. The searching system of claim 1, wherein each said P2P device includes at least one file data, and wherein when the user's device selects the P2P device to be connected based on the search result, the online server provides the link data to the P2P device, and the user's device, connects to the selected P2P device and downloads the file data based on the link data.

9. The searching system of claim 1, wherein the user's device selects the P2P device to be connected based on the search result, and the online server provides the link data to the P2P device, so as for the user's device to connect to the selected P2P device based on the link data.

10. A P2P device applicable to the searching system of claim 1, comprising:

at least one file data, each said file data includes an indexed data; and

a control unit controlling the file data being an open state or a hidden state.

11. A searching method for a P2P device community, applicable to a searching system for a P2P device community, the searching system includes at least one P2P device, an online server, and a content management server, the searching method comprising the steps of:

recording a link data of each said P2P device to generate a topology data table and storing the topology data table in the online server;

creating an indexed data of each said P2P device and storing the indexed data in an index

database of the content management server;
receiving by the content management server a search request sent from a user's device and
generating a search result by searching the index database based on the search request;
and
returning the search result to the user's device.

12. The searching method of claim 11, further comprising the steps of:

creating a weighted data associated with each said P2P device by the content management unit based on the link data of the P2P devices;
performing a function operation based on the search result and the weighted data corresponding to the P2P device to generate a weighted search result; and
sorting the weighted search result based on the order of the weighted search results to generate a weighed and sorted search result.

13. The searching method of claim 12, further comprising the steps of:

recording the weighted data of the P2P devices to generate a weight look-up table; and
storing the weight look-up table in the content management server, the online server, or a storage device.

14. The searching method of claim 11, further comprising the steps of:

providing the search result by the content management server, or providing at least one link data of the P2P device by the online server, to the user's device by the content management server confirming that the user's device has been charged.

15. The searching method of claim 14, wherein the content management server confirming that the user's device has been charged comprises the steps of:

confirming a user's identity data of the user's device;
receiving a charge-mode data sent from the user's device;
confirming a payment confirmation data sent from the user's device; and
recording a pricing data required for connection or downloading requested by the user's

device.

16. The searching method of claim 11, wherein the indexed data can be created by the P2P devices themselves, or the indexed data can be created by the content management server gathering from the P2P devices via a network gathering module.

17. The searching method of claim 11, further comprising the step of:

controlling a file data of each said P2P device being an open state or a hidden state.

18. The searching method of claim 17, further comprising the steps of:

selecting the P2P device to be connected by the user's device based on the search result;

providing the link data of the P2P device to the user's device by the online server; and

connecting to the selected P2P device and downloading the file data by the user's device based on the link data.

19. The searching method of claim 11, further comprising the steps of:

selecting the P2P device to be connected by the user's device based on the search result;

providing the link data of the P2P device to the user's device by the online server; and

connecting to the selected P2P device by the user's device based on the link data.

ABSTRACT

A searching system, searching method and P2P devices for a P2P device community are provided. An online server connects to a content management server and a P2P device community, respectively. The content management server includes a search engine and an index database, and each of the P2P devices of the P2P device community is provided with an indexed data and a weighted data. The index database is recorded with the indexed data associated with each of the P2P devices of the P2P device community, and the search engine searches the index database to generate a search result and then generates a weighted and sorted search result based on the weighted data, thereby achieving the object of searching important file data in the P2P device community.

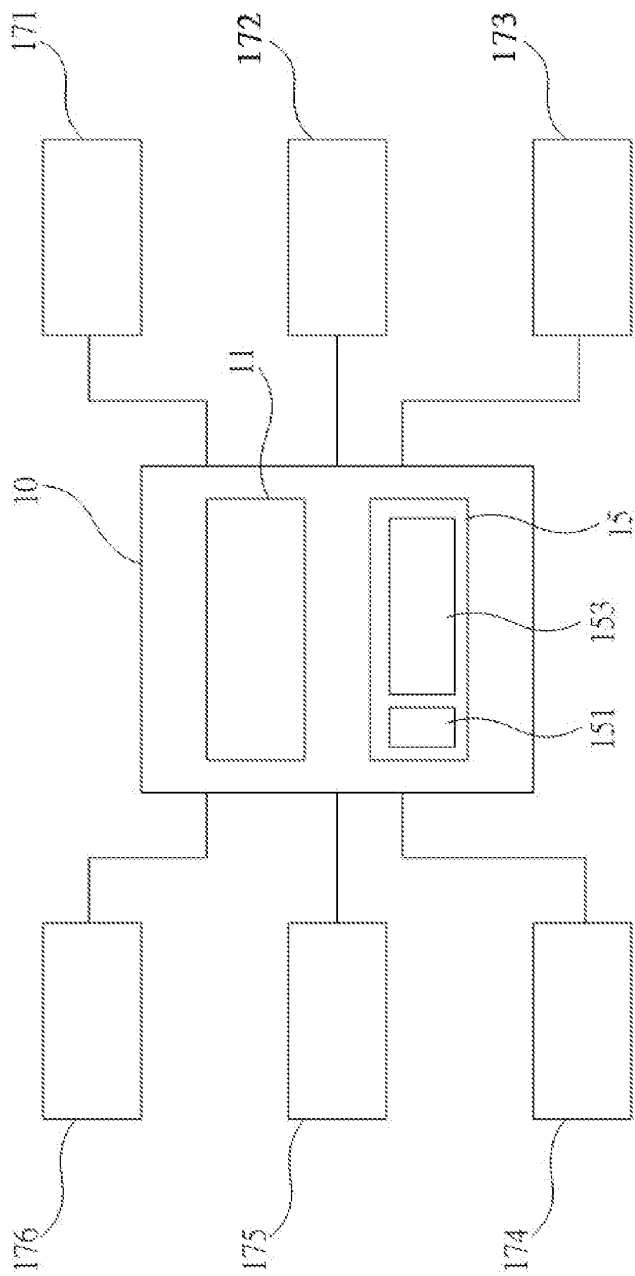


FIG.1
(PRIOR ART)

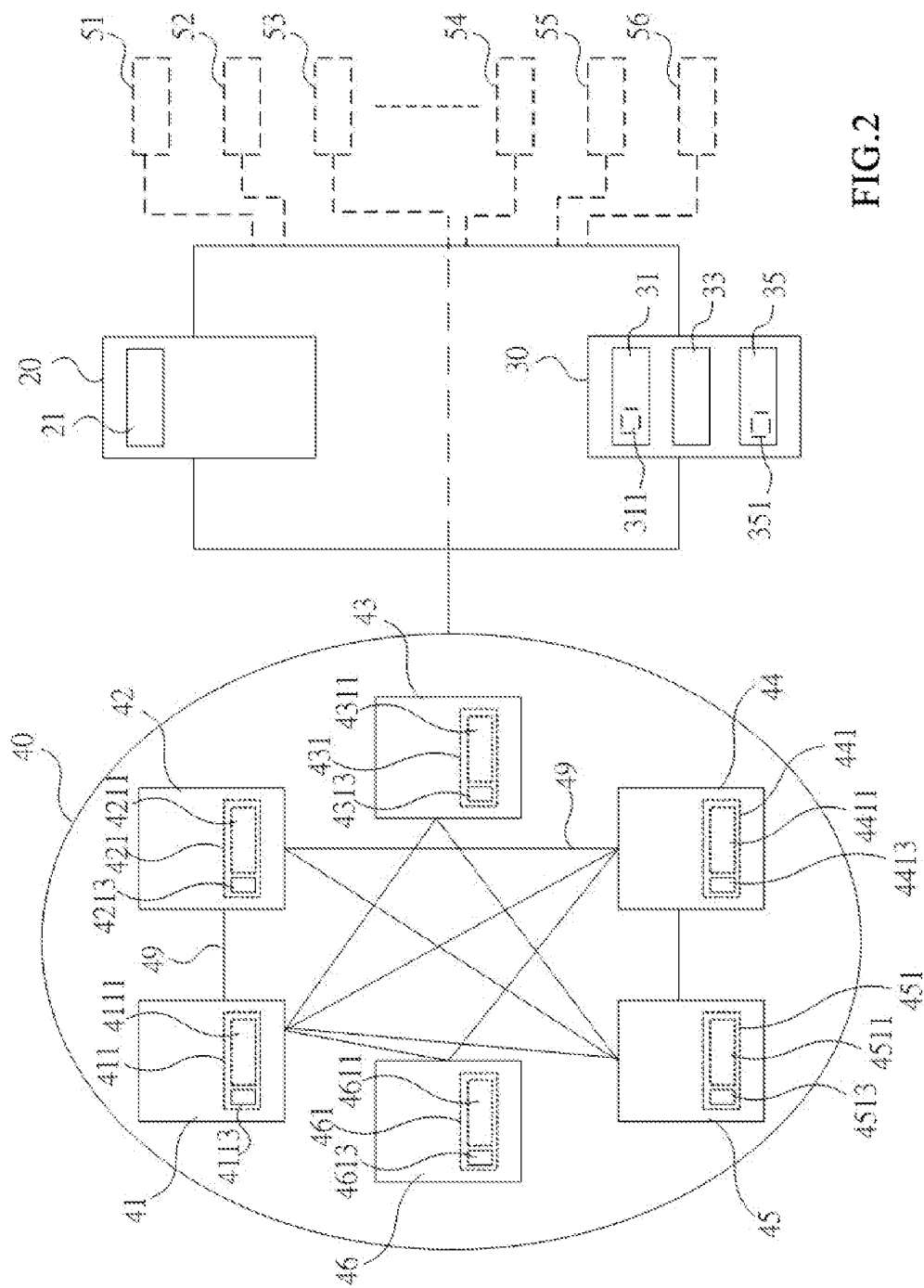


FIG.2

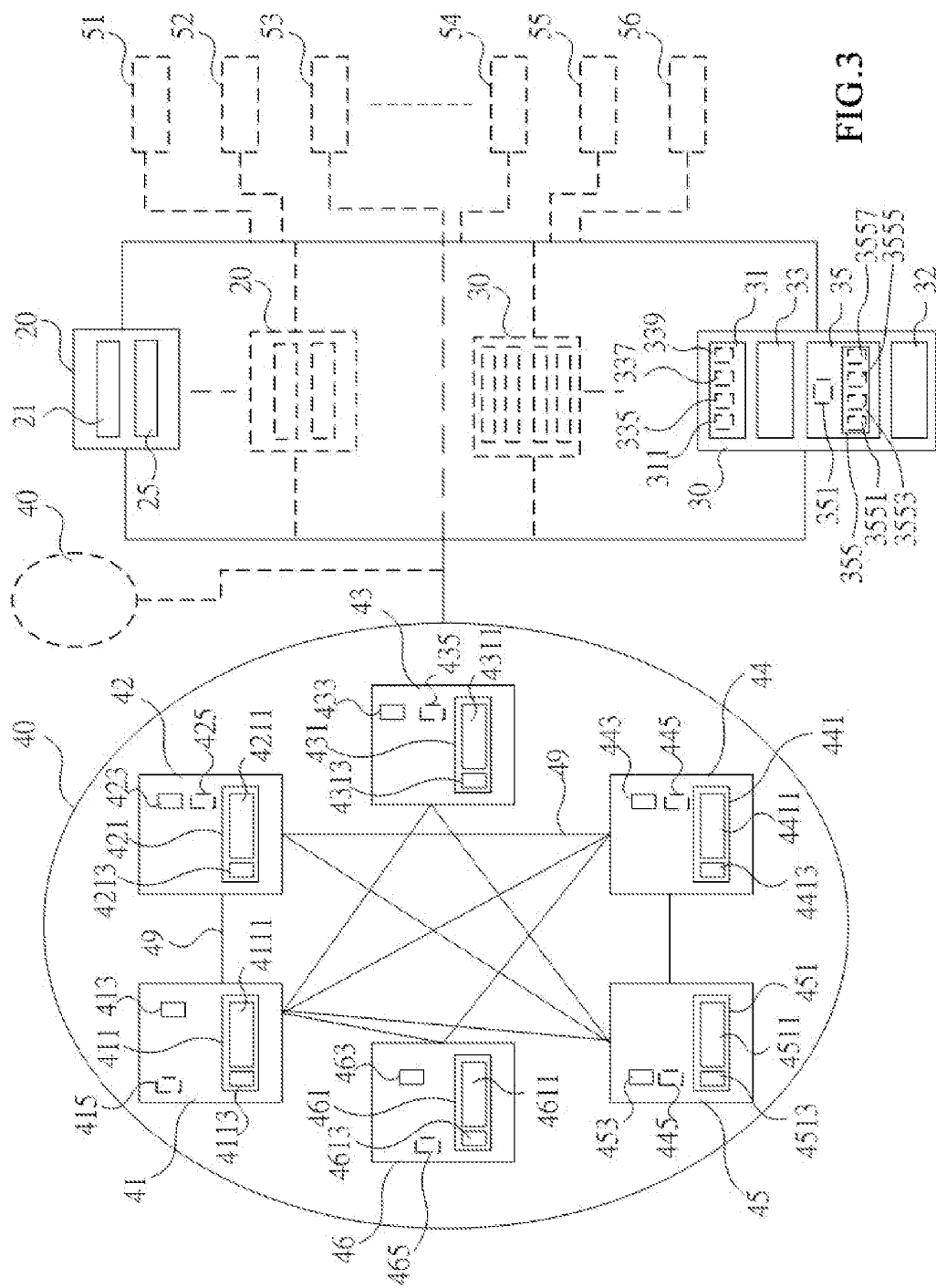
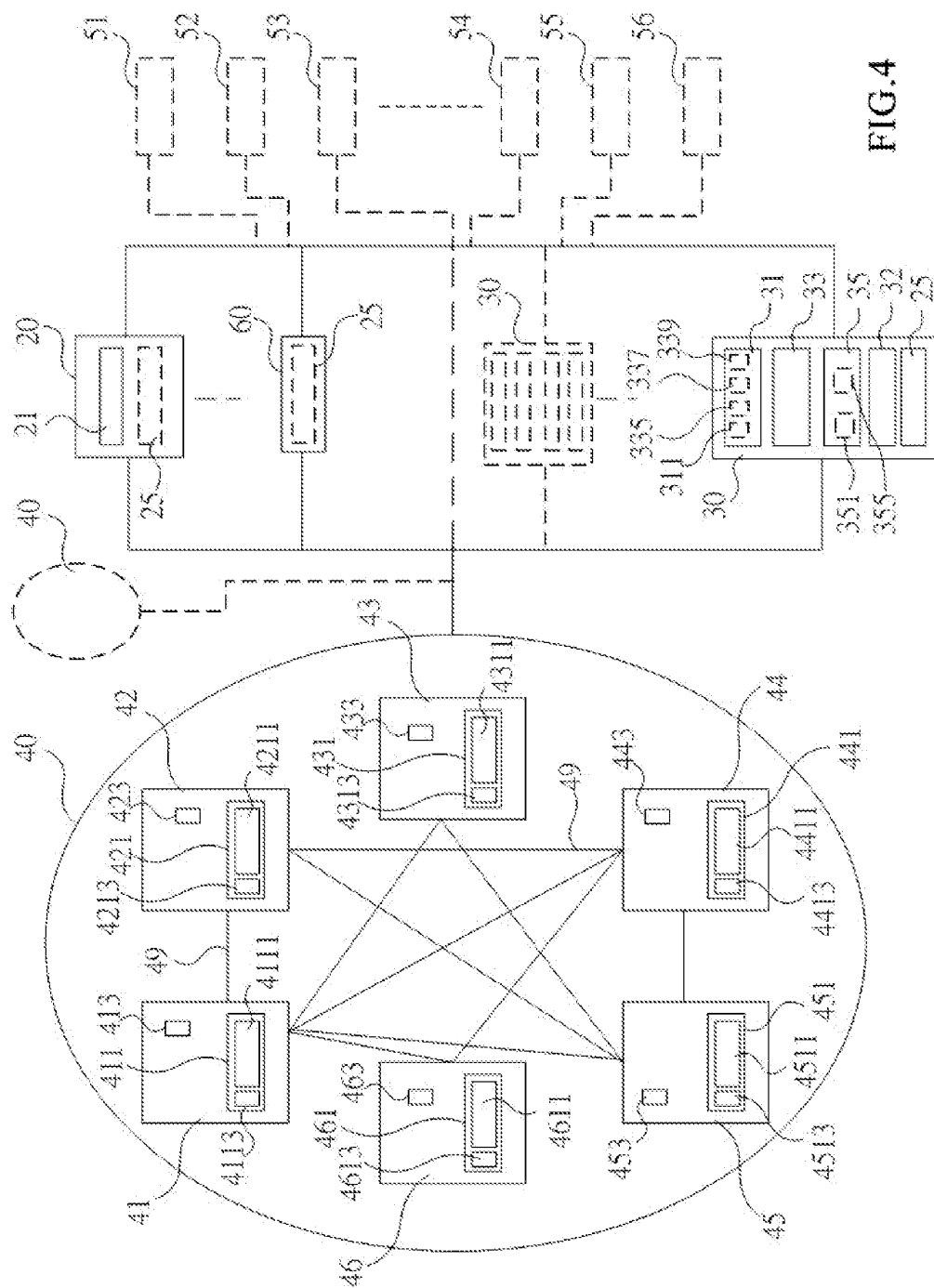


FIG.3



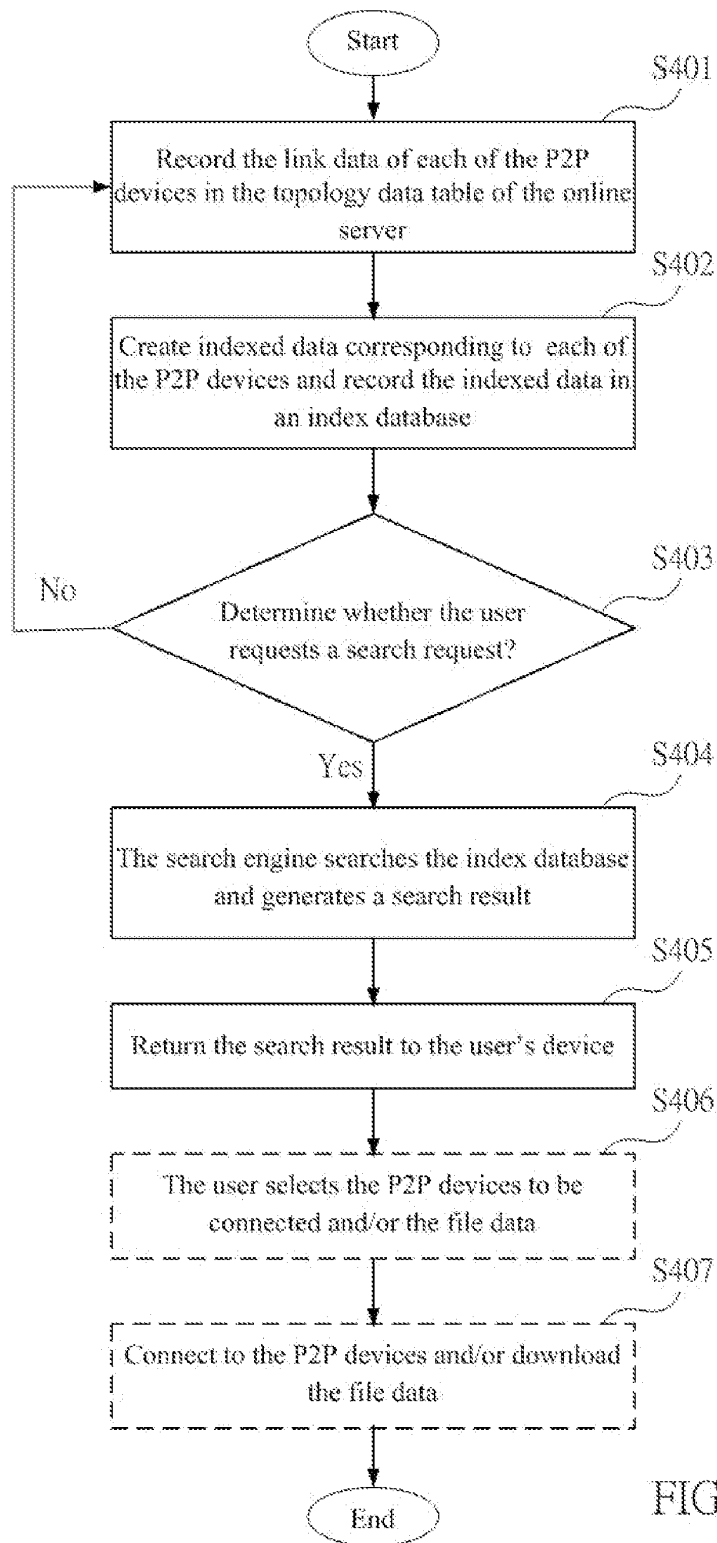


FIG.5

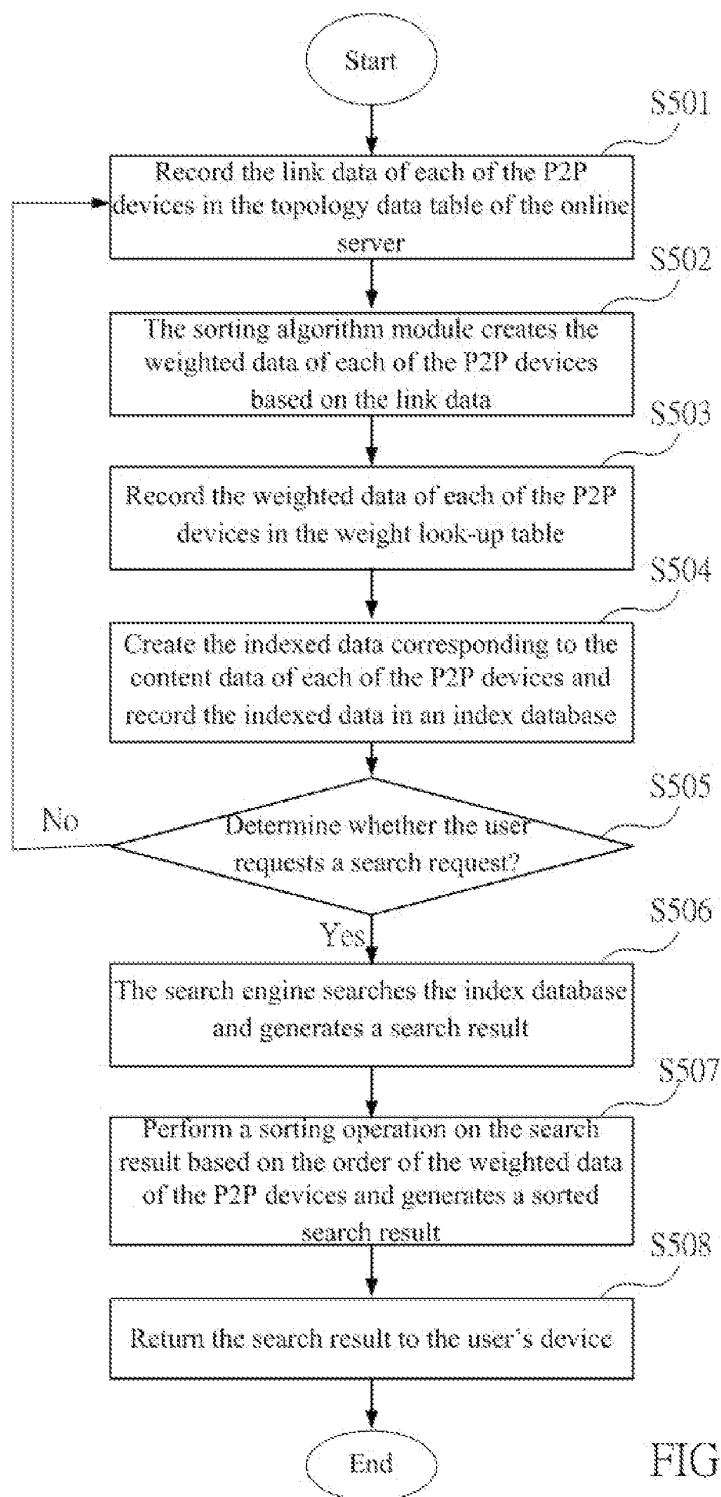


FIG.6

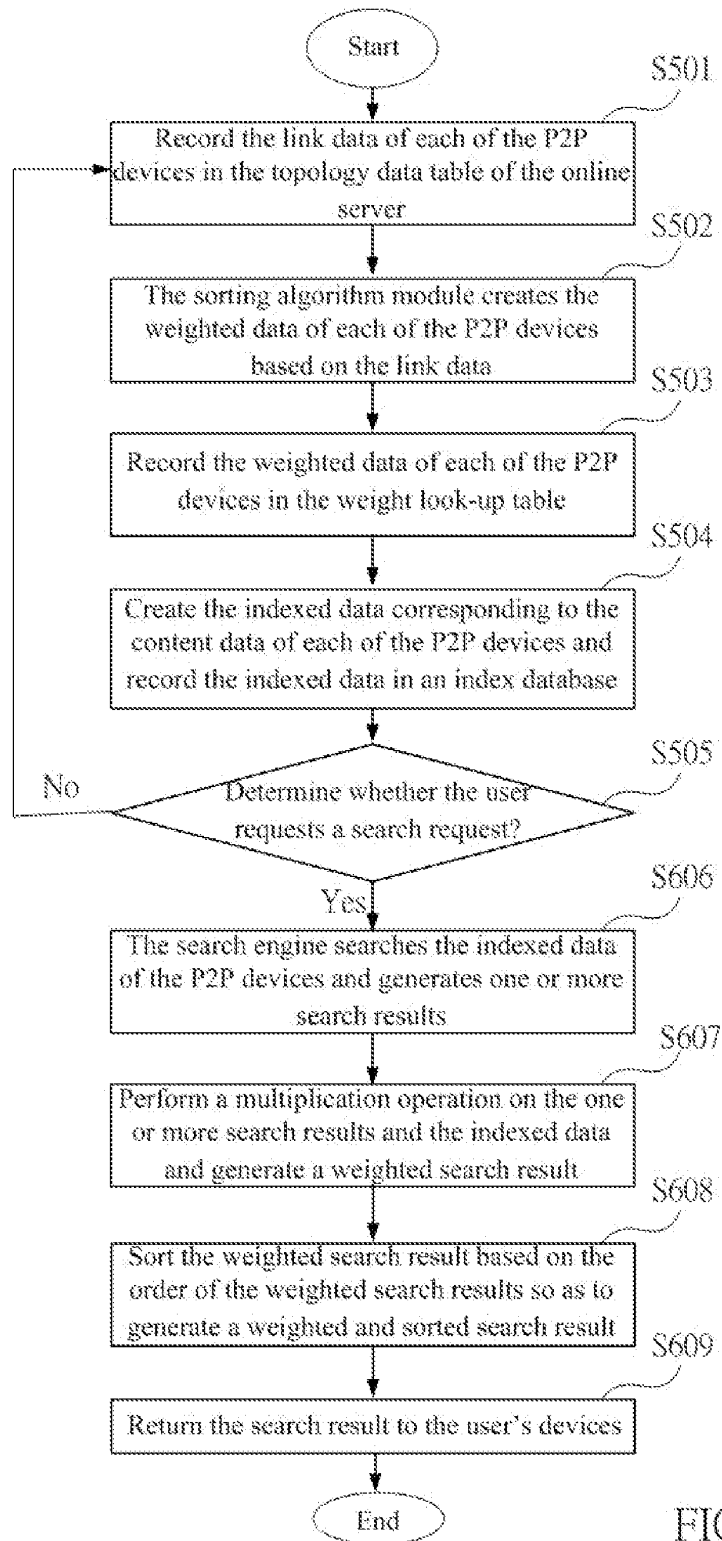
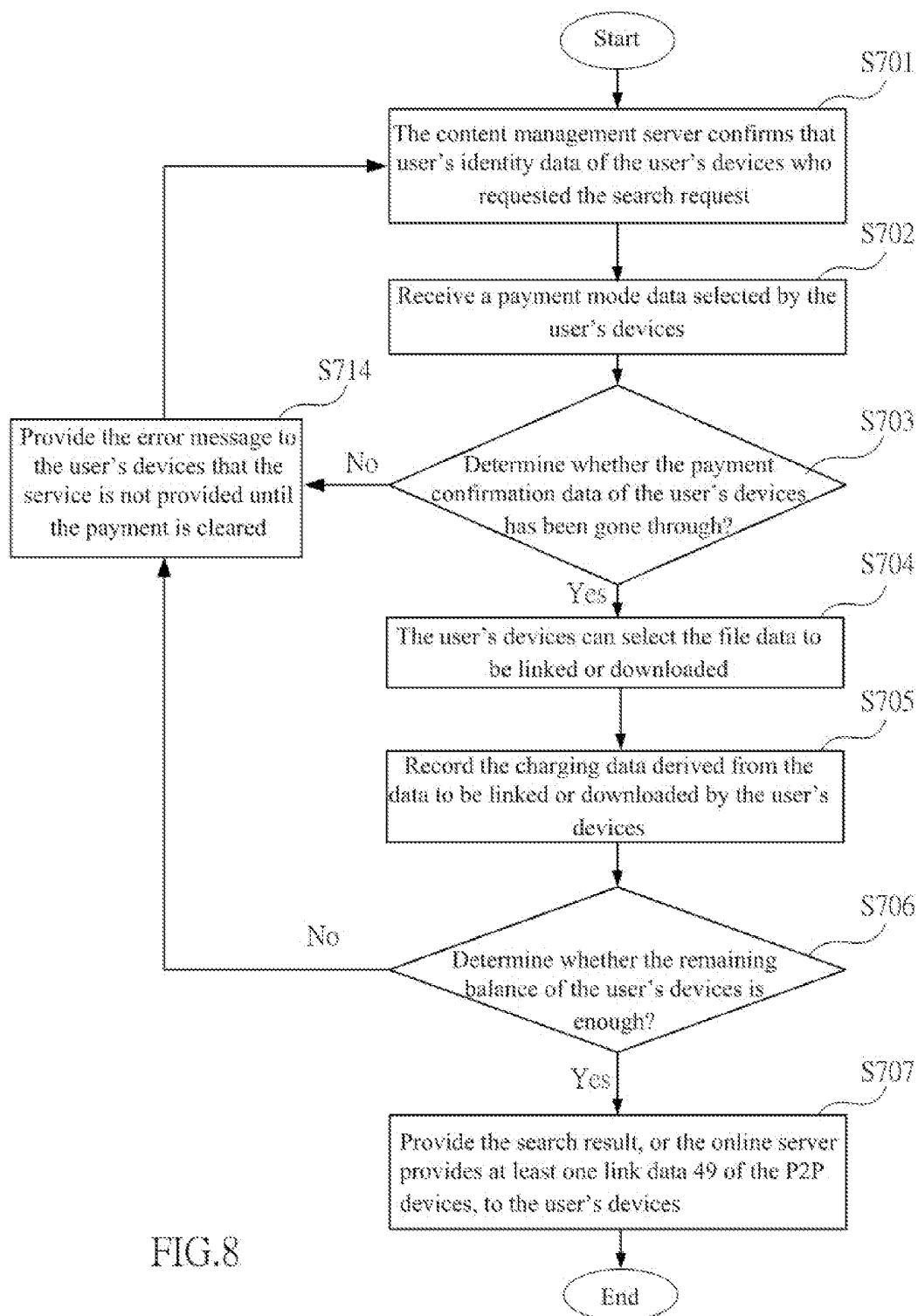


FIG.7



Docket No.: TUTK-1405-003US

**DECLARATION AND ASSIGNMENT
FOR PATENT AND DESIGN APPLICATIONS**

SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

(Title of Invention)

As a below named inventor, I hereby declare that:

This declaration is directed to:

☒ The attached application,

OR

☐ United States Application Number or PCT International Application number _____
filed on _____

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent, utility model, design or inventor's certificate listed below and have also identified below any foreign application(s) for patent, utility model, design or inventor's certificate having a filing date before that of the application(s) on which priority is claimed:

Prior Foreign Application(s) Number	Country	Date Filed	Priority Claimed	
			Yes	No
103134585	TW	2014/10/3	v	

Direct all Correspondence to:

The address associated with Customer Number 84956 (HDS IPR Services)
Telephone: (571) 276-6506 • Facsimile (571) 282-6420

1. ThroughTek Technology (ShenZhen) Co., Ltd.

WHEREAS 2. ThroughTek Co., Ltd.

1. Room 201, Chaohui Building, No.173 Baohua Rd., Longhua Street, Longhua New District, Shenzhen, China

who's address is 2. 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist., Taipei City 115, Taiwan

hereinafter referred to as the assignee, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for a good and valuable consideration received by me, I hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as I might or could have held and enjoyed the same, if this assignment had not been made.

AND I hereby agree to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND I authorize and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Signature: _____



Date: September 29, 2014

Legal Name of

Sole or First Inventor: Wu, Hsin-Tai

Residence and Mailing Address:

9F, No.364, Sec. 1, Nangang Rd., Nangang Dist., Taipei City
115, Taiwan

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3216758

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
HSIN-TAI WU	09/29/2014
RECEIVING PARTY DATA	
Name:	THROUGHTTEK TECHNOLOGY (SHENZHEN) CO., LTD.
Street Address:	ROOM 201, CHAOHUI BUILDING, NO.173 BAOHUA RD., LONGHUA STREET, LONGHUA NEW DISTRICT,
City:	SHENZHEN
State/Country:	CHINA
Name:	THROUGHTTEK CO., LTD.
Street Address:	9F, NO.364, SEC. 1, NANGANG RD., NANGANG DIST.,
City:	TAIPEI CITY
State/Country:	TAIWAN
Postal Code:	115
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	14616478
CORRESPONDENCE DATA	
Fax Number:	(571)282-6420
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	5712765506
Email:	services.ipr@gmail.com
Correspondent Name:	HDLS IPR SERVICES
Address Line 1:	P.O. BOX 230970
Address Line 4:	CENTREVILLE, VIRGINIA 20120
ATTORNEY DOCKET NUMBER:	TUTK-1405-003US
NAME OF SUBMITTER:	PIN PIN HUANG
SIGNATURE:	/Pin Pin Huang/
DATE SIGNED:	02/06/2015
This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 2

source=TUTK-1405-003US_DecAss#page1.tif

source=TUTK-1405-003US_DecAss#page2.tif

Docket No.: TUTK-1405-003US

**DECLARATION AND ASSIGNMENT
FOR PATENT AND DESIGN APPLICATIONS**

SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

(Title of Invention)

As a below named inventor, I hereby declare that:

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☒ The attached application,

OR

☐ United States Application Number or PCT International Application number _____
filed on _____

The above-identified application was made or authorized to be made by me.

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I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent, utility model, design or inventor's certificate listed below and have also identified below any foreign application(s) for patent, utility model, design or inventor's certificate having a filing date before that of the application(s) on which priority is claimed:

Prior Foreign Application(s) Number	Country	Date Filed	Priority Claimed	
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103134585	TW	2014/10/3	v	

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The address associated with Customer Number 84956 (HDLs IPR Services)
Telephone: (571) 276-5506 • Facsimile (571) 282-6420

1. ThroughTek Technology (ShenZhen) Co., Ltd.
WHEREAS 2. ThroughTek Co., Ltd.

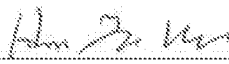
1. Room 201, Chaohui Building, No.173 Baohua Rd., Longhua Street, Longhua New District, Shenzhen, China
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AND I hereby agree to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

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I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Signature: 
Legal Name of
Sole or First Inventor: Wu, Hsin-Tai

Date: September 29, 2014

Residence and Mailing Address: 9F, No.364, Sec. 1, Nangang Rd., Nangang Dist., Taipei City 115, Taiwan

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/616,478	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	19	minus 20 = *	x 40 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
			TOTAL	730		TOTAL	
* If the difference in column 1 is less than zero, enter "0" in column 2.							
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	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))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	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))					OR	
	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.							



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/616,478	02/06/2015	2161	730	TUTK-1405-003US	19	2

CONFIRMATION NO. 9534

84956
HDLS IPR Services
P.O. Box 230970
CENTREVILLE, VA 20120

FILING RECEIPT



OC000000073517293*

Date Mailed: 02/23/2015

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**

Inventor(s)

Hsin-Tai Wu, TAIPEI CITY, TAIWAN;

Applicant(s)

ThroughTek Technology (ShenZhen) Co., Ltd., Shenzhen, CHINA
ThroughTek Co., Ltd., Taipei City, TAIWAN

Power of Attorney: The patent practitioners associated with Customer Number 84956

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

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 103134585 10/03/2014

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 02/20/2015

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/616,478**

Projected Publication Date: 04/07/2016

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

Preliminary Class

707

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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 (1-866-999-4258).

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.

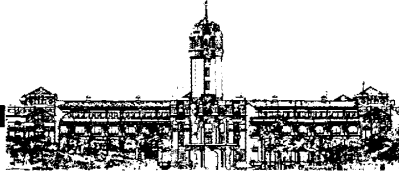
The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise 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 Assets Control, 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).

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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 U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



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 2014 年 10 月 03 日
Application Date Oct. 3, 2014

申 請 案 號：103134585
Application No.

申 請 人：物聯智慧科技（深圳）有限公司、物聯智慧股份有限
Applicant(s) 公司

發 明 人：吳心岱
Inventor(s)

局 長

Director General

王美花

西元 2014 年 11 月 03 日
Nov. 3, 2014

707K-1405-003US

發明摘要

※ 申請案號：

※ 申請日：※IPC 分類：

【發明名稱】(中文/英文)

對等網路裝置社群之搜尋系統、搜尋方法及其對等網路裝置
/Searching System、Method and P2P Device for P2P Device Community

【中文】

本發明提供一種對等網路(P2P)裝置社群之搜尋系統、搜尋方法及其對等網路裝置，一連線伺服器分別連接一內容管理伺服器及一對等網路裝置社群，內容管理伺服器具有一搜尋引擎及一索引資料庫，並在對等網路裝置社群中的每一個對等網路裝置中設有一索引資料及一權重資料。索引資料庫記錄對等網路裝置社群中每一個對等網路裝置之索引資料，搜尋引擎則可搜尋索引資料庫以產生一搜尋結果，並依據權重資料以產生一權重搜尋排序結果，藉此可達成在對等網路裝置社群中快速搜尋到重要檔案資料的目的。

【英文】

The present invention provides a search system, search methods and P2P devices for peer to peer (P2P) device community. A connection server is connected to a content management server and a P2P device community. Each P2P device in the P2P device community has an index data and a weight data. An index database records the index data of every P2P device in the P2P device community. A search engine can search the index database to generate a search result and produce a weight sorted search result according to the weight data. Take this to achieve the purpose of quickly finding the important file in the P2P device community.

【代表圖】

【本案指定代表圖】：第 2 圖。

【本代表圖之符號簡單說明】：

20	連線伺服器	4313	索引資料
21	拓撲結構資料表	44	對等網路裝置
30	內容管理伺服器	441	檔案資料
31	搜尋引擎	4411	內容資料
311	搜尋結果	4413	索引資料
33	索引資料庫	45	對等網路裝置
35	使用者裝置管理單元	451	檔案資料
351	搜尋請求	4511	內容資料
40	對等網路裝置社群	4513	索引資料
41	對等網路裝置	46	對等網路裝置
411	檔案資料	461	檔案資料
4111	內容資料	4611	內容資料
4113	索引資料	4613	索引資料
42	對等網路裝置	49	連結資料
421	檔案資料	51	使用者裝置
4211	內容資料	52	使用者裝置
4213	索引資料	53	使用者裝置
43	對等網路裝置	54	使用者裝置
431	檔案資料	55	使用者裝置
4311	內容資料	56	使用者裝置

【本案若有化學式時，請揭示最能顯示發明特徵的化學式】：

無

發明專利說明書

(本說明書格式、順序，請勿任意更動)

【發明名稱】(中文/英文)

對等網路裝置社群之搜尋系統、搜尋方法及其對等網路裝置/Searching System、Method and P2P Device for P2P Device Community

【技術領域】

【0001】 本發明係有關於一種搜尋系統、搜尋方法及其裝置，尤指一種用於對等網路（peer to peer，P2P）裝置社群之搜尋系統、搜尋方法及其對等網路裝置。

【先前技術】

【0002】 傳統之網路資料與多媒體儲存系統需要一中央伺服器做為資料的儲存、提供、交換或搜尋的功能，然而中央伺服器之處理效能與儲存容量都是固定的，無法按照使用需求的增減而調整，因而造成網路傳輸效能低落或資源過剩閒置的結果。

【0003】 如第 1 圖所示，係習用網路裝置搜尋系統之構造示意圖，中央網路系統具有一中央伺服器 10，中央伺服器 10 儲存有一檔案資料 15，檔案資料 15 內具有一索引資料 151 與一內容資料 153。當使用者裝置 171、172、173、174、175 與 176 有資料需求時，可與中央伺服器 10 連線以下載或上傳儲存於該中央伺服器 10 上的檔案資料 15。

【0004】 該中央伺服器 10 設置有一搜尋引擎 11，搜尋引擎 11 可對該內容資料 153 建立索引資料 151。當使用者要搜尋內容資料 153 時，使用者裝置 171~176 向中央伺服器 10 提出一搜尋請求，中央伺服器 10 之搜尋引擎 11 即可依使用者裝置 171~176 提出之搜尋條件而對索引資料 151 進行搜尋，並產生一搜尋結果，中央伺服器 10 再將該搜尋結果回傳給使用者裝置 171~176。

【0005】 為解決習用網路中央伺服器 10 之資源與效能之利用設有限制性的問題，業界發展出一種對等網路（Peer to Peer，P2P）裝置社群。惟，該 P2P 裝置社群之資料搜尋亦存在有改善空間，例如如何提高其搜尋效率

與速度，且設法有效提高搜尋的準確度。

【發明內容】

【0006】 於 P2P 裝置社群建立一新穎之資料搜尋系統及搜尋方法，以有效提高資料之搜尋效率與速度，此即為本發明之技術特點。

【0007】 為了達到以上目的，本發明提供一種對等網路裝置社群之搜尋系統，用以接收至少一使用者裝置所傳送之一搜尋請求，該對等網路裝置社群之搜尋系統包括：至少一對等網路裝置社群，每一該對等網路裝置社群具有至少一個對等網路裝置；至少一連線伺服器，連接該對等網路裝置社群，每一該連線伺服器具有一拓撲結構資料表，該拓撲結構資料表記錄該對等網路裝置社群中每一該對等網路裝置彼此間之一連結資料；以及至少一內容管理伺服器，分別連接該對等網路裝置社群及該連線伺服器，每一該內容管理伺服器具有一搜尋引擎、一索引資料庫及一使用者裝置管理單元，該索引資料庫記錄該對等網路裝置社群中每一該對等網路裝置之一索引資料，該使用者裝置管理單元接受該使用者裝置提出的該搜尋請求，該搜尋引擎依據該搜尋請求搜索該索引資料庫以產生一搜尋結果，並將該搜尋結果回傳給該使用者裝置。

【0008】 另外，為達上述目的，本發明提供一種對等網路裝置社群之搜尋方法，應用於一對等網路裝置社群之搜尋系統，該搜尋系統具有至少一個對等網路裝置、一連線伺服器及一內容管理伺服器，該搜尋方法包括下列步驟：記錄每一該對等網路裝置之一連結資料，以產生一拓撲結構資料表，並儲存該拓撲結構資料表於該連線伺服器；建立每一該對等網路裝置之一索引資料，並儲存該些索引資料於該內容管理伺服器之一索引資料庫；該內容管理伺服器接收來至一使用者裝置所傳送之一搜尋請求，依據該搜尋請求搜尋該索引資料庫，以產生一搜尋結果；及回傳該搜尋結果給該使用者裝置。

【0009】 在本發明又一實施例中，其中每一該對等網路裝置具有一權重資料，該內容管理伺服器設有一排序演算模組，該排序演算模組根據該對等網路裝置之連結資料而建立該權重資料，該搜尋結果則依據該對等網路裝置之權重資料高低順序而進行排序，以產生一搜尋排序結果。

- 【0010】 在本發明又一實施例中，其中更包含：一權重對應表，記錄每一該對等網路裝置之該權重資料，其中該權重對應表存放於該內容管理伺服器、該連線伺服器或一儲存裝置。
- 【0011】 在本發明又一實施例中，其中該排序演算模組根據該搜尋結果與該對等網路裝置所對應之該權重資料進行一函數運算，以產生一權重搜尋結果，並依據該權重搜尋結果高低順序進行排序，以產生一權重搜尋排序結果。
- 【0012】 在本發明又一實施例中，其中該使用者裝置管理單元具有一使用者付費模組，確認該使用者裝置付費後，內容管理伺服器才提供該搜尋結果或由該連線伺服器提供至少一該對等網路裝置之該連結資料給該使用者裝置。
- 【0013】 在本發明又一實施例中，其中該使用者付費模組接收該使用者裝置所傳送之一使用者身份資料、一計價資料、一付費模式資料或一付款確認資料。
- 【0014】 在本發明又一實施例中，其中該索引資料可由該些對等網路裝置自行建立、或由該內容管理伺服器透過一網路搜集模組至該些對等網路裝置中搜集而得。
- 【0015】 在本發明又一實施例中，其中每一該對等網路裝置具有至少一檔案資料，當該使用者裝置根據該搜尋結果挑選所欲連結之該對等網路裝置，該連線伺服器提供該對等網路裝置之該連結資料，該使用者裝置根據該連結資料連結所挑選之該對等網路裝置，並下載該檔案資料。
- 【0016】 在本發明又一實施例中，其中該使用者裝置根據該搜尋結果挑選所欲連結之該對等網路裝置，該連線伺服器提供該對等網路裝置之該連結資料，該使用者裝置根據該連結資料連結所挑選之該對等網路裝置。
- 【0017】 在本發明又一實施例中，其中該對等網路裝置，包括：至少一檔案資料，每一該檔案資料具有一索引資料；及一控制單元，控制該檔案資料為一開放狀態或一隱藏狀態。
- 【0018】 在本發明又一實施例中，更包括下列步驟：該內容管理伺服器依據該些對等網路裝置之該連結資料，建立每一該對等網路裝置之一權重資料；根據該搜尋結果與該對等網路裝置所對應之該權重資料，進行一

函數運算，以產生一權重搜尋結果；及依據該權重搜尋結果高低順序進行排序，以產生一權重搜尋排序結果。

【0019】 在本發明又一實施例中，更包括下列步驟：記錄該些對等網路裝置之該權重資料，以產生一權重對應表；及儲存該權重對應表放於該內容管理伺服器、該連線伺服器或一儲存裝置。

【0020】 在本發明又一實施例中，更包括下列步驟：藉由該內容管理伺服器確認該使用者裝置付費後，該內容管理伺服器才提供該搜尋結果或由該連線伺服器提供至少一該對等網路裝置之該連結資料給該使用者裝置。

【0021】 在本發明又一實施例中，其中該使用者付費模組確認使用者裝置付費步驟係包括有：確認該使用者裝置之一使用者身分資料；接收該使用者裝置傳送之一付費模式資料；確認該使用者裝置傳送之一付款確認資料；及記錄該使用者裝置連結或下載而所需支付之一計價資料。

【0022】 在本發明又一實施例中，更包括下列步驟：控制每一該對等網路裝置之一檔案資料為一開放狀態或一隱藏狀態。

【0023】 在本發明又一實施例中，更包括下列步驟：該使用者裝置根據該搜尋結果，挑選所欲連結之該對等網路裝置；該連線伺服器提供該對等網路裝置之該連結資料給該使用者裝置；及該使用者裝置根據該連結資料，連結所挑選之對等網路裝置，並下載該檔案資料。

【0024】 在本發明又一實施例中，更包括下列步驟：該使用者裝置根據該搜尋結果，挑選所欲連結之該對等網路裝置；該連線伺服器提供該對等網路裝置之該連結資料給該使用者裝置；及該使用者裝置根據該連結資料，連結所挑選之對等網路裝置。

【圖式簡單說明】

【0025】 第 1 圖：係習用網路裝置搜尋系統之構造示意圖。

【0026】 第 2 圖：係本發明對等網路裝置社群之搜尋系統及其對等網路裝置一實施例之構造示意圖。

【0027】 第 3 圖：係本發明對等網路裝置社群之搜尋系統及其對等網路裝置另一實施例之構造示意圖。

【0028】 第 4 圖：係本發明對等網路裝置社群之搜尋系統及其對等網路裝置又一實施例之構造示意圖。

【0029】 第 5 圖：係本發明對等網路裝置社群之搜尋方法一實施例之流程圖。

【0030】 第 6 圖：係本發明對等網路裝置社群之搜尋方法又一實施例之流程圖。

【0031】 第 7 圖：係本發明對等網路裝置社群之搜尋方法又一實施例之流程圖。

【0032】 第 8 圖：係本發明對等網路裝置社群搜尋方法之付費確認流程圖。

【實施方式】

【0033】 本案將可由以下的實施例說明而得到充分了解，使得熟習本技藝之人士可以據以實施，然本案之實施並非可由下列實施案例而被限制其實施型態。其中相同的標號始終代表相同的組件。

【0034】 首先，請參閱第 2 圖，係本發明對等網路裝置社群之搜尋系統及其對等網路裝置一實施例之構造示意圖。如圖所示，對等網路裝置社群之搜尋系統包括：一對等網路裝置社群 40、一連線伺服器 20 及一內容管理伺服器 30。連線伺服器 20 分別連接內容管理伺服器 30 及對等網路裝置社群 40，而內容管理伺服器 30 亦分別連接對等網路裝置社群 40 及連線伺服器 20。對等網路裝置社群 40 內具有複數個對等網路裝置 41、42、43、44、45、46。連線伺服器 20 設置有一拓撲結構資料表 21。內容管理伺服器 30 則設置有一搜尋引擎 31、一索引資料庫 33 與一使用者裝置管理單元 35。

【0035】 連線伺服器 20 之拓撲結構資料表 21 主要是記錄有對等網路裝置社群 40 中每一個對等網路裝置 41~46 彼此間的一連結資料 49，連結資料 49 係指對等網路裝置 41~46 彼此間的連結關係，可包含但不限制係指其連結結構、連結資料及/或連線位置。

【0036】 內容管理伺服器 30 之索引資料庫 33 可記錄並管理對等網路裝置

社群 40 中所有對等網路裝置 41~46 之索引資料 4113、4213、4313、4413、4513 與 4613。索引資料 4113~4613 係可為對等網路裝置 41~46 自行主動提供給內容管理伺服器 30，或者是內容管理伺服器 30 利用一網路搜集模組，例如一網路爬蟲(crawler)，至對等網路裝置 41~46 中搜集而得，並整理記錄於索引資料庫 33。

【0037】 本發明對等網路裝置社群之搜尋系統可接收一個或多個使用者裝置 51、52、53、54、55、56 所要求及傳送之一搜尋請求 351。使用者裝置管理單元 35 即可記錄與管理該使用者裝置 51~56(或可稱各使用者)。當使用者要進行資料搜尋時，可利用使用者裝置 51、52、53、54、55 或 56 而與該內容管理伺服器 30 之使用者裝置管理單元 35 及/或連線伺服器 20 連結，並向內容管理伺服器 30 之使用者裝置管理單元 35 提出搜尋請求 351(如虛線所示)。內容管理伺服器 30 之搜尋引擎 31 即可依據該搜尋請求 351 而搜尋該索引資料庫 33，並因此以產生一搜尋結果 311。搜尋結果 311 將透過使用者裝置管理單元 35 回傳給提出該搜尋請求 351 之使用者裝置 51、52、53、54、55 或 56。使用者裝置 51~56 即可依據搜尋結果 311 及透過連線伺服器 20 之拓撲結構資料表 21 以獲得對等網路裝置社群 40 內之對等網路裝置 41~46 的連結資料 49 或連線位置，並挑選出想要連接並獲得資料的對等網路裝置 41、42、43、44、45 及/或 46。

【0038】 於本發明又一實施例中，每一對等網路裝置 41~46 個別設置有至少一檔案資料 411、421、431、441、451 或 461，而每一檔案資料 411~461 又包括有一內容資料 4111、4211、4311、4411、4511、4611 及/或一索引資料 4113、4213、4313、4413、4513、4613。對等網路裝置 41~46 所儲存的檔案資料 411~461 可為至少一圖片、影片、音樂、論文及/或統計資料等內容物。但不應以此為限，任何形式之內容物都可以接受。使用者裝置 51~56 在連線所挑選之對等網路裝置 41~46 後，即可連結或下載所挑選之檔案資料 411~461。如此即可達成在對等網路裝置社群 40 中快速搜尋到重要資料(檔案資料 411~461)之目的。

【0039】 使用者裝置 51~56 係可為一手機、一平板電腦、一可攜式電子裝

置及/或一電腦系統，但不依此為限。

【0040】 再者，請參閱第 3 圖，係本發明對等網路裝置社群之搜尋系統及其對等網路裝置另一實施例之構造示意圖。與前述第 2 圖實施例不同之處即在於：每一對等網路裝置 41~46 中個別設置有一權重資料 413、423、433、443、453 與 463，且該內容管理伺服器 30 中增設有一排序演算模組 32。其中，排序演算模組 32 可根據對等網路裝置 41、42、43、44、45 與 46 之連結資料 49 以建立每一個對等網路裝置 41~46 之一權重資料 413、423、433、443、453 與 463。

【0041】 當使用者要進行資料搜尋時，可利用使用者裝置 51、52、53、54、55 或 56 向內容管理伺服器 30 之使用者裝置管理單元 35 提出一搜尋請求 351，內容管理伺服器 30 之搜尋引擎 31 則可透過連線伺服器 20 之拓撲結構資料表 21 以搜尋找到對等網路裝置社群 40 中每一個索引資料 4113、4213、4313、4413、4513 與 4613，或者是搜尋引擎 31 直接至該索引資料庫 33，根據搜尋請求 351 之搜尋條件進行搜尋，並因此產生一搜尋結果 311。排序演算模組 32 可根據該對等網路裝置 41~46 之權重資料 413、423、433、443、453 與 463 的高低順序而對該搜尋結果 311 進行排序，因此又可更進一步產生一更精確之搜尋排序結果 335，如虛線所示。搜尋排序結果 335 再透過使用者裝置管理單元 35 回傳給提出搜尋請求 351 之使用者裝置 51、52、53、54、55 或 56，以提供使用者裝置 51~56 可挑選出想要獲得到的檔案資料 411~461、內容資料 4111~4611 及/或欲連接之對等網路裝置 41~46，因而達成在對等網路裝置社群 40 中快速搜尋到最重要資料之目的。

【0042】 雖然在本發明主要實施例中係以權重資料 413~463 的高低順序來進行排序，但並不依此為限。本發明也可以利用其他可提供比較之內容而對搜尋結果 311 進行排序，例如搜尋速度等。

【0043】 於本發明又一實施例中，連線伺服器 20 或內容管理伺服器 30 中亦可增設有一權重對應表 25，而權重對應表 25 可記錄每一個對等網路裝置 41、42、43、44、45、46 相對應之權重資料 413、423、433、443、453 與 463。

【0044】 另外，於本發明又一實施例中，當使用者及/或使用者裝置 51、52、53、54、55 或 56 向內容管理伺服器 30 之使用者裝置管理單元 35 提出一搜尋請求 351 時，內容管理伺服器 30 之搜尋引擎 31 可透過該連線伺服器 20 之拓撲結構資料表 21 而搜尋對等網路裝置社群 40 中每一個索引資料 4113、4213、4313、4413、4513 與 4613。由於每一個對等網路裝置 41~46 可能存在有一個或多個檔案資料 411~461，或每一索引資料 4113~4613 存在有一個或多個所代表之內容資料 4111~4611，因此每一索引資料 4113~4613 可以皆產生一個或多個搜尋結果 311。與該對等網路裝置 41~46 所對應之權重資料 413、423、433、443、453 與 463 進行一函數運算，以產生可代表每一筆搜尋結果 311 高低次序之一權重搜尋結果 337，並依所有權重搜尋結果 337 之高低順序進行排序，因此可產生一權重搜尋排序結果 339。權重搜尋排序結果 339 可透過使用者裝置管理單元 35 回傳給提出搜尋請求 351 之使用者裝置 51~56。如此即可達成在對等網路裝置社群 40 中快速搜尋到最重要資料之目的。

【0045】 於本發明一實施例中，前述之函數運算係可為但不限制為一相乘、一相加、一等比計算、一 PageRank、一 HITS 及/或一 TrustRank 等運算模式，以產生可代表每一筆搜尋結果 311 之高低順序之權重搜尋排序結果 339。

【0046】 又，於本發明又一實施例中，該索引資料庫 33 可記錄並儲存該對等網路裝置 41~46 之索引資料 4113~4613，索引資料 4113~4613 可包括但不限制係為至少一標籤、至少一 XML、至少一 RSS、至少一資料庫及/或至少一網頁。

【0047】 於本發明又一實施例中，該使用者裝置管理單元 35 可設置一使用者付費模組 355，當使用者裝置 51~56 向該內容管理伺服器 30 之使用者裝置管理單元 35 進行一付費並確認程序後，內容管理伺服器 30 才允許提供該搜尋結果 311、搜尋排序結果 335、權重搜尋結果 337、權重搜尋排序結果 339 及/或允許該連線伺服器 20 提供該對等網路裝置 41~46 之連結資料 49 給該使用者裝置 51~56。

【0048】 於本發明又一實施例中，該索引資料 4113~4613 除了可利用該搜



尋引擎 31 對該對等網路裝置 41~46 之內容資料 4111~4611 建立外，索引資料 4113~4613 亦可由該對等網路裝置 41~46 自行建立，並將該索引資料 4113~4613 主動提供並記錄於內容管理伺服器 30，或者是內容管理伺服器 30 利用一網路搜集模組，例如一網路爬蟲(crawler)，至對等網路裝置 41~46 中搜集而得，並整理記錄於索引資料庫 33 中。

【0049】 於本發明又一實施例中，如虛線所示，連線伺服器 20、內容管理伺服器 30 及/或對等網路裝置社群 40 亦可為一個或多個，藉此以擴大搜尋樣品數或搜尋速度。

【0050】 於本發明又一實施例中，該對等網路裝置 41~46 設置有控制單元 415、425、435、445、455 與 465，及檔案資料 411、421、431、441、451 或 461，每一個檔案資料 411~461 又具有一內容資料 4111~4611，該控制單元 415~465 則可控制及設置該對等網路裝置 41~46 之檔案資料 411~461 與內容資料 4111~4611 係為一開放狀態或一隱藏狀態。當設置為開放狀態時，則允許該搜尋引擎 31 對該對等網路裝置 41~46 之內容資料 4111~4611 建立該索引資料 4113~4613，並允許連線伺服器 20 提供對等網路裝置 41~46 之連結資料 49 給使用者裝置 51~56。當設為隱藏狀態時則禁止該搜尋引擎 31 對該對等網路裝置 41~46 之內容資料 4111~4611 建立索引資料 4113~4613，並禁止連線伺服器 20 提供對等網路裝置 41~46 之連結資料 49 給使用者裝置 51~56。

【0051】 於本發明又一實施例中，使用者付費模組 355 內具有一使用者身份資料 3551，可記錄使用者裝置 51~56 的身份或存取權限，例如：已註冊使用者、未註冊使用者、付費使用者或免費使用者等。使用者付費模組 355 亦記錄有一可讓使用者裝置 51~56 選擇其付款方式的付費模式資料 3553，例如每月定額付款模式或是預先付款模式，其中預先付款模式例如是可採預先以一定額付款當預備款，預備款用完後再儲值預備款。

【0052】 使用者付費模組 355 亦記錄有一付款確認資料 3555，例如可和銀行合作以使用安全加密的資料傳輸方式來進行付款確認與否。使用者付費模組 355 與合作銀行連線，若確認使用者裝置 51~56 已付款成功，使用者裝置管理單元 35 才讓該使用者裝置 51~56 開始使用服務；反之，

若合作銀行連線確認使用者付款不成功，則提供錯誤訊息給使用者裝置 51~56，要求其解決付款問題後才可進行資料提供服務。其中，使用者裝置 51~56 可以藉由使用應用程式或專屬網頁以和使用使用者付費模組 355 連線，並進行網路線上付費程序。使用者付費模組 355 也可記錄使用者裝置挑選之資料連結 49 或下載的檔案資料 411~461，再依據使用的數據流量、傳輸頻寬及/或使用記憶體空間大小等計算出不同費用的一計價(方案)資料 3557，例如使用的數據流量越大、要求的傳輸頻寬越大、要求的使用記憶體空間越多則收費越多。其中，當記錄的資料已經超越付費模式資料 3553 的設定基準時，則可不再提供該檔案資料。

【0053】 再者，請參閱第 4 圖，係本發明對等網路裝置社群之搜尋系統及其對等網路裝置又一實施例之構造示意圖。與前述第 3 圖實施例不同之處即在於：該權重對應表 25 可設置於連線伺服器 20、設置於內容管理伺服器 30 及/或一獨立之儲存裝置 60。

【0054】 請參閱第 5 圖，係本發明對等網路裝置社群之搜尋方法一實施例之流程圖。可同時參閱第 3 圖，本發明搜尋方法可應用於一對等網路裝置社群之搜尋系統，該搜尋系統具有複數個對等網路裝置 41~46、一連線伺服器 20 及一內容管理伺服器 30，該搜尋方法包括下列步驟：如步驟 S401 所示，於連線伺服器 20 之拓撲結構資料表 21 記錄對等網路裝置社群 40 中每個對等網路裝置 41~46 之連結資料 49。接著，如步驟 S402 所示，利用內容管理伺服器 30 之搜尋引擎 31 對該對等網路裝置社群 40 中每個對等網路裝置 41~46 之內容資料 4111~4611 建立其索引資料 4113~4613，並將該索引資料 4113~4613 記錄於內容管理伺服器 30 之索引資料庫 33 中。如步驟 S403 所示，判斷使用者是否利用使用者裝置 51~56 向該內容管理伺服器 30 之使用者裝置管理單元 35 提出一搜尋請求 351？若否，則進行步驟 S401；若是，則繼續進行步驟 S404。步驟 S404，內容管理伺服器 30 之搜索引擎 31 依據該搜尋請求 351 而搜尋該索引資料庫 33，並產生一搜尋結果 311。如步驟 S405 所示，內容管理伺服器 30 將回傳該搜尋結果 311 給提出該搜尋請求 351 之使用者裝置 51~56。

【0055】 於本發明又一實施例中，尚包括有以下搜尋步驟：步驟 S406，使用者或使用者裝置 51~56 根據搜尋結果 311 以挑選出欲連結或下載之對等網路裝置 41~46 及/或檔案資料 411~461，而連線伺服器 20 則可提供該對等網路裝置 41~46 之連結線路等連結資料 49。步驟 S407，使用者裝置 51~56 根據連結資料 49 以連接所挑選之對等網路裝置 41~46 及/或下載其檔案資料 411~461。

【0056】 請參閱第 6 圖，係本發明對等網路裝置社群之搜尋方法又一實施例之流程圖。請同時參閱第 3 圖。於此實施例所示之步驟 S501、S504、S505、S506 及 S508 係相同於前述第 5 圖之步驟 S401、S402、S403、S404 及 S405。於連線伺服器 20 之拓撲結構資料表 21 記錄對等網路裝置社群 40 中每一個對等網路裝置 41~46 之連結資料 49，如步驟 S501。內容管理伺服器 30 之排序演算模組 32 將根據每一個對等網路裝置 41~46 之連結資料 49，以建立該對等網路裝置 41~46 之權重資料 413~463，如步驟 S502。記錄每一個對等網路裝置 41~46 之權重資料 413~463 於連線伺服器 20 之權重對應表 25，如步驟 S503。利用內容管理伺服器 30 之搜尋引擎 31 對該對等網路裝置社群 40 中每一個對等網路裝置 41~46 之內容資料 4111~4611，建立其索引資料 4113~4613，並將該索引資料 4113~4613 記錄於內容管理伺服器 30 之索引資料庫 33 中，如步驟 S504 所示。

【0057】 如步驟 S505 所示，判斷使用者是否利用使用者裝置 51~56 向該內容管理伺服器 30 之使用者裝置管理單元 35 提出一搜尋請求 351？若否，則進行步驟 S501；若是，則繼續進行步驟 S506。內容管理伺服器 30 之搜索引擎 31 依據該搜尋請求 351 搜尋該索引資料庫 33，並產生一搜尋結果 311，如步驟 S506。該排序演算模組 32 將依據對等網路裝置 41~46 之權重資料 413~463 的高低順序而對該搜尋結果 311 進行排序，並藉此產生一搜尋排序結果 335，如步驟 S507。接著，回傳該搜尋排序結果 335 給提出搜尋請求 351 之使用者裝置 51~56，如步驟 S508 所示。

【0058】 當然，在本發明又一實施例中，於步驟 S508 後，尚可接續如第 5 圖所示之步驟 S406 及步驟 S407。在此不再贅述。

【0059】 請參閱第 7 圖，係本發明對等網路裝置社群之搜尋方法又一實施

例之流程圖。本搜尋方法及流程與前述第 6 圖所示實施例之步驟 S501~S505 係完全相同，其不同之處係步驟 S606~S609。步驟 S501~S505 不再贅述。如步驟 S606 所示，內容管理伺服器 30 之搜索引擎 31 依據該搜尋請求 351 搜尋該對等網路裝置 41~46 中之索引資料 4113~4613，而每一索引資料 4113~4613 皆可產生一個或多個搜尋結果 311。排序演算模組 32 則可將該一個或多個搜尋結果 311 與該對等網路裝置 41~46 本身之權重資料 413~463 進行一函數運算，並因此產生一權重搜尋結果 337，其中該函數運算例如但不限制係為一相乘、一相加、一等比計算、一 PageRank、一 HITS 及/或一 TrustRank 等運算模式，如步驟 S607 所示。該排序演算模組 32 又可依所有權重搜尋結果 337 之高低順序而進行排序，藉此以產生一權重搜尋排序結果 339，如步驟 S608 所示。接著，如步驟 S609 所示，回傳該權重搜尋排序結果 339 給提出搜尋請求 351 之使用者裝置 51~56。

【0060】 於本發明又一實施例中，內容管理伺服器 30 必須確認提出搜尋請求 351 之使用者裝置 51~56 之身份資格及/或付款完成後方可提供該搜尋結果 311 或由該連線伺服器 20 提供至少一該對等網路裝置 41~46 之該連結資料 49 給該使用者裝置 51~56。而此付費確認流程，如第 8 圖所示。

【0061】 請參閱第 8 圖，係本發明對等網路裝置社群搜尋方法之付費確認流程圖。可同時參閱第 3 圖。如步驟 S701，內容管理伺服器 30 確認提出搜尋請求 351 之使用者裝置 51~56 的使用者身份資料 3551，例如：已註冊使用者、未註冊使用者、付費使用者或免費使用者等。接著，如步驟 S702，內容管理伺服器 30 可接收使用者裝置 51~56 所欲挑選之一付費模式資料 3553，例如每月定額付款模式或是預先付款模式。

【0062】 步驟 S703，判斷該使用者裝置 51~56 之付款確認資料 3555 是否已完成付款？例如可和銀行合作以使用安全加密的資料傳輸方式來進行付款確認與否。若是，繼續進行步驟 S704；若否，則進行步驟 S714。步驟 S714，表示使用者裝置 51~56 付款程序並未完成，內容管理伺服器 30 可提供錯誤訊息給使用者裝置 51~56，並要求其解決付款問題後，才

可進行資料提供服務。步驟 S704，表示使用者裝置 51~56 已完成付款程序，使用者裝置 51~56 挑選欲連結或下載之資料 411~461。

【0063】 步驟 S705，內容管理伺服器 30 根據使用者裝置 51~56 選擇下載之檔案資料 411~461 所需之使用的數據流量、傳輸頻寬及/或使用記憶體空間大小等計算出一相對應需支付之使用費用（計價資料 3557），而內容管理伺服器 30 記錄該使用者裝置 51~56 欲連結或下載資料而衍生之計價資料 3557。

【0064】 步驟 S706，判斷該使用者裝置 51~56 剩餘金額是否足夠？若是，繼續進行步驟 S707；若否，則進行步驟 S714。步驟 S714，表示使用者裝置 51~56 付款程序並未完成，內容管理伺服器 30 可提供錯誤訊息給使用者裝置 51~56，並要求其解決付款問題後，才可進行資料提供服務。步驟 S707，表示使用者裝置 51~56 之剩餘金額足以支付此次搜尋請求 351 之費用，內容管理伺服器 30 提供搜尋結果 311 或由連線伺服器 20 提供至少一對等網路裝置 41~46 之連結資料 49 給使用者裝置 51~56。

【0065】 根據以上所述，本案實為一兼具產業利用性、新穎性並在工業技術發展上極具價值的發明。惟以上所述者，僅為本發明之實施例而已，當不能以之限定本發明所實施之範圍。凡依本發明申請專利範圍所作之均等變化與修飾，皆應仍屬於本發明專利涵蓋之範圍內。

【符號說明】

10	中央伺服器	175	使用者裝置
11	搜尋引擎	176	使用者裝置
15	檔案資料	20	連線伺服器
151	索引資料	21	拓撲結構資料表
153	內容資料	25	權重對應表
171	使用者裝置	30	內容管理伺服器
172	使用者裝置	31	搜尋引擎
173	使用者裝置	311	搜尋結果
174	使用者裝置	32	排序演算模組

33	索引資料庫	433	權重資料
335	搜尋排序結果	435	控制單元
337	權重搜尋結果	44	對等網路裝置
339	權重搜尋排序結果	441	檔案資料
35	使用者裝置管理單元	4411	內容資料
351	搜尋請求	4413	索引資料
355	使用者付費模組	443	權重資料
3551	使用者身份資料	445	控制單元
3553	付款模式資料	45	對等網路裝置
3555	付款確認資料	451	檔案資料
3557	計價資料	4511	內容資料
40	對等網路裝置社群	4513	索引資料
41	對等網路裝置	453	權重資料
411	檔案資料	455	控制單元
4111	內容資料	46	對等網路裝置
4113	索引資料	461	檔案資料
413	權重資料	4611	內容資料
415	控制單元	4613	索引資料
42	對等網路裝置	463	權重資料
421	檔案資料	465	控制單元
4211	內容資料	49	連結資料
4213	索引資料	51	使用者裝置
423	權重資料	52	使用者裝置
425	控制單元	53	使用者裝置
43	對等網路裝置	54	使用者裝置
431	檔案資料	55	使用者裝置
4311	內容資料	56	使用者裝置
4313	索引資料	60	儲存裝置

申請專利範圍

1. 一種對等網路裝置社群之搜尋系統，用以接收至少一使用者裝置所傳送之一搜尋請求，該對等網路裝置社群之搜尋系統包括：
至少一對等網路裝置社群，每一該對等網路裝置社群具有至少一個對等網路裝置；
至少一連線伺服器，連接該對等網路裝置社群，每一該連線伺服器具有一拓撲結構資料表，該拓撲結構資料表記錄該對等網路裝置社群中每一該對等網路裝置彼此間之一連結資料；以及
至少一內容管理伺服器，分別連接該對等網路裝置社群及該連線伺服器，每一該內容管理伺服器具有一搜尋引擎、一索引資料庫及一使用者裝置管理單元，該索引資料庫記錄該對等網路裝置社群中每一該對等網路裝置之一索引資料，該使用者裝置管理單元接受該使用者裝置提出的該搜尋請求，該搜尋引擎依據該搜尋請求搜索該索引資料庫以產生一搜尋結果，並將該搜尋結果回傳給該使用者裝置。
2. 如請求項 1 所述之搜尋系統，其中每一該對等網路裝置具有一權重資料，該內容管理伺服器設有一排序演算模組，該排序演算模組根據該對等網路裝置之連結資料而建立該權重資料，該搜尋結果則依據該對等網路裝置之權重資料高低順序而進行排序，以產生一搜尋排序結果。
3. 如請求項 2 所述之搜尋系統，更包括：
一權重對應表，記錄每一該對等網路裝置之該權重資料，其中該權重對應表存放於該內容管理伺服器、該連線伺服器或一儲存裝置。
4. 如請求項 2 所述之搜尋系統，其中該排序演算模組根據該搜尋結果與該對等網路裝置所對應之該權重資料進行一函數運算，以產生一權重搜尋結果，並依據該權重搜尋結果高低順序進行排序，以產生一權重搜尋排序結果。
5. 如請求項 1 所述之搜尋系統，其中該使用者裝置管理單元具有一使用者付費模組，確認該使用者裝置付費後，內容管理伺服器才提供該搜尋結果或由該連線伺服器提供至少一該對等網路裝置之該連結資料給該使用者裝置。
6. 如請求項 5 所述之搜尋系統，其中該使用者付費模組接收該使用者裝置

- 所傳送之一使用者身份資料、一計價資料、一付費模式資料或一付款確認資料。
7. 如請求項 1 所述之搜尋系統，其中該索引資料可由該些對等網路裝置自行建立、或由該內容管理伺服器透過一網路搜集模組至該些對等網路裝置中搜集而得。
 8. 如請求項 1 所述之搜尋系統，其中每一該對等網路裝置具有至少一檔案資料，當該使用者裝置根據該搜尋結果挑選所欲連結之該對等網路裝置，該連線伺服器提供該對等網路裝置之該連結資料，該使用者裝置根據該連結資料連結所挑選之該對等網路裝置，並下載該檔案資料。
 9. 如請求項 1 所述之搜尋系統，其中該使用者裝置根據該搜尋結果挑選所欲連結之該對等網路裝置，該連線伺服器提供該對等網路裝置之該連結資料，該使用者裝置根據該連結資料連結所挑選之該對等網路裝置。
 10. 一種可應用於如請求項 1 所述搜尋系統之對等網路裝置，包括：
至少一檔案資料，每一該檔案資料具有一索引資料；及
一控制單元，控制該檔案資料為一開放狀態或一隱藏狀態。
 11. 一種對等網路裝置社群之搜尋方法，應用於一對等網路裝置社群之搜尋系統，該搜尋系統具有至少一個對等網路裝置、一連線伺服器及一內容管理伺服器，該搜尋方法包括下列步驟：
記錄每一該對等網路裝置之一連結資料，以產生一拓撲結構資料表，並儲存該拓撲結構資料表於該連線伺服器；
建立每一該對等網路裝置之一索引資料，並儲存該些索引資料於該內容管理伺服器之一索引資料庫；
該內容管理伺服器接收來至一使用者裝置所傳送之一搜尋請求，依據該搜尋請求搜尋該索引資料庫，以產生一搜尋結果；及
回傳該搜尋結果給該使用者裝置。
 12. 如請求項 11 所述之搜尋方法，更包括下列步驟：
該內容管理伺服器依據該些對等網路裝置之該連結資料，建立每一該對等網路裝置之一權重資料；
根據該搜尋結果與該對等網路裝置所對應之該權重資料，進行一函數運算，以產生一權重搜尋結果；及

依據該權重搜尋結果高低順序進行排序，以產生一權重搜尋排序結果。

13.如請求項 12 所述之搜尋方法，更包括下列步驟：

記錄該些對等網路裝置之該權重資料，以產生一權重對應表；及
儲存該權重對應表放於該內容管理伺服器、該連線伺服器或一儲存裝置。

14.如請求項 11 所述之搜尋方法，更包括下列步驟：

藉由該內容管理伺服器確認該使用者裝置付費後，該內容管理伺服器才提供該搜尋結果或由該連線伺服器提供至少一該對等網路裝置之該連結資料給該使用者裝置。

15.如請求項 14 所述之搜尋方法，其中該付費步驟包含下列步驟：

確認該使用者裝置之一使用者身分資料；
接收該使用者裝置傳送之一付費模式資料；
確認該使用者裝置傳送之一付款確認資料；及
記錄該使用者裝置連結或下載而所需支付之一計價資料。

16.如請求項 11 所述之搜尋方法，其中該索引資料可由該些對等網路裝置自行建立、或由該內容管理伺服器透過一網路搜集模組至該些對等網路裝置中搜集而得。

17.如請求項 11 所述之搜尋方法，更包括下列步驟：

控制每一該對等網路裝置之一檔案資料為一開放狀態或一隱藏狀態。

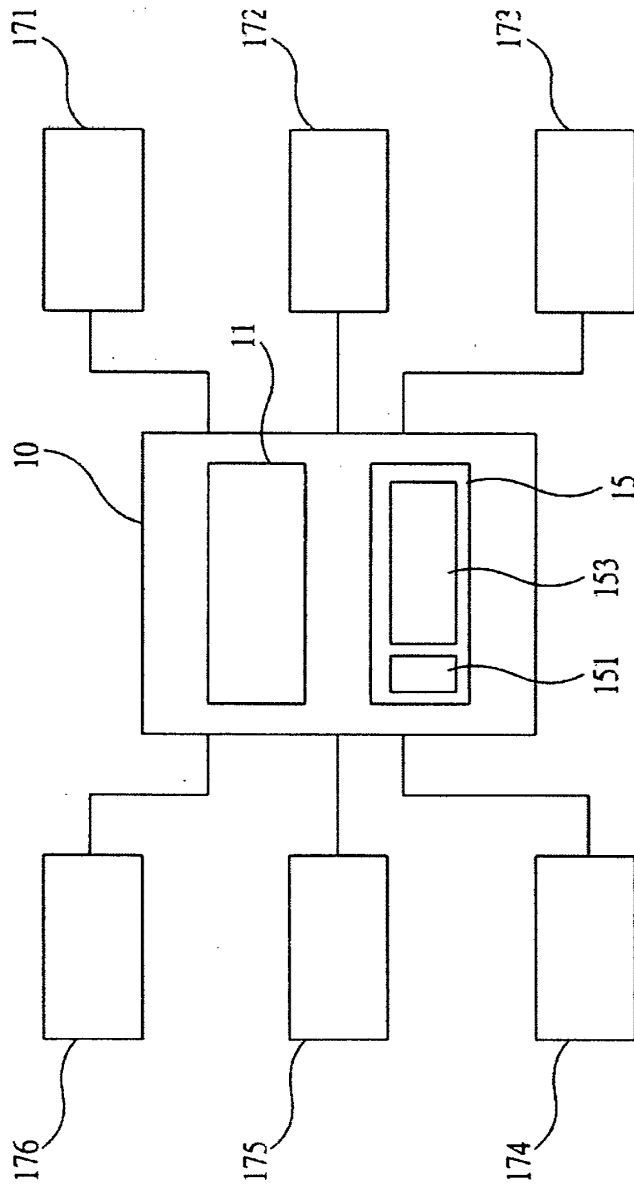
18.如請求項 17 所述之搜尋方法，更包括下列步驟：

該使用者裝置根據該搜尋結果，挑選所欲連結之該對等網路裝置；
該連線伺服器提供該對等網路裝置之該連結資料給該使用者裝置；及
該使用者裝置根據該連結資料，連結所挑選之對等網路裝置，並下載該檔案資料。

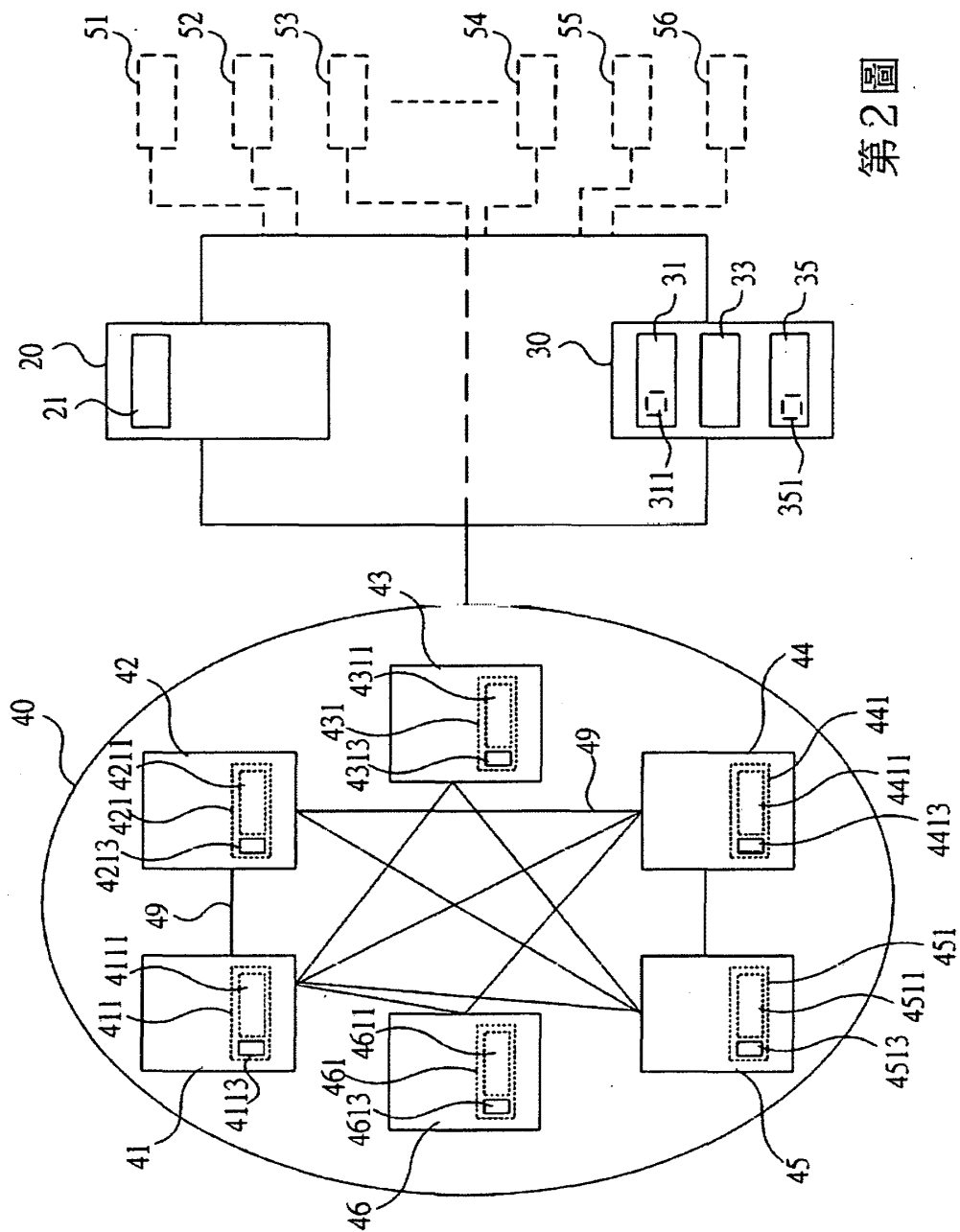
19.如請求項 11 所述之搜尋方法，更包括下列步驟：

該使用者裝置根據該搜尋結果，挑選所欲連結之該對等網路裝置；
該連線伺服器提供該對等網路裝置之該連結資料給該使用者裝置；及
該使用者裝置根據該連結資料，連結所挑選之對等網路裝置。

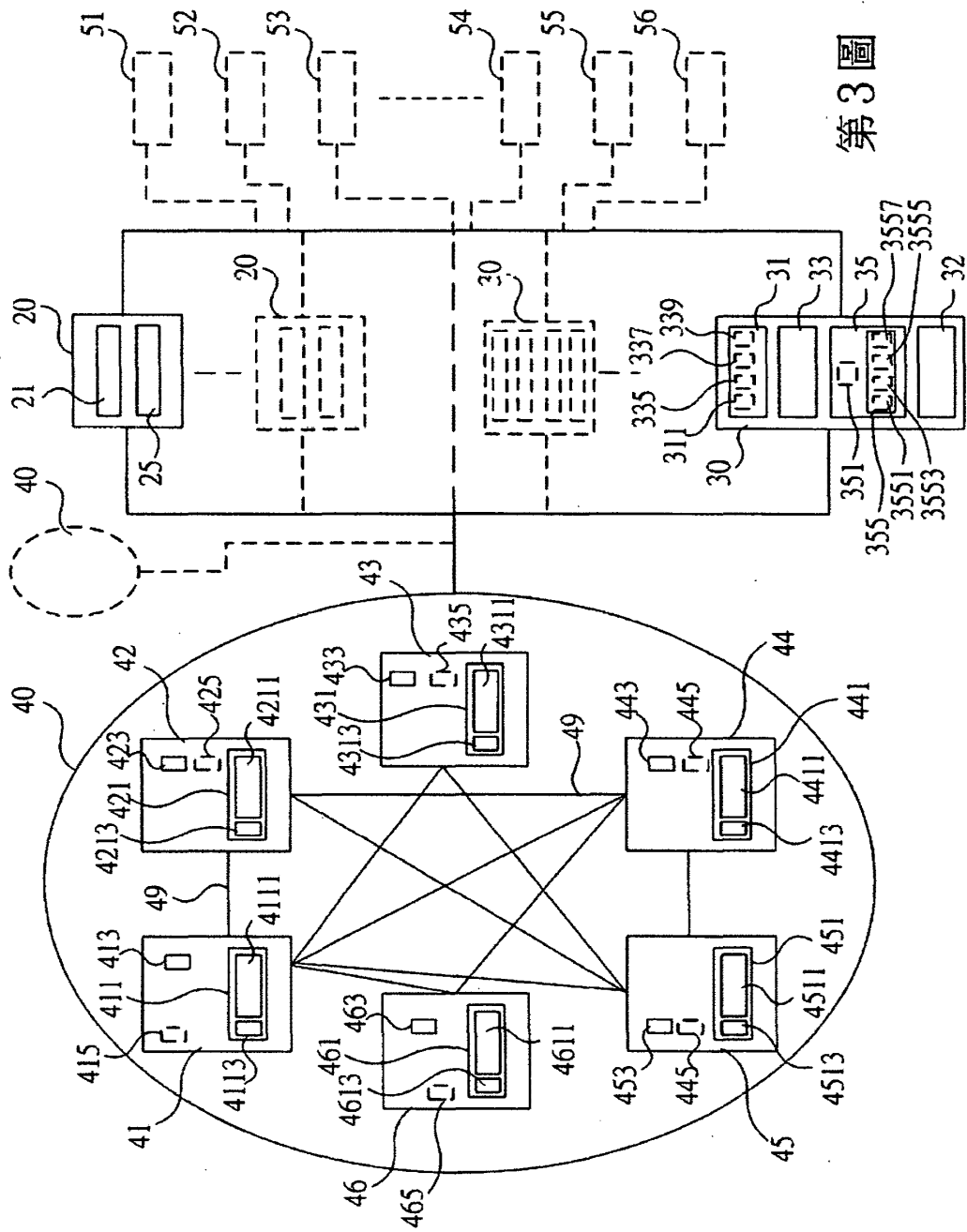
圖式



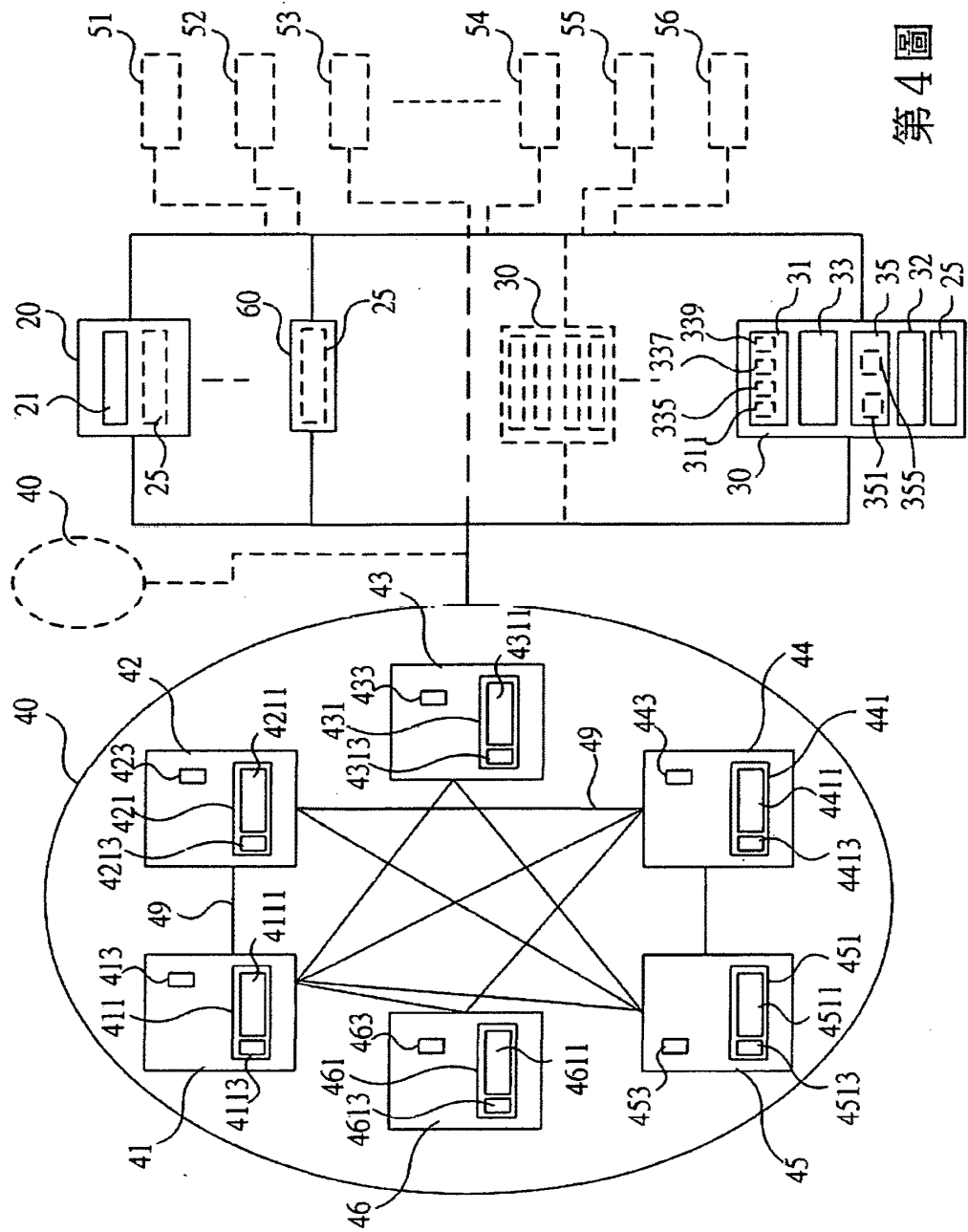
第1圖
(習用技術)



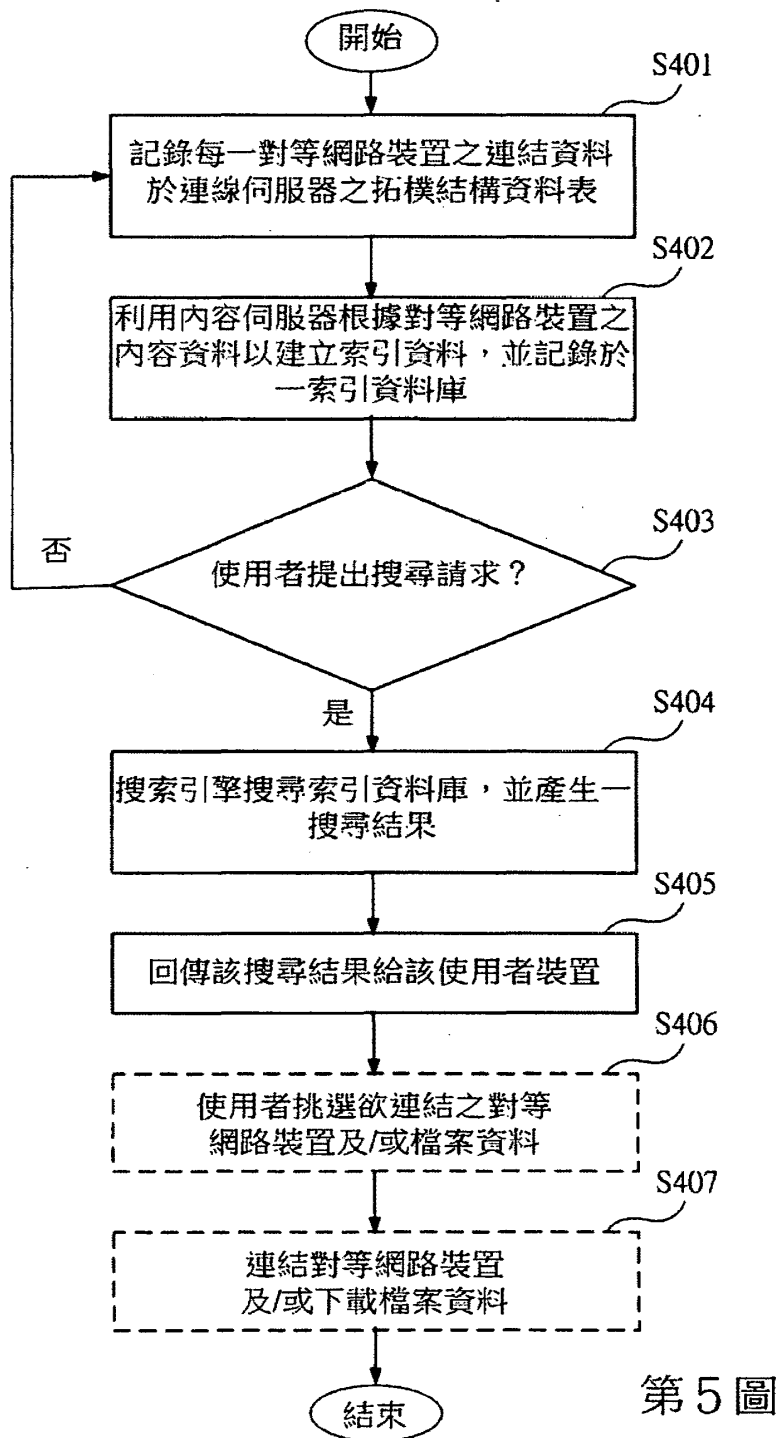
第2圖



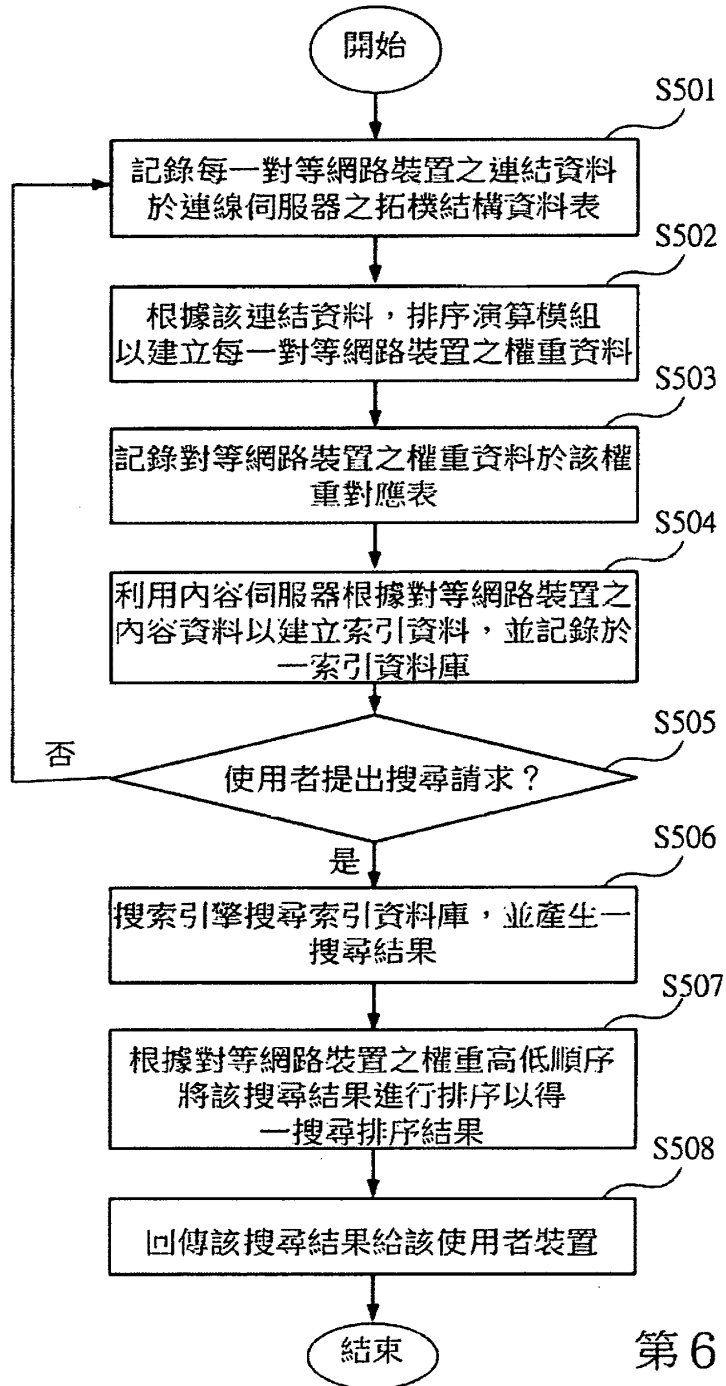
第3圖



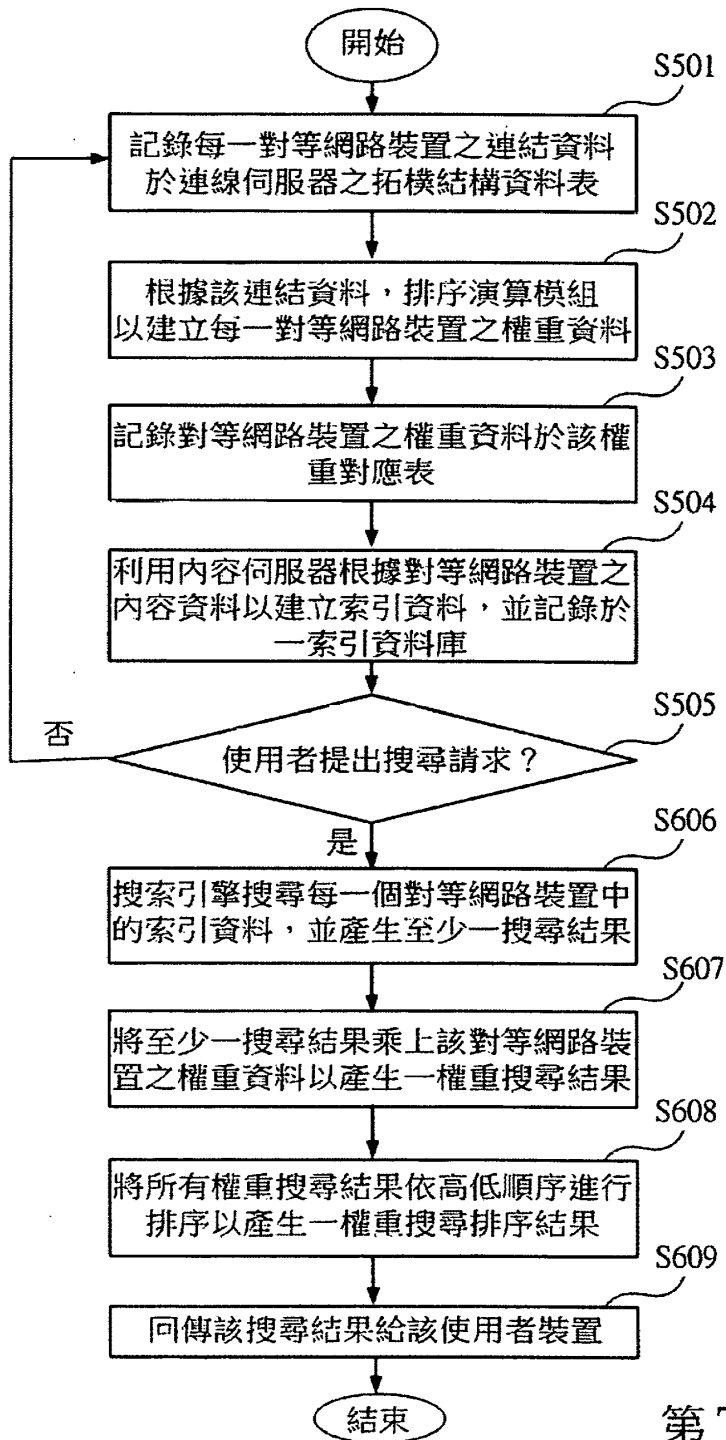
第4圖



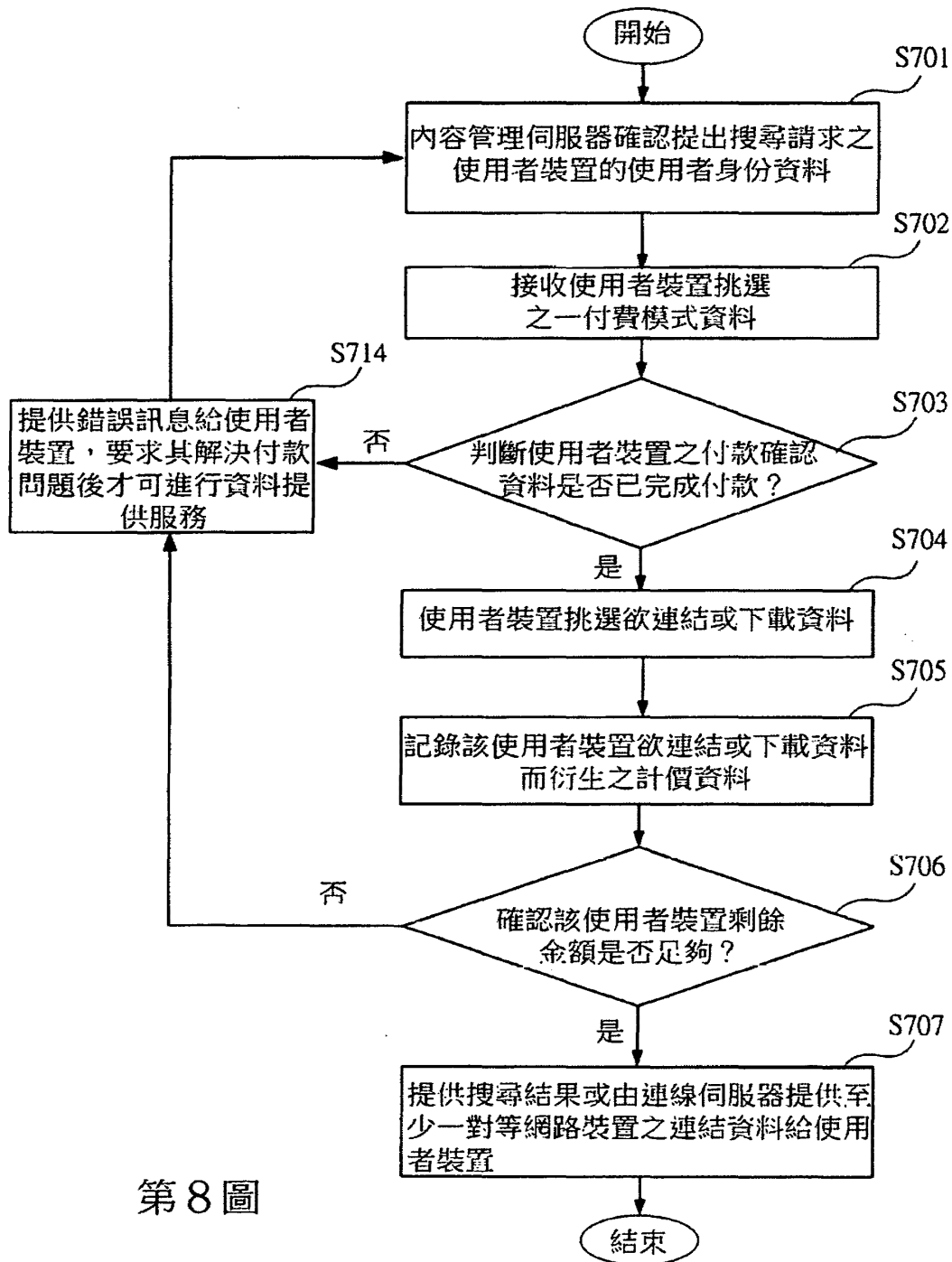
第 5 圖



第 6 圖



第 7 圖



第8圖



Jim

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	14616478
	Filing Date	02/06/2015
	First Named Inventor	Hsin-Tai Wu
	Art Unit	2165
	Examiner Name	ABEL JALIL, NEVEEN
Total Number of Pages in This Submission	Attorney Docket Number	TUTK-1405-003US

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form	☐ Drawing(s)	☐ After Allowance Communication to TC
☐ Fee Attached	☐ Licensing-related Papers	☐ Appeal Communication to Board of Appeals and Interferences
☐ Amendment/Reply	☐ Petition	☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
☐ After Final	☐ Petition to Convert to a Provisional Application	☐ Proprietary Information
☐ Affidavits/declaration(s)	☐ Power of Attorney, Revocation	☐ Status Letter
☐ Extension of Time Request	☐ Change of Correspondence Address	☐ Other Enclosure(s) (please identify below):
☐ Express Abandonment Request	☐ Terminal Disclaimer	
☐ Information Disclosure Statement	☐ Request for Refund	
☒ Certified Copy of Priority Document(s)	☐ CD, Number of CD(s) _____	
☐ Reply to Missing Parts/Incomplete Application	☐ Landscape Table on CD	
☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm Name	HDLS IPR Services	
Signature	/Jimmy Shih/	
Printed name	Chun-Ming Shih	
Date	Jan. 29, 2016	Reg. No. 64041

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	/Jimmy Shih/		
Typed or printed name	Chun-Ming Shih	Date	Jan. 29, 2016

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 and 1.14. 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.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US

CONFIRMATION NO. 9534

84956
HDLS IPR Services
P.O. Box 230970
CENTREVILLE, VA 20120

PUBLICATION NOTICE



OC000000082018944

Title:SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

Publication No.US-2016-0098486-A1

Publication Date:04/07/2016

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 publicly available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

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



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US	9534
84956	7590	02/22/2017		
HDLS IPR Services P.O. Box 230970 CENTREVILLE, VA 20120			EXAMINER LEE, WILSON	
			ART UNIT 2155	PAPER NUMBER
			MAIL DATE 02/22/2017	DELIVERY MODE PAPER

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

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

Office Action Summary	Application No. 14/616,478	Applicant(s) WU, HSIN-TAI	
	Examiner WILSON LEE	Art Unit 2155	AIA (First Inventor to File) Status Yes

-- 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 2/6/15.
☐ 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) 1-19 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-19 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

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

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 2/6/15 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) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____. | 4) ☐ Other: ____. |

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “index database being recorded with an indexed data of each said P2P device of the P2P device community, the user’s device management unit receiving the search request sent from the user’s device, the search engine searching the index database to generate a search result based on the search request and then returning the search result to the user’s device” of Claim 1 in user’s perspective must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New

Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections – 35 U.S.C. 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-19 are rejected under U.S.C. 101 because the claimed invention is directed to a judicial exception (i.e. a law of nature, a nature phenomenon or an abstract idea) without significantly more. Claims 1 -19 are directed to the abstract ideas at least one of the following identified abstract ideas:

1) Collecting information, analyzing it, and displaying certain results of the collection and analysis (Electric Power Group)

2) Delivering user-selected media content to portable devices (Affinity Labs v. Amazon.com)

2) Determining a price, using organizational and product group hierarchies (Versata).

These abstract ideas above are identified according to the Interim Eligibility Identifying Abstract Ideas, December 2016.

Further, the method as claimed can be practiced manually by human using computer.

The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements or combination of elements in the claims other than the abstract idea per se amounts to no more than: adding insignificant extra solution activity to the judicial exception (e.g., mere data gathering in conjunction with a law of nature or abstract idea) (see Mayo, 132 S. Ct. at 1297-98) and mere instructions to implement the idea on a computer, and/or recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry which has been treated by the courts as an attempt to link the abstract idea to a particular technological environment.

As demonstrated above, the claimed processor readable medium is merely being used as means of implementing the abstract idea on the system and to further perform generic computer functions, which are well understood, routine, and conventional activities previously known to the pertinent industry such which was treated in Alice Corp., as an attempt to link the judicial exception to a particular technological environment.

As a result, the claimed processor readable medium is still considered to be nothing more than a general purpose computer that happens to be the particular means for performing/executing instructions, i.e. the abstract idea.

Viewed as a whole, these additional claim elements do not provide meaningful limitations to transform the abstract idea into a patent eligible application of the abstract idea such that the claims amount to significantly more than the abstract idea

itself. Therefore, the claims are rejected under 35 U.S.C 101 as being directed to non-statutory matter.

The dependent claims have been fully considered and do not recite anything that is found to render the abstract idea as being transformed into a patent eligible invention. The dependent claims are reciting similar steps to that addressed above, such as receiving, storing, transmitting data and applying rules, are not reciting significantly more than the abstract idea itself. The dependent claims are also rejected as being drawn to an abstract idea.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

Claim(s) 1-9, 11-16, 18-19, as best understood, is/are rejected under 35 U.S.C. 102a(1) as being anticipated by Hammad (2013/0166332).

Regarding Claim 1, Hammad (2013/0166332) discloses a searching system for a P2P (peer-to-peer) device community (“person-2-person”, paragraph [0106]; “in a P2P transfer”, paragraph [0166]; “peer wallets”, paragraph [0175]), for receiving a search request sent from at least one user’s device (“search results in response to a user providing keywords”, paragraph [0106]; “a request for on-demand search”, paragraph [0199]; “making the search requests”, paragraph [0202]), the searching system comprising:

at least one P2P device community, each said P2P device community includes at least one P2P device (“person-2-person”, paragraph [0106]; “in a P2P transfer”, paragraph [0166]; “peer wallets”, paragraph [0175]);

at least one online server connecting to the P2P device community (“person-2-person”, paragraph [0106]; “in a P2P transfer”, paragraph [0166]; “peer wallets”, paragraph [0175]), each said online server includes a topology data table (“database table”, paragraph [0120]; “tables remoted from the mobile device”, paragraph [0137]), the topology data table being recorded with a link data between each of the P2P devices of the P2P device community (“person-2-person”, paragraph [0106]; “in a P2P transfer”, paragraph [0166]; “peer wallets”, paragraph [0175]); and

at least one content management server (“server”, paragraphs [0199], [0249]; fig. 21) connecting to the P2P device community and the online server respectively, each said content management server includes a search engine (“search engine”, paragraph [0199]), an index database (“relational database”, “index against the key field”, paragraph [0556]), and a user’s device management unit, the index database being recorded with an indexed data of each said P2P device of the P2P device community, the user’s device management unit receiving the search request sent from the user’s device, the search engine searching the index database to generate a search result based on the search request and then returning the search result to the user’s device (“search results in response to a user providing keywords”, paragraph [0106]).

Claim 11 is rejected similarly as discussed above in a manner of method.

Regarding Claim 2, Hammad discloses the searching system of claim 1, wherein each said P2P device includes a weighted data, and the content management server is provided with a sorting algorithm module creating the weighted data (“a database table/matrix of weighting values”, paragraph [0149]) based on the link data associated with the P2P device, the search result being sorted (“retained products may be sorted in descending order”, paragraph [0254]) by the order of the weighted data of the P2P device so as to generate a sorted search result (“search results in response to a user providing keywords”, paragraph [0106]).

Claim 12 is rejected similarly as discussed above in a manner of method.

Regarding Claim 3, Hammad discloses the searching system of claim 2, further comprising:

a weight look-up table (“lookup a database”, paragraph [0096]) recorded with the weighted data of each said P2P device (“matrix of weighting values”, paragraph [0149]), wherein the weight look-up table is stored in the content management server, the online server, or a storage device (“server may lookup”, paragraph [0493]).

Claim 13 is rejected similarly as discussed above in a manner of method.

Regarding Claim 4, Hammad discloses the searching system of claim 2, wherein the sorting algorithm module performs a function operation based on the search result (“search results in response to a user providing keywords”, paragraph [0106]) and the weighted data corresponding to the P2P device to generate a weighted search result, and the weighted search result is sorted by the order of the weighted search results so as to generate a weighted (“matrix of weighting values”, paragraph [0149]) and sorted

search result (“retained products may be sorted in descending order”, paragraph [0254]).

Regarding Claim 5, Hammad discloses the searching system of claim 1, wherein the user’s device management unit includes a user-charge module, and wherein after confirming that the user’s device has been charged (“proof of purchase payment”, paragraph [0105]; “confirm reallocation of charges”, paragraph [0158]; “pay card for confirmation”, paragraph [0160]; “payment confirmation”, paragraph [0360]), the content management server provides the search result, or the online server provides at least one of the link data of the P2P device, to the user’s device.

Claim 14 is rejected similarly as discussed above in a manner of method.

Regarding Claim 6, Hammad discloses the searching system of claim 5, wherein the user-charge module receives a user’s identity data (“user’s profile”, “user’s identity”, paragraph [0105]), a charging data, a charging-mode data, or a payment confirmation data (“proof of purchase payment”, paragraph [0105]; “confirm reallocation of charges”, paragraph [0158]; “pay card for confirmation”, paragraph [0160]; “payment confirmation”, paragraph [0360]), all of which being sent from the user’s device.

Regarding Claim 7, Hammad discloses the searching system of claim 1, wherein the indexed data (“indexing against the key field”, paragraph [0556]) can be created by the P2P devices themselves (“person-2-person”, paragraph [0106]; “in a P2P transfer”, paragraph [0166]; “peer wallets”, paragraph [0175]), or the indexed data can be created by the content management server gathering from the P2P devices via a network

gathering module (“server may parse the data record rule”, “server may query a database”, paragraph [0249]).

Claim 16 is rejected similarly as discussed above in a manner of method.

Regarding Claim 8, Hammad discloses the searching system of claim 1, wherein each said P2P device includes at least one file data, and wherein when the user’s device selects the P2P device (“user may utilize a mobile device”, paragraph [0099]) to be connected based on the search result (“display the results”, paragraph [0137]), the online server provides the link data to the P2P device (“user may share a link via message”, paragraph [0113]), and the user’s device, connects to the selected P2P device and downloads the file data based on the link data (“download”, paragraph [0123]; “a link to retrieve directions”, paragraph [0513]).

Claim 18 is rejected similarly as discussed above in a manner of method.

Regarding Claim 9, Hammad discloses the searching system of claim 1, wherein the user’s device selects the P2P device (“user may utilize a mobile device”, paragraph [0099]) to be connected based on the search result, and the online server provides the link data to the P2P device (“a link to obtain a shoptrail”, paragraph [0139]; “devices linked in the wallet”, paragraph [0173]), so as for the user’s device to connect to the selected P2P device based on the link data (“a link to obtain a shoptrail”, paragraph [0139]; “devices linked in the wallet”, paragraph [0173]),

Claim 19 is rejected similarly as discussed above in a manner of method.

Regarding Claim 15, Hammad discloses the searching method of claim 14, wherein the content management server confirming that the user's device has been charged comprises the steps of:

confirming a user's identity data of the user's device ("user's profile", "user's identity", paragraph [0105]);

receiving a charge-mode data sent from the user's device ("proof of purchase payment", paragraph [0105]; "confirm reallocation of charges", paragraph [0158]; "pay card for confirmation", paragraph [0160]; "payment confirmation", paragraph [0360]);

confirming a payment confirmation data sent from the user's device ("proof of purchase payment", paragraph [0105]; "confirm reallocation of charges", paragraph [0158]; "pay card for confirmation", paragraph [0160]; "payment confirmation", paragraph [0360]); and

recording a pricing data ("product pricing", paragraph [0162]; "price matching", paragraph [0173]) required for connection or downloading requested by the user's device ("download", paragraph [0123]; "a link to retrieve directions", paragraph [0513]).

Claim Rejections – 35 U.S.C. 103

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

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 17 is/are rejected under 35 U.S.C. 103 as being unpatentable over Hammad (2013/0166332) in view of Brown II (2015/0149286).

Regarding Claim 10, Hammad discloses a P2P device applicable to the searching system of claim 1, comprising:

at least one file data, each said file data includes an indexed data ("indexing", "data", paragraph [0198]); and

As discussed above, Hammad essentially discloses the claimed invention but does not explicitly disclose a control unit controlling the file data being an open state or a hidden state.

Brown II (2015/0149286) teaches traditionally search engine index information as open state (paragraph [0023]).

It would have been obvious to one of ordinary skill in the art to have known that Hammad's search engine is able to index information in order to allow the user retrieve or match the information as taught by Brown.

Claim 17 is rejected similarly as discussed above in a manner of method.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to the application may be submitted by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application 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).

/Wilson Lee/
Primary Examiner, Art Unit 2155

Notice of References Cited	Application/Control No. 14/616,478	Applicant(s)/Patent Under Reexamination WU, HSIN-TAI	
	Examiner WILSON LEE	Art Unit 2155	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2015/0149286 A1	05-2015	Brown, II; Benjamin Alexander	G06Q30/0264	705/14.58
*	B	US-2014/0337175 A1	11-2014	Katzin; Edward	G06Q20/204	705/26.62
*	C	US-2014/0282586 A1	09-2014	Shear; Victor Henry	G06F9/5072	718/104
*	D	US-2014/0164507 A1	06-2014	Tesch; Mans Anders	H04L51/10	709/204
*	E	US-2014/0019352 A1	01-2014	Shrivastava; Abhinav	G06Q20/3674	705/41
*	F	US-2013/0273968 A1	10-2013	Rhoads; Geoffrey B.	G06F17/30244	455/556.1
*	G	US-2013/0166332 A1	06-2013	Hammad; Ayman	G06Q40/10	705/5
*	H	US-2013/0080565 A1	03-2013	van Coppenolle; Bart P.E.	G06Q30/06	709/213
*	I	US-2012/0123924 A1	05-2012	Rose; Mark	G06Q20/12	705/35
*	J	US-2012/0197911 A1	08-2012	Banka; Tarun	G06F17/30864	707/752
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Search Notes 	Application/Control No. 14616478	Applicant(s)/Patent Under Reexamination WU, HSIN-TAI
	Examiner WILSON LEE	Art Unit 2155

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Search	2/19/17	WL
EAST Search and CPC G06Q 20/12, 30/06, 20/36 with keywords and G06F 17/30244, 30545, 30864 with keywords	2/20/17	WL

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

	/WILSON LEE/ Primary Examiner.Art Unit 2155
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	43	((("20160034305") or ("20150271557") or ("20150185034") or ("20140337175") or ("20140282586") or ("20120123924") or ("20140164507") or ("20140019352") or ("20130273968") or ("20130166332") or ("20130080565") or ("20120197911") or ("20120197898") or ("20120197852") or ("20120066065") or ("20110153586") or ("20050108063") or ("8713295")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/20 17:15
S2	3	S1 and download\$4 same link\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:16
S3	2	("20140164507").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/20 17:23
S4	1	S3 and (open or state or hidden)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:23
S5	1	S3 and (result same (p2p or peer or user or device))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:23
S6	1	S3 and (p2p or peer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:26
S7	2	S3 and sort\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:30

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S9	2	S3 and sort\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:30
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S11	1	S3 and search\$3 same result	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:33
S12	1	S3 and weight\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:34
S13	0	S3 and topolog\$3 near10 table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:36
S14	1	S3 and topolog\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:36
S15	1	S3 and table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:36
S16	1	S3 and table same (lookup or look\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2017/02/20 17:37

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S17	1	S3 and index\$3 same database	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:38
S18	0	S3 and table same link\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:50
S19	9	S1 and table same link\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:50
S20	1	S3 and (request or query) same (user or client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:56
S21	9	table same link\$4 and S1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 18:01
S22	7	table same link\$4 and S1 and download\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:00
S23	9	((("20120123924") or ("20140164507")) or ("20130166332") or ("20130273968")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/20 19:10
S24	2	("20130166332").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/20 19:28
S25	1	S24 and (p2p or peer)	US-PGPUB; USPAT; USOCR;	OR	ON	2017/02/20 19:29

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S27	1	S24 and request near5 search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:33
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S34	1	S24 and search\$3 near5 engine	US-PGPUB;	OR	ON	2017/02/20

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S36	1	S24 and index\$3 same database	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:43
S37	1	S24 and search near5 result	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:44
S38	1	S24 and index\$3 same search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:46
S39	1	S24 and sort	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:47
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S42	1	S24 and sort\$4 and (weight\$3 and link\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2017/02/20 19:48

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S45	1	S24 and result	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:51
S46	1	S24 and lookup	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:54
S47	1	S24 and weight\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:55
S48	1	S24 and lookup same server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:57
S49	1	S24 and weight\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 19:58
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S51	1	S24 and confirm\$5 same (payment or paid or charg\$3)	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2017/02/20 20:01

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S54	1	S24 and server same (person or peer\$3 or p2p)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:06
S55	1	S24 and sort\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:17
S56	1	S24 and link\$3 same server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:19
S57	1	S24 and download\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:21
S58	1	S24 and (download\$4 or access\$3 or retriev\$4) same link\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:22
S59	1	S24 and link\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:23
S60	1	S24 and download\$3	US-PGPUB; USPAT;	OR	ON	2017/02/20 20:29

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S61	1	S24 and link\$3 same (p2p or user or person or peer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:30
S62	1	S24 and (result same select\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:31
S63	1	S24 and (result same user)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:33
S64	1	S24 and ((p2p or peer or person or device) same user)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:40
S65	1	S24 and ((p2p or peer or person or device) same link\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 20:42
S66	1	S24 and index\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:13
S67	2	S24 and (data or file)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:17
S68	1	S24 and (data or file) same index\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:20

S69	1	(14/616478).APP.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/20 21:23
S70	1	S69 and (open or hidden)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:23
S71	1	S24 and engine	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:24
S72	0	S24 and engine same index\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:25
S73	1	S24 and engine same identif\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:25
S74	1	S24 and engine same search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:27
S75	27058	index\$4 same (engine near10 search\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:27
S76	23657	S75 and @AD < ("20140117")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:28
S77	1861	open and hidden and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2017/02/20 21:29

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S78	664	S77 and (P2P or peer\$3 or (person near2 person))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:30
S79	171	open same (engine) and hidden same (engine) and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:31
S80	4626	(index\$4 same (allow or permit)) same (engine near10 search\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:35
S81	4118	S80 and @AD < ("20140117")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:35
S82	946	S81 and (P2P or peer\$3 or (person near2 person))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:36
S83	3	((index\$4 same (allow or permit)) same (engine near10 search\$3)) same (open same hidden)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:40
S84	2	S83 and @AD < ("20140117")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:40
S85	1	S24 and pric\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 21:53
S86	16171	(G06Q20/12).cpc.	US-PGPUB; USPAT; USOCR;	OR	ON	2017/02/20 22:56

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S87	58381	(G06Q30/06).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:56
S88	2163	(G06Q20/36).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:56
S89	3211	(G06F17/30244).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:56
S90	3030	(G06F17/30545).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:56
S91	37905	(G06F17/30864).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:56
S92	114105	S86 or S87 or S88 or S89 or S90 or S91	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:56
S93	7346	S92 and (p2p or peer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:57

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2/ 20/ 2017 10:58:14 PM

EAST Search History

EAST Search History (Prior Art)

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L2	3	1 and download\$4 same link\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:16
L3	2	("20140164507").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/20 17:23
L4	1	3 and (open or state or hidden)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:23
L5	1	3 and (result same (p2p or peer or user or device))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:23
L6	1	3 and (p2p or peer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:26
L7	2	3 and sort\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:30

L8	0	3 and sort\$3 same weight	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:30
L9	2	3 and sort\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:30
L10	0	3 and sort\$3 same result	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:32
L11	1	3 and search\$3 same result	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:33
L12	1	3 and weight\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:34
L13	0	3 and topolog\$3 near10 table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:36
L14	1	3 and topolog\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:36
L15	1	3 and table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:36
L16	1	3 and table same (lookup or look\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2017/02/20 17:37

			DERWENT; IBM_TDB			
L17	1	3 and index\$3 same database	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:38
L18	0	3 and table same link\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:50
L19	9	1 and table same link\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:50
L20	1	3 and (request or query) same (user or client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 17:56
L21	9	table same link\$4 and 1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 18:01

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2/ 20/ 2017 6:03:06 PM

EAST Search History**EAST Search History (Prior Art)**

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L2	50411	index\$3 and weight\$4 and (match\$3 or lookup or (look\$3 near2 up)) near20 table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:39
L3	5732	search\$3 near6 engine and 2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:40
L4	930	topology and 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:40
L5	820	@AD < ("20141003") and 4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:41
L6	313	(P2P or (peer near3 peer)) and 5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:41
L7	233	6 and (payment or paid or charg\$3 or pric\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:47

EAST Search History (Interference)

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EAST Search History**EAST Search History (Prior Art)**

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L1	1	(14/616478).APP.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/02/19 22:36
L2	50411	index\$3 and weight\$4 and (match\$3 or lookup or (look\$3 near2 up)) near20 table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:39
L3	5732	search\$3 near6 engine and 2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:40
L4	930	topology and 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:40
L5	820	@AD < ("20141003") and 4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:41
L6	313	(P2P or (peer near3 peer)) and 5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:41
L7	233	6 and (payment or paid or charg\$3 or pric\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/19 22:47

EAST Search History (Interference)

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2/ 19/ 2017 11:59:54 PM

EAST Search History**EAST Search History (Prior Art)**

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L2	58381	(G06Q30/06).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:58
L3	2163	(G06Q20/36).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L4	3211	(G06F17/30244).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L5	3030	(G06F17/30545).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L6	37905	(G06F17/30864).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L7	114105	1 or 2 or 3 or 4 or 5 or 6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L8	7346	7 and (p2p or peer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L9	7346	7 and (p2p or peer or (person near2 peron))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 22:59
L10	5867	9 and @AD < ("20140117")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 23:00
L11	2310	10 and index\$4 and result	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 23:03
L12	1488	11 and table	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 23:04
L13	231	12 and topolog\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/02/20 23:04

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named
Inventor: Hsin-Tai Wu : Conf. # 9534
Serial No: 14/616,478 : Art Unit #2155
Filed: 06 February 2015 : Examiner: LEE, WLISON
Title: SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P
DEVICE COMMUNITY

AMENDMENT

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

Sir:

Responsive to the Office Action dated 22 February 2017, please amend the above-referenced Patent Application as follows:

Amendments to the Claims are reflected in the Listing of Claims which begins on page 2 of this paper.

Amendments to the Drawings begin on page 9 of this paper and include eight replacement sheets.

Remarks/Arguments begin on page 10 of this paper.

An Appendix including replacement drawings of Figs. 1-8 are being filed concurrently with this Paper.

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of claims in the subject Patent Application:

Listing of Claims:

1. (Currently amended) A searching system for a P2P (peer-to-peer) device community, for receiving a search request sent from at least one user's device, the searching system comprising:

at least one P2P device community, wherein each the [[said]] P2P device community includes at least one P2P device, wherein each the P2P device respectively comprises at least one file data, and each the file data comprises a content data and an indexed data;

at least one online server connecting to the P2P device community, each the [[said]] online server includes a topology data table, the topology data table being recorded with a link data between each of the P2P devices of the P2P device community; and

at least one content management server connecting to the P2P device community and the online server respectively, each the [[said]] content management server includes a search engine, an index database, and a user's device management unit, wherein the index database records the being-recorded with an indexed data of each the [[said]] P2P device of the P2P device community, the user's device management unit receives ~~receiving~~ the search request sent from the user's device, the search engine searches ~~searching~~ the index database to generate a search result based on the search request and then returning the search

result to the user's device, wherein the user's device obtains the link data of the P2P device within the P2P device community according to the topology data table of the online server and the search result.

2. (Currently amended) The searching system of claim 1, wherein each the ~~[[said]]~~ P2P device includes a weighted data, and the content management server is provided with a sorting algorithm module creating the weighted data based on the link data associated with the P2P device, the search result being sorted by the order of the weighted data of the P2P device so as to generate a sorted search result.

3. (Currently amended) The searching system of claim 2, further comprising: a weight look-up table recorded with the weighted data of each the ~~[[said]]~~ P2P device, wherein the weight look-up table is stored in the content management server, the online server, or a storage device.

4. (Original) The searching system of claim 2, wherein the sorting algorithm module performs a function operation based on the search result and the weighted data corresponding to the P2P device to generate a weighted search result, and the weighted search result is sorted by the order of the weighted search results so as to generate a weighted and sorted search result.

5. (Original) The searching system of claim 1, wherein the user's device management unit includes a user-charge module, and wherein after confirming

that the user's device has been charged, the content management server provides the search result, or the online server provides at least one of the link data of the P2P device, to the user's device.

6. (Original) The searching system of claim 5, wherein the user-charge module receives a user's identity data, a charging data, a charging-mode data, or a payment confirmation data, all of which being sent from the user's device.

7. (Original) The searching system of claim 1, wherein the indexed data can be created by the P2P devices themselves, or the indexed data can be created by the content management server gathering from the P2P devices via a network gathering module.

8. (Currently amended) The searching system of claim 1, wherein ~~each said P2P device includes at least one file data, and wherein when the user's device selects the P2P device to be connected based on the search result, the online server provides the link data to the P2P device, and the user's device~~[[,]] connects to the selected P2P device according to the link data and downloads the file data based on the link data.

9. (Currently amended) The searching system of claim 1, wherein ~~the user's device selects the P2P device to be connected based on the search result, and the online server provides the link data to the P2P device, so as for the user's device connects to connect to the selected P2P device based on the link data.~~

10. (Currently amended) A P2P device applicable to the searching system of claim 1, comprising:

~~at least one file data, each said file data includes an indexed data; and~~
a control unit controlling the file data being an open state or a hidden state.

11. (Currently amended) A searching method for a P2P device community, applicable to a searching system for a P2P device community, the searching system includes at least one P2P device, an online server, and a content management server, the searching method comprising the steps of:

recording a link data of each the ~~[[said]]~~ P2P device to generate a topology data table and storing the topology data table in the online server,
wherein each the P2P devices respectively comprises at least one file data, and each the file data comprises a content data and an indexed data;

~~creating an~~ recording the indexed data of each the ~~[[said]]~~ P2P device and storing the indexed data in an index database of the content management server;

receiving by the content management server a search request sent from a user's device and generating a search result by searching the index database based on the search request; ~~[[and]]~~

returning the search result to the user's device; and

obtaining the link data of the P2P device within the P2P device community by the user's device according to the topology data table of the online server and the search result.

12. (Currently amended) The searching method of claim 11, further comprising the steps of:

creating a weighted data associated with each the [[said]] P2P device by the content management unit based on the link data of the P2P devices;

performing a function operation based on the search result and the weighted data corresponding to the P2P device to generate a weighted search result; and

sorting the weighted search result based on the order of the weighted search results to generate a weighed and sorted search result.

13. (Original) The searching method of claim 12, further comprising the steps of:

recording the weighted data of the P2P devices to generate a weight look-up table; and

storing the weight look-up table in the content management server, the online server, or a storage device.

14. (Original) The searching method of claim 11, further comprising the steps of:

providing the search result by the content management server, or providing at least one link data of the P2P device by the online server, to the user's device by the content management server confirming that the user's device has been charged.

15. (Original) The searching method of claim 14, wherein the content management server confirming that the user's device has been charged comprises the steps of:

- confirming a user's identity data of the user's device;
- receiving a charge-mode data sent from the user's device;
- confirming a payment confirmation data sent from the user's device;

and

- recording a pricing data required for connection or downloading requested by the user's device.

16. (Original) The searching method of claim 11, wherein the indexed data can be created by the P2P devices themselves, or the indexed data can be created by the content management server gathering from the P2P devices via a network gathering module.

17. (Currently amended) The searching method of claim 11, further comprising the step of:
controlling a file data of each the ~~the~~ P2P device being an open state or a hidden state.

18. (Currently amended) The searching method of claim 17, further comprising the steps of:

~~selecting the P2P device to be connected by the user's device based on the search result;~~

~~providing the link data of the P2P device to the user's device by the online server; and~~

connecting to the selected P2P device and downloading the file data by the user's device based on the link data.

19. (Currently amended) The searching method of claim 11, further comprising the steps of:

~~selecting the P2P device to be connected by the user's device based on the search result;~~

~~providing the link data of the P2P device to the user's device by the online server; and~~

connecting to the selected P2P device by the user's device based on the link data.

AMENDMENTS TO THE DRAWINGS

The attached three sheets of drawings included changes to FIGS. 1-8 and replace the original drawing sheets that included FIGS. 1-8 thereon. In FIGS. 1-8, have shown every feature of the invention specified in the claims, as required by the Examiner.

Attachment: Eight Replacement Sheets.

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Office Action dated 22 February 2017. Responsive to that Office Action, Claims 1-3, 8-12 and 17-19 have been amended for further clarification and prosecution with the other pending claims. Accordingly, Claims 1-19 remain pending.

Objections to Drawings

In the Office Action, the Examiner objected to the drawings “because the drawings must show every feature of the invention specified in the claims.” Responsive to the drawing objection, corrected formal drawings of FIGS. 1-8 are submitted herewith. Therefore, FIGS. 2-4 have shown the index database 33, the indexed data 4113-4613, the P2P devices 41-46, the P2P device community 40, the user’s device management unit 35, the search request 351, the user’s devices 51-56, the search engine 31, the search result 311 of Claim 1.

Rejections Under 35 U.S.C. §101

The Examiner rejected Claims 1-19 under U.S.C. §101 due to the claimed invention is directed to a judicial exception without significantly more.

In short, the Office Action asserts that Claims 1-19 are directed to collecting information, analyzing it, and displaying certain results of the collection

and analysis, delivering user-selected media content to portable device, and determining a price, using organizational and product group hierarchies.

Furthermore, under the recently mandated two-part Mayo/Alice analysis under § 101, it is first determined if the claims are directed to a statutory category of invention. If the claims are directed to a statutory category of invention, an eligibility determination under 35 U.S.C. § 101 includes determining whether the claim, as a whole, is directed to at least one of several judicial exceptions such as an abstract idea. *Alice*, 134 S. Ct. at 2355; Interim Guidance, Quick Reference Sheet. Here, the claims are directed toward a statutory category and the claims are directed toward a concept that is not an abstract idea.

Regarding the statutory category of invention, the Commissioner for Patents recently explained, "the Federal Circuit in *Enfish* stated that certain claims directed to improvements in computer-related technology, including **claims directed to software**, are not necessarily abstract (Step 2A)." *Enfish* Memo, May 19, 2016, emphasis added. Because the claims in *Enfish* were evaluated under Step 2A they necessarily satisfied the Step 1 analysis established in *Alice*, and thus "claims directed to improvements in computer-related technology, including claims directed to software" satisfy Step 1 of the two-part *Mayo/Alice* analysis and fall within one of the four categories of patent eligible subject matter.

Further, concerning the Step 2A analysis of the claims in *Enfish*, the Commissioner for Patents further explains that the claimed invention that was not an abstract idea

"Specifically, the court identified the specification's teachings that the claimed invention achieves other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements. It was noted that **the improvement does not need to be defined by reference to "physical" components. Instead, the improvement here is defined by logical structures and processes, rather than particular physical features.** The Federal Circuit stated that the *Enfish* claims were not ones in which general-purpose computer components are added after the fact to a fundamental economic practice or mathematical equation, but were **directed to a specific implementation of a solution to a problem in the software arts**, and concluded that the *Enfish* claims were thus **not** directed to an abstract idea (under Step 2A)." *Enfish* Memo, May 19, 2016, emphasis added.

Similar to the "claims directed to software" in *Enfish*, the instant claims fall within one of the four categories of patent eligible subject matter. Further, because the claimed invention is "directed at a specific implementation of a solution to a problem in the software arts" the claims are not directed to an abstract idea.

Another decision in *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, AT&T Corp., Case No. 2015-1763 (CAFC, June 27, 2016) is also applicable here. Claims 1-19 contain an inventive concept. *Bascom* held that the "inventive concept inquiry requires more than recognizing that each claim element,

by itself, was known in the art" and that "an inventive concept can be found in the non-conventional and nongeneric arrangement of known, conventional pieces."

The ability to improve a networked-based communication system "represents a software-based invention that improves the performance of the computer system itself." The present claims, as in Bascom, represent that "an inventive concept can be found in the ordered combination of claim limitations that transform the abstract idea of filtering content into a particular, practical application of that abstract idea."

In view of the above, it is evident that the Applicant provide a novel data searching system and searching method for a P2P device community so as to increase the efficiency and speed of data searching, due to "each online server including a topology data table for recording a link data between each of the P2P devices", "the index database recording the indexed data of each P2P device", "the search engine searching the index database to generate and transmit a search result to the user's device" and "the user's device obtaining the link data of the P2P device according to the topology data table of the online server and the search result."

Also, as discussed further below when responding to the 35 U.S.C. §102 and §103 rejections, Claims 1, 10 and 11 include patentable aspects that are novel and inventive in the industry, and thus previously unknown in the industry. Claims 1, 10 and 11 as a whole - based at least in part on these novel and inventive aspects -

offers significantly more than an abstract idea since the novel and inventive process required by the Claims 1, 10 and 11 provide substantial and meaningful improvements within the industry.

Therefore, Claims 1-19 are unlike the claims in Alice that claimed little more than abstract concepts. The claims do not "recite a commonplace business method aimed at processing business information, applying a known business process to the technological environment of the Internet," or collecting, recognizing, and storing data on a generic computer as did the claims in those cases. For at least the above discussed reasons, withdrawal of the rejection of Claims 1-19 under § 101 is respectfully requested.

Rejections Under 35 U.S.C. §102 and §103

The Examiner rejected Claims 1-9, 11-16, 18-19, as best understood, under 35 U.S.C. §102a(1) as being anticipated by Hammad (2013/0166332).

The Examiner rejected Claims 10, 17 under 35 U.S.C. §103 as being unpatentable over Hammad (2013/0166332) in view of Brown II (2015/0149286).

Before discussing the reference relied upon by the Examiner, it is believed beneficial to briefly review certain features of the searching system and searching method for a P2P device community of the present invention. As newly-amended independent Claims 1, 10 and 11 now more clearly recite, "each online server including a topology data table which records a link data between each of the P2P

devices”, “the index database recording the indexed data of each P2P device”, “the search engine searching the index database to generate and transmit a search result to the user’s device” and “the user’s device obtaining the link data of the P2P device according to the topology data table of the online server and the search result”.

The full combinations of these and other features now more clearly recited by the pending claims are nowhere disclosed by the cited references. Turning first to the primarily-cited Hammad reference, that reference provides for a mobile wallet store and service injection platform apparatuses, methods and systems. FIG. 2B shows a virtual wallet application 221 providing a broad range of search results 222 in response to a user providing search keywords and/or filters for a search query. Further, the search results may include historical transactions of the user 231, offers (235, for a new account, which the user can import into the virtual wallet application) and/or recommendations for the user based on the user’s behavioral patterns, coupons 232, bills 234, discounts, person-2-person transfer requests 236, paragraph [0106].

The wallet application may query the storage areas in the mobile device or elsewhere (e.g., one or more databases and/or tables remote from the mobile device) for prior transactions, paragraph [0120].

FIG. 13B shows a logic flow diagram of the SEWI, e.g., an Offer Recommendation and Exchange (“ORE”) component 1310. The user’s device

may obtain the user's input, and determine whether the user desires to obtain a new offer, or obtain offers in exchange for an offer currently stored within the user's virtual wallet application executing on the device, 1302. The device may generate an offer generation/exchange request for a pay network server.

The pay network server may parse the offer generation/exchange request, 1307, and then may generate a user behavior data query, 1308. The database may provide such user behavior data and analysis thereof to the pay network server, 1309. The server may provide the generated offers to the device, which may display the received offers to the user, 1311.

FIG. 21 shows a data flow diagram of the SEWI. The pay network server may obtain a trigger to perform a search from user's device. The pay network server may generate a query for application programming interface (API) templates for various search engines (e.g., Google.TM., Bing.RTM., AskJeeves, market data search engines, etc.) from which to collect data for aggregation. The pay network server may query, e.g., 2112, a pay network database, e.g., 2107, for search API templates for the search engines. Based on the list of API templates, the pay network server may generate search requests, e.g., 2114. The pay network server may issue the generated search requests, e.g., 2115a-c, to the search engine servers, e.g., 2101a-c.

Accordingly, Hammad discloses the pay network server generates and transmits a (user behavior) data query to various database or search engines.

Thereafter, each database transmits (user behavior) data to each pay network server respectively, and the pay network server collects data for aggregation.

On the contrary, Claims 1, 10 and 11 of the application disclose the topology data table of the online server recording (updating) a link data between each of the P2P devices of the P2P device community, and the content management server searching the index database to generate a search result based on the search request. Further, the user's device obtains the link data of the P2P device according to the topology data table of the online server and the search result rather than acquires and collects data for aggregation from various servers (database) as Hammad.

Hence, Hammad fails to disclose “each online server including a topology data table which records a link data between each of the P2P devices”, “the index database recording the indexed data of each P2P device”, “the search engine searching the index database to generate and transmit a search result to the user's device” and “the user's device obtaining the link data of the P2P device according to the topology data table of the online server and the search result”, as now defined in Claims 1 and 10.

Further, Hammad fails to disclose “recording a link data of each the P2P device to generate a topology data table and storing the topology data table in the online server”, “recording the indexed data of each the P2P device and storing the indexed data in an index database of the content management server”, “generating

a search result by searching the index database based on the search request, and transmitting the search result to the user's device" and "obtaining the link data of the P2P device within the P2P device community by the user's device according to the topology data table of the online server and the search result", as now claimed in Claim 11.

As the Hammad reference fails to disclose each and every limitation of the invention of the subject Patent Application, as now claimed in Claims 1, 10 and 11, it cannot anticipate that invention. Further, as the reference also fails to suggest or present any other reason for the combination of elements that form the claimed invention, and in fact teaches away from that invention, it cannot make obvious that invention either.

The secondarily-cited Brown II reference is directed to a mobile provider advertising and scheduling platform. Brown II discloses index services that by their very nature are transient or temporal in nature. Most significantly, this reference relies on the relationship between a service provider's availability and/or schedule to give context to the provision of goods, services, or events. This reference was cited for incidentally disclosing features such as a control unit controlling the file data being an open state or a hidden state of Claims 10 and 17. The Brown II reference does not overcome the deficiencies of Hammad.

Thus, the combination of Hammad and Brown II fail to disclose, suggest or present any reason for providing "each online server including a topology data

table which records a link data between each of the P2P devices", "the index database recording the indexed data of each P2P device", "the search engine searching the index database to generate and transmit a search result to the user's device" and "the user's device obtaining the link data of the P2P device according to the topology data table of the online server and the search result", as now set forth in Claims 1, 10 and 11. As the combination of Hammad and Brown II fails to disclose, suggest or present any reason for providing the concatenation of elements that form the present invention, as now claimed, and in fact teach away from the invention, they cannot make obvious the claimed invention.

The dependent Claims that have not been discussed, are believed to add further patentably distinct limitations, but are at least patentably distinct for at least the same reasons as independent Claims 1 and 11, from which they ultimately depend.

TUTK-1405-003US
Serial Number: 14/616,478
Response to Office Action Dated 22 February 2017

For all the forgoing reasons, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

By /Jimmy Shih/
Chun-Ming Shih
Registration No. 64,041
(571) 276-5506

P.O. Box 230970
Centreville, VA 20120

Electronic Acknowledgement Receipt	
EFS ID:	29269741
Application Number:	14616478
International Application Number:	
Confirmation Number:	9534
Title of Invention:	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
First Named Inventor/Applicant Name:	Hsin-Tai Wu
Customer Number:	84956
Filer:	Chun-Ming Shih
Filer Authorized By:	
Attorney Docket Number:	TUTK-1405-003US
Receipt Date:	22-MAY-2017
Filing Date:	06-FEB-2015
Time Stamp:	11:38:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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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	Reply.pdf	3828093	no	20
			bbc326c7b06da9ec8f2d07082907758858787371		

Warnings:

Information:	
Total Files Size (in bytes):	3828093
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.	

Replacement Sheet

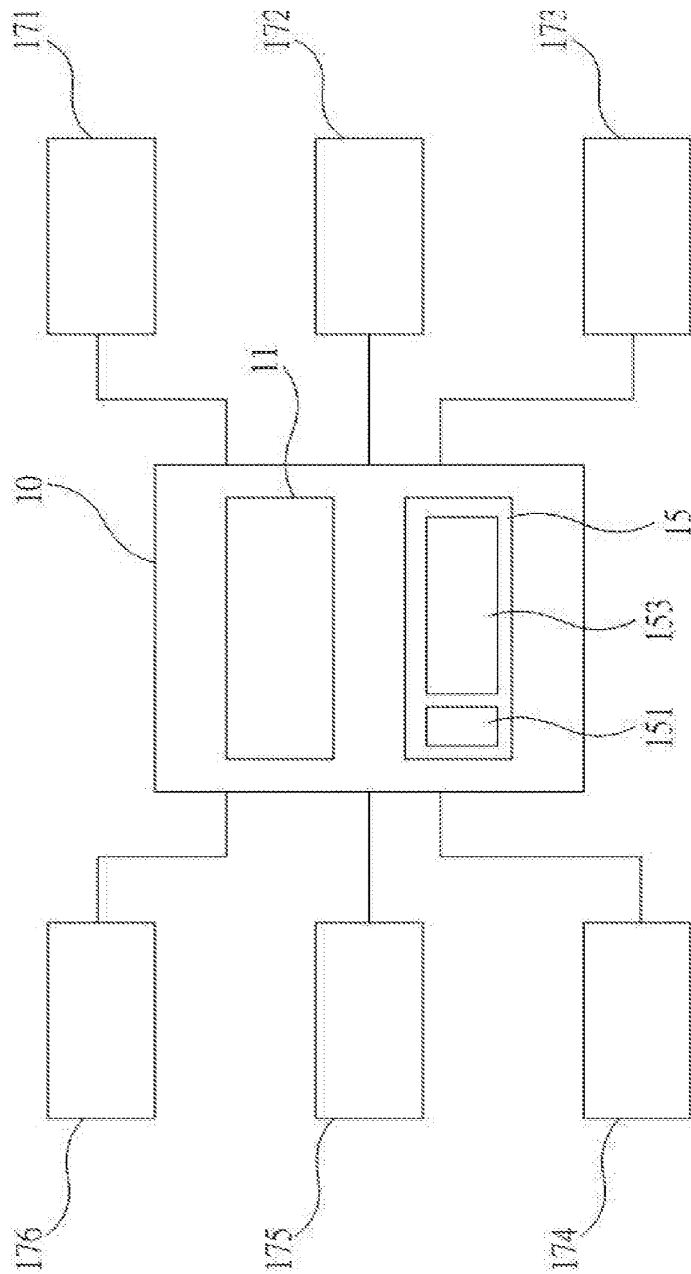
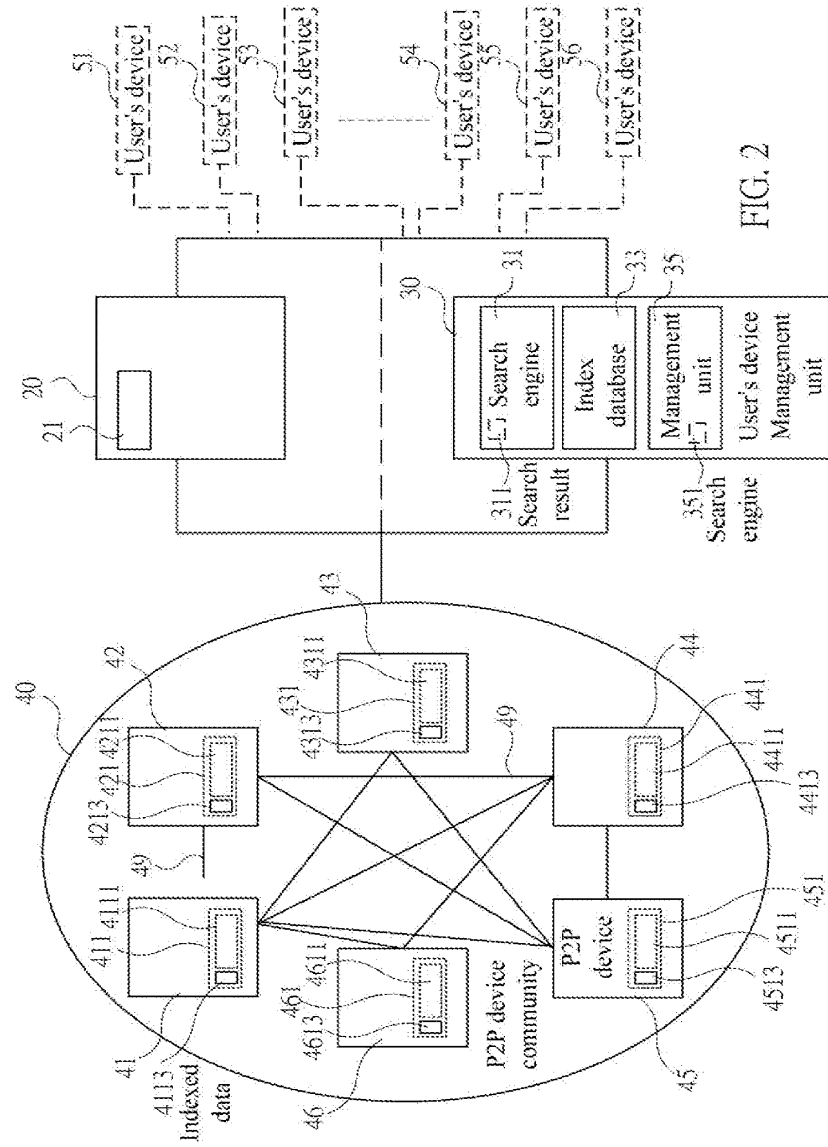


FIG.1
(PRIOR ART)



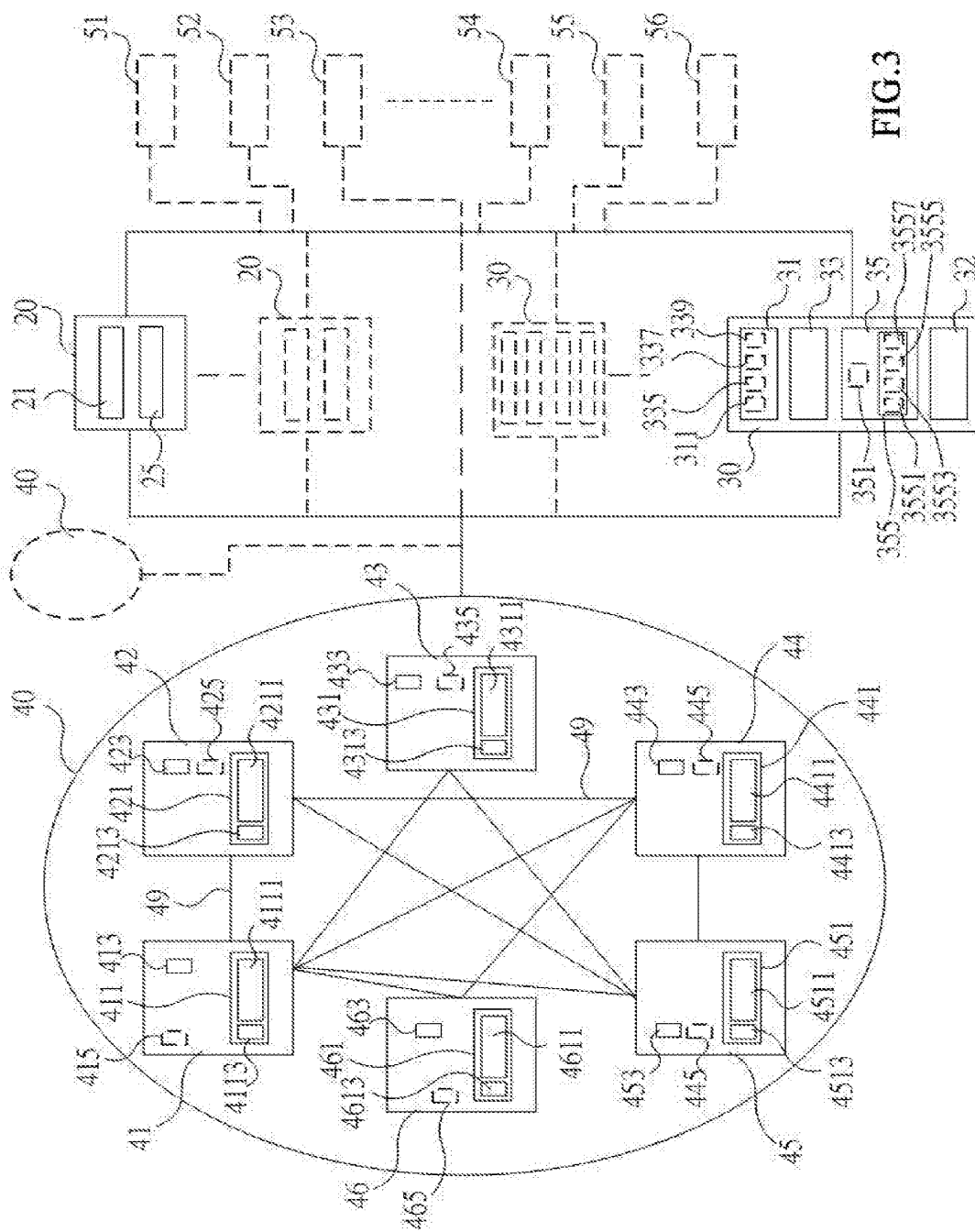


FIG. 3

Replacement Sheet

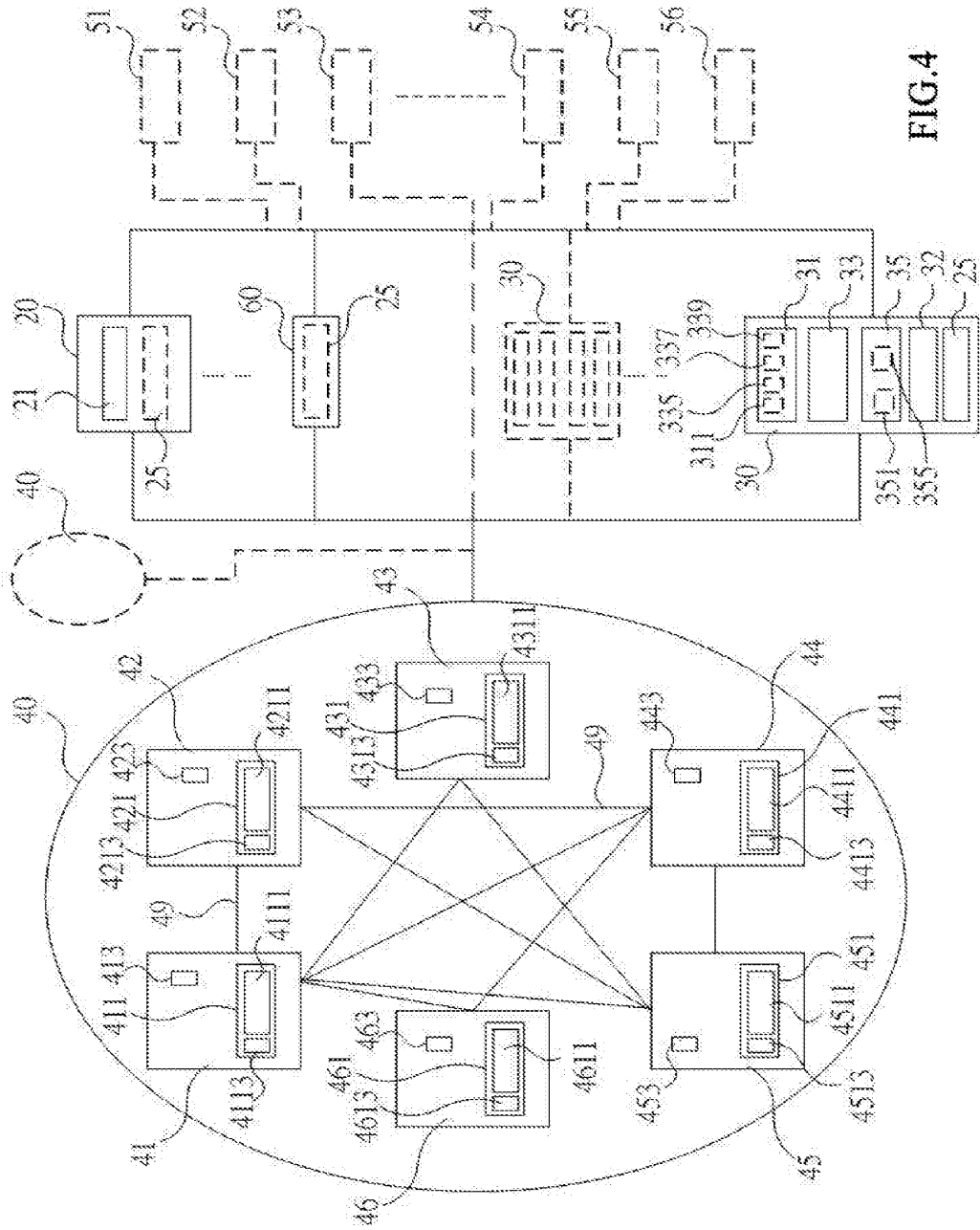


FIG. 4

Replacement Sheet

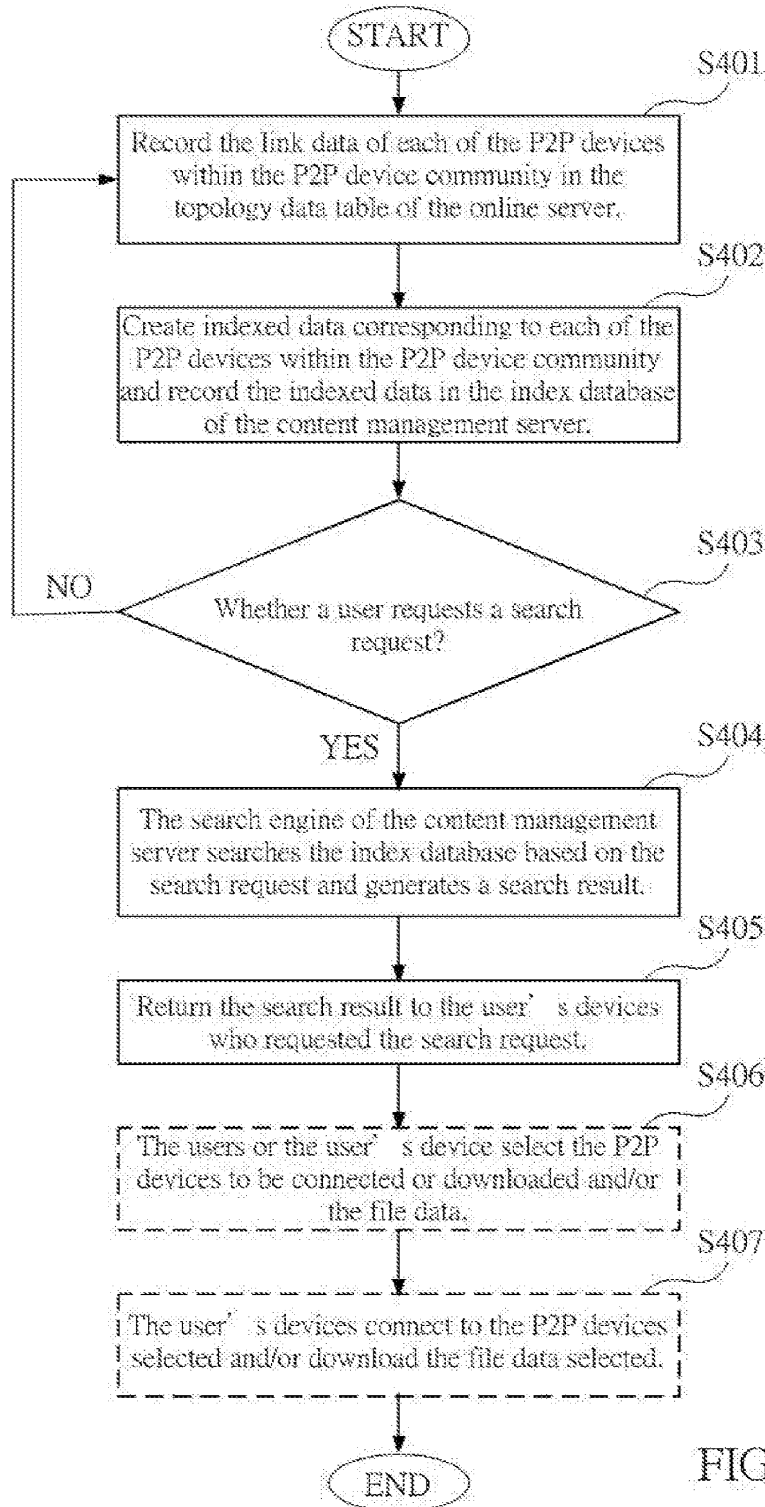


FIG.5

Replacement Sheet

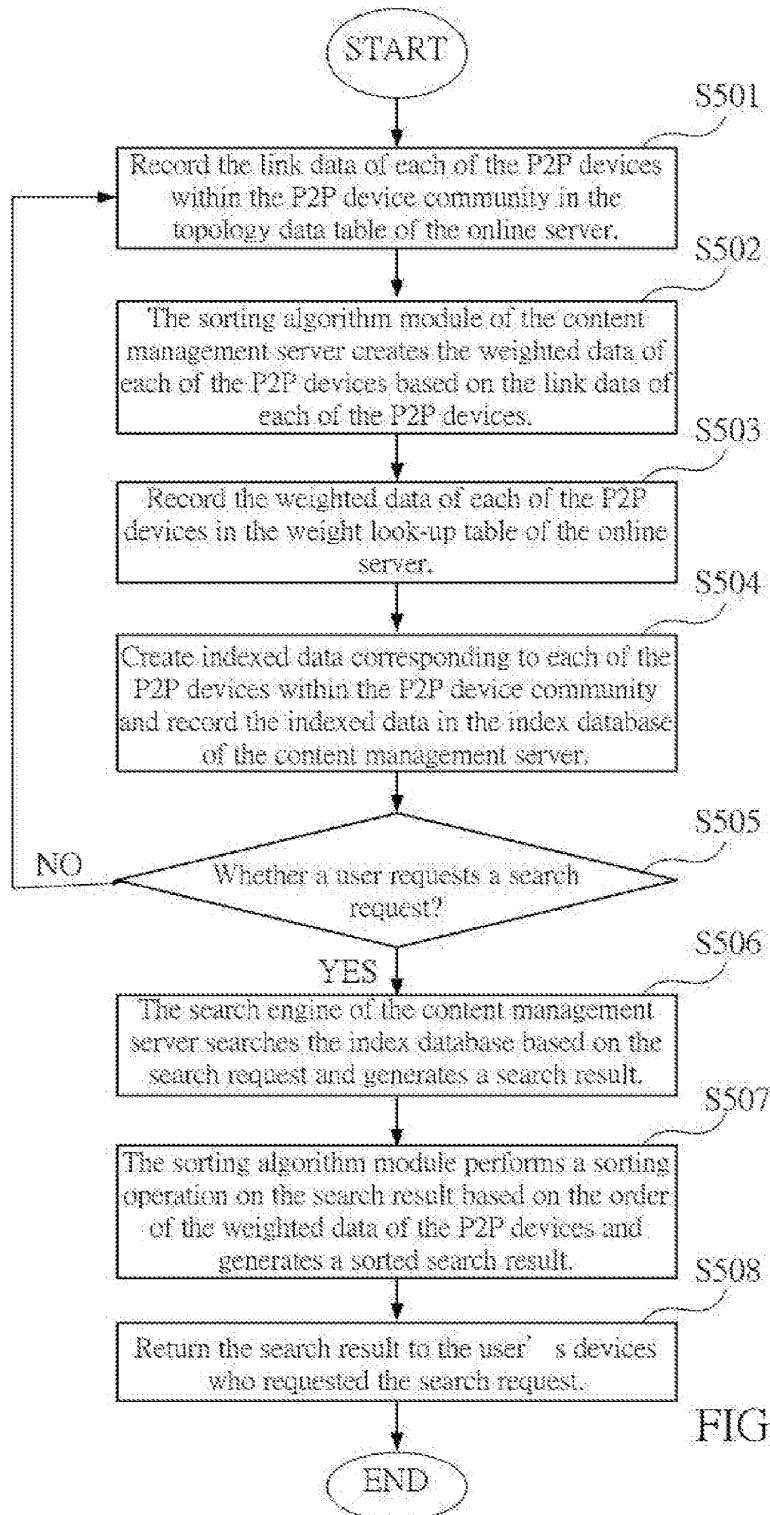


FIG.6

Replacement Sheet

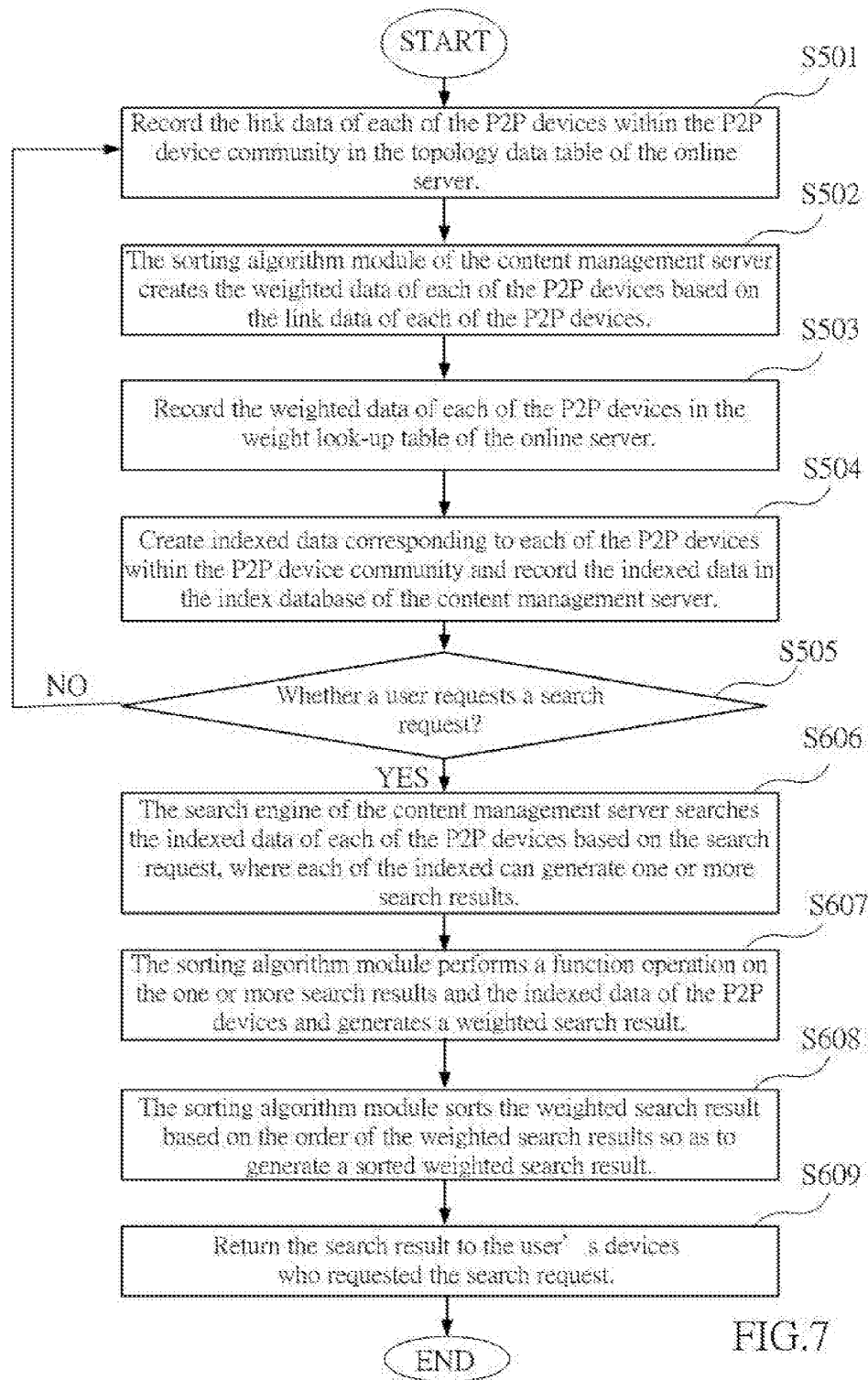
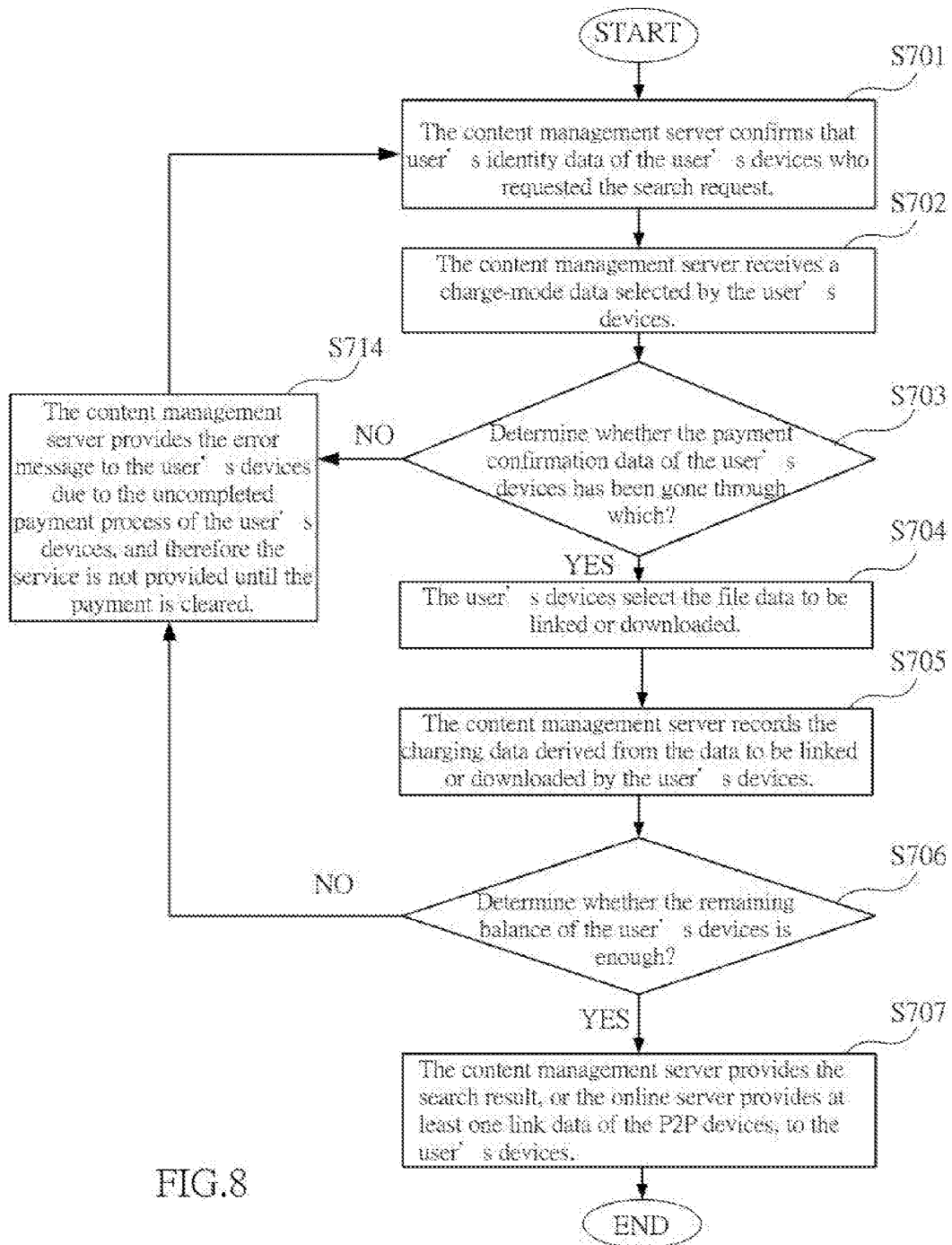


FIG.7

Replacement Sheet



Electronic Acknowledgement Receipt	
EFS ID:	29281393
Application Number:	14616478
International Application Number:	
Confirmation Number:	9534
Title of Invention:	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
First Named Inventor/Applicant Name:	Hsin-Tai Wu
Customer Number:	84956
Filer:	Chun-Ming Shih
Filer Authorized By:	
Attorney Docket Number:	TUTK-1405-003US
Receipt Date:	22-MAY-2017
Filing Date:	06-FEB-2015
Time Stamp:	23:10:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	Drawings.pdf	946761	no	8
			1236cef2ba93bdf16fb672523cf305cb42f2cddf		

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Information:	
Total Files Size (in bytes):	946761
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/616,478		Filing Date 02/06/2015		☐ 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), (l), 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									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	05/22/2017	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 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		
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		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 KIMBERLY PANNELL				

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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NOTICE OF ALLOWANCE AND FEE(S) DUE

84956 7590 06/28/2017
HDLS IPR Services
P.O. Box 230970
CENTREVILLE, VA 20120

EXAMINER

LEE, WILSON

ART UNIT

PAPER NUMBER

2155

DATE MAILED: 06/28/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US	9534

TITLE OF INVENTION: SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	09/28/2017

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

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

HOW TO REPLY TO THIS NOTICE:

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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.

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US	9534

TITLE OF INVENTION: SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	09/28/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEE, WILSON	2155	707-706000

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, 1 _____
(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. 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
☐ 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 _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US	9534

84956 7590 06/28/2017
HDLS IPR Services
P.O. Box 230970
CENTREVILLE, VA 20120

EXAMINER

LEE, WILSON

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 06/28/2017

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

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

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

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

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

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

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 14/616,478	Applicant(s) WU, HSIN-TAI	
	Examiner WILSON LEE	Art Unit 2155	AIA (First Inventor to File) Status Yes

-- 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 5/22/17.
☐ 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 1-19. 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) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/WILSON LEE/
Primary Examiner, Art Unit 2155

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Allowable subject matter

Claims 1-19 are allowed.

The following is an examiner's statement of reasons for allowance:

Prior arts of record do not render obvious, nor anticipate the combination of remaining claimed elements including the technique of: each the P2P device respectively comprises at least one file data and each the file data comprises a content data and an indexed data, and the user's device obtains the link data of the P2P device within the P2P device community according to the topology data table of the online server and the search result.

The primary reason for allowance of independent Claims 1 and 11 in this case is the inclusion of: each the P2P device respectively comprises at least one file data and each the file data comprises a content data and an indexed data, and the user's device obtains the link data of the P2P device within the P2P device community according to the topology data table of the online server and the search result.

The novelty of the invention is to provide a searching method or system for a P2P device community comprising recording a link data of each of the P2P devices to generate a topology data table an storing the topology data table in the online server, and generate a search result based on the search request wherein the user's device obtains the link data of the P2P device within the P2P device community according to the topology data table of the online server and the search result (emphasis added).

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

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to the application may be submitted by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application 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).

/Wilson Lee/
Primary Examiner, Art Unit 2155



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BIB DATA SHEET

CONFIRMATION NO. 9534

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
14/616,478	02/06/2015	707	2155	TUTK-1405-003US		
RULE						
APPLICANTS ThroughTek Technology (ShenZhen) Co., Ltd., Shenzhen, CHINA; ThroughTek Co., Ltd., Taipei City, TAIWAN; INVENTORS Hsin-Tai Wu, TAIPEI CITY, TAIWAN; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** TAIWAN 103134585 10/03/2014 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** * SMALL ENTITY ** 02/20/2015						
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and Acknowledged <u>/Wilson Lee /</u> Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY TAIWAN	SHEETS DRAWINGS 8	TOTAL CLAIMS 19	INDEPENDENT CLAIMS 2
ADDRESS HDLS IPR Services P.O. Box 230970 CENTREVILLE, VA 20120 UNITED STATES						
TITLE SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY						
FILING FEE RECEIVED 730	FEES: Authority has been given in Paper 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		

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("20130166332").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/19 21:39
L2	1	1 and connect\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:43
L3	2741	((person near3 person) or P2P or PTP) and index\$3 near20 search\$4 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:53
L4	2407	@AD < ("20141003") and 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:55
L5	1501	4 and result near10 search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:59
L6	534	payment and 5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:00
L7	400	6 and download\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:00
L8	4704	((person near3 person) or P2P or PTP or (peer near3 peer)) and index\$3 near20 search\$4 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04
L9	2931	8 and result near10 search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04
L10	958	9 and download\$3 and payment	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04

L11	868	@AD < ("20141003") and 10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04
L12	851	(sort\$3 or rank\$3 or weight\$4) and 11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:05
L13	802	12 and (request\$3 or quer\$3 or criteria) near10 search\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:06
L14	839	12 and (request\$3 or quer\$3 or criteria or keyword) near10 search\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:07
L15	1	(14/616478).APP.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/19 22:55
S1	2	("20150149286").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/19 20:12
S2	1	(14/616478).APP.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/19 20:13
S3	1	S2 and open near5 state	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 20:13
S4	1	S2 and content	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 20:18
S5	1	S2 and link	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 20:32
S6	1	S2 and topology	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 20:32

EAST Search History (Interference)

<This search history is empty>

6/ 19/ 2017 10:55:59 PM

Issue Classification 	Application/Control No. 14616478	Applicant(s)/Patent Under Reexamination WU, HSIN-TAI	
	Examiner WILSON LEE	Art Unit 2155	

CPC					
Symbol				Type	Version
G06F	17		30867	F	2013-01-01
H04L	67		104	I	2013-01-01
G06F	17		30424	I	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 19	
/WILSON LEE/ Primary Examiner, Art Unit 2155 (Primary Examiner) _____ (Date) _____		6/20/17 O.G. Print Claim(s) 1	O.G. Print Figure 2

Issue Classification 	Application/Control No. 14616478	Applicant(s)/Patent Under Reexamination WU, HSIN-TAI
	Examiner WILSON LEE	Art Unit 2155

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION														
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED									
707		705				G	0	6	F	17 / 30 (2006.01.01)										
CROSS REFERENCE(S)																				
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																			
707	722																			

NONE		Total Claims Allowed:	
		19	
(Assistant Examiner)	(Date)		
/WILSON LEE/ Primary Examiner.Art Unit 2155	6/20/17	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Search Notes 	Application/Control No. 14616478	Applicant(s)/Patent Under Reexamination WU, HSIN-TAI
	Examiner WILSON LEE	Art Unit 2155

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
EAST Search	2/19/17	WL
EAST Search and CPC G06Q 20/12, 30/06, 20/36 with keywords and G06F 17/30244, 30545, 30864 with keywords	2/20/17	WL
EAST Search	6/19/17	WL
EAST Search and 707/705-718, 722-726, 741-746, 758-759, 769-770 with keywords and CPC G06Q 20/12, 30/06, 20/36 with keywords and CPC G06F 17/30244, 30545, 30864 with keywords	6/20/17	WL

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
707	705-718, 722-726, 741-746, 758-759, 769-770 with keywords	6/20/17	WL
G06Q	20/12, 30/06, 20/36 with keywords	6/20/17	WL
G06F	17/30244, 30545, 30864 with keywords	6/20/17	WL

	/WILSON LEE/ Primary Examiner.Art Unit 2155
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L6	27	((("20170064753") or ("20170271557") or ("20150067819") or ("20120204032") or ("20120203661") or ("20120190386") or ("20110212717") or ("20100306249") or ("20100169340") or ("20100113072") or ("20090210391") or ("8825660")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/20 17:16
L7	11	6 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 17:55
L8	47136	((707/705) or (707/706) or (707/707) or (707/708) or (707/709) or (707/710) or (707/711) or (707/712) or (707/713) or (707/714) or (707/715) or (707/716) or (707/717) or (707/718) or (707/722) or (707/723) or (707/724) or (707/725) or (707/726) or (707/741) or (707/742) or (707/743) or (707/744) or (707/745) or (707/746) or (707/758) or (707/759) or (707/769) or (707/770)).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/20 18:24
L9	16670	(g06Q20/12).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:35
L10	60232	(g06Q30/06).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:35
L11	2398	(g06Q20/36).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:36
L12	3420	(g06f17/30244).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2017/06/20 18:36

			IBM_TDB			
L13	3197	(g06f17/30545).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:36
L14	40083	(g06f17/30864).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:36
L15	157132	(8 or 9 or 10 or 11 or 12 or 13 or 14)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:40
L16	1876	((person near3 person) or P2P or PTP or (peer near3 peer)) same (network or community) and index\$3 near20 search\$4 and 15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:40
L17	1611	@AD < ("20141003") and 16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:41
L18	1512	17 and (request\$3 or quer\$3 or criteria or keyword or term) near10 search\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:41
L19	382	18 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/20 18:41

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L20	30593	((707/705) or (707/706) or (707/707) or (707/708) or (707/709) or (707/710) or (707/711) or (707/712) or (707/713) or (707/714) or (707/715) or (707/716) or (707/717) or (707/718) or (707/722) or (707/723) or (707/724) or (707/725) or	US-PGPUB; USPAT	OR	OFF	2017/06/20 18:42

		(707/726) or (707/741) or (707/742) or (707/743) or (707/744) or (707/745) or (707/746) or (707/758) or (707/759) or (707/769) or (707/770)).OCLS.				
L21	5727	(g06Q20/12).cpc.	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L22	23119	(g06Q30/06).cpc.	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L23	830	(g06Q20/36).cpc.	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L24	1505	(g06f17/30244).cpc.	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L25	1529	(g06f17/30545).cpc.	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L26	18183	(g06f17/30864).cpc.	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L27	72823	(20 or 21 or 22 or 23 or 24 or 25 or 26)	US-PGPUB; USPAT	OR	ON	2017/06/20 18:42
L28	1865	((person near3 person) or P2P or PTP or (peer near3 peer)) same (network or community) and index\$3 near20 search\$4 and 27	US-PGPUB; USPAT	OR	ON	2017/06/20 18:43
L29	1602	@AD < ("20141003") and 28	US-PGPUB; USPAT	OR	ON	2017/06/20 18:43
L30	1505	29 and (request\$3 or quer\$3 or criteria or keyword or term) near10 search\$4	US-PGPUB; USPAT	OR	ON	2017/06/20 18:43
L31	381	30 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT	OR	ON	2017/06/20 18:43

6/ 20/ 2017 6:58:13 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("20130166332").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/19 21:39
L2	1	1 and connect\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:43
L3	2741	((person near3 person) or P2P or PTP) and index\$3 near20 search\$4 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:53
L4	2407	@AD < ("20141003") and 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:55
L5	1501	4 and result near10 search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 21:59
L6	534	payment and 5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:00
L7	400	6 and download\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:00
L8	4704	((person near3 person) or P2P or PTP or (peer near3 peer)) and index\$3 near20 search\$4 and (connect\$3 or link\$4) same (table or topology)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04
L9	2931	8 and result near10 search\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04
L10	958	9 and download\$3 and payment	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04

EAST Search History

L11	868	@AD < ("20141003") and 10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:04
L12	851	(sort\$3 or rank\$3 or weight\$4) and 11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:05
L13	802	12 and (request\$3 or quer\$3 or criteria) near10 search\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:06
L14	839	12 and (request\$3 or quer\$3 or criteria or keyword) near10 search\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/06/19 22:07

EAST Search History (Interference)

< This search history is empty >

6/ 19/ 2017 10:35:41 PM

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **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)

84956 T590 06/26/2017
HDLS IPR Services
P.O. Box 230970
CENTREVILLE, VA 20120

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

Certificate of Mailing or Transmission

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US	9534

TITLE OF INVENTION: SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	09/28/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEE, WILSON	2155	707-706000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.563). ☐ 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 <u>Chun-Ming Shih</u> 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)
THROUGHTTEK TECHNOLOGY (SHENZHEN) CO., LTD.	SHENZHEN, CHINA
THROUGHTTEK CO., LTD.	TAIPEI CITY, TAIWAN

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

4a. The following fee(s) are submitted: ☒ Issue Fee ☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies _____	4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) ☐ A check is enclosed. ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).
--	---

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

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ 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 <u>/Jimmy Shih/</u>	Date <u>07/06/2017</u>
Typed or printed name <u>Chun-Ming Shih</u>	Registration No. <u>64041</u>

Electronic Patent Application Fee Transmittal				
Application Number:		14616478		
Filing Date:		06-Feb-2015		
Title of Invention:		SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY		
First Named Inventor/Applicant Name:		Hsin-Tai Wu		
Filer:		Chun-Ming Shih/Pin Pin Huang		
Attorney Docket Number:		TUTK-1405-003US		
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:	29697031
Application Number:	14616478
International Application Number:	
Confirmation Number:	9534
Title of Invention:	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
First Named Inventor/Applicant Name:	Hsin-Tai Wu
Customer Number:	84956
Filer:	Chun-Ming Shih/Pin Pin Huang
Filer Authorized By:	Chun-Ming Shih
Attorney Docket Number:	TUTK-1405-003US
Receipt Date:	06-JUL-2017
Filing Date:	06-FEB-2015
Time Stamp:	00:52:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$480
RAM confirmation Number	070617INTEFSW00525000
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	IFT-TUTK1405003US.pdf	404867	no	1
			0767a342e79a0214feaa686f8b7084d3bfb06ee4		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30492	no	2
			ded6dec3184be5f123f3c5e8ad9c0025c83c8dcb		
Warnings:					
Information:					
Total Files Size (in bytes):			435359		
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.					



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UNITED STATES DEPARTMENT OF COMMERCE
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Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/616,478	08/08/2017	9727655	TUTK-1405-003US	9534
84956	7590	07/19/2017		
HDLS IPR Services P.O. Box 230970 CENTREVILLE, VA 20120				

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 322 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):

Hsin-Tai Wu, TAIPEI CITY, TAIWAN;
ThroughTek Technology (ShenZhen) Co., Ltd., Shenzhen, CHINA;
ThroughTek Co., Ltd., 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.

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PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	9727655
	Issue Date	08-08-2017
	First Named Inventor	Hsin-Tai Wu
	Title	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
	Attorney Docket No.	6121.009US

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

☐ A Power of Attorney is submitted herewith.

OR

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

11336

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent 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 patent to:

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

OR

☐ The address associated with the Customer Number identified in the box at right:

OR

☐ Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☒ Applicant.

OR

☐ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Patent Owner

Signature	/Chi-Ming Kuo/	Date	Jan. 29, 2021
Name	Chi-Ming Kuo	Telephone	886-2-28535111
Title and Company	CEO, ThroughTek Technology (Shenzhen) Co., Ltd.		

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☒ A total of 2 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 update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 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.

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 - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	9727655
	Issue Date	08-08-2017
	First Named Inventor	Hsin-Tai Wu
	Title	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
	Attorney Docket No.	6121.009US

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

☐ A Power of Attorney is submitted herewith.

OR

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

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OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent 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 patent to:

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

OR

☐ The address associated with the Customer Number identified in the box at right:

OR

☐ Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☒ Applicant.

OR

☐ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Patent Owner

Signature	/Chi-Ming Kuo/	Date	Jan. 29, 2021
Name	Chi-Ming Kuo	Telephone	886-2-28535111
Title and Company	CEO, ThroughTek Co., Ltd.		

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☒ A total of 2 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 update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 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:	41794664
Application Number:	14616478
International Application Number:	
Confirmation Number:	9534
Title of Invention:	SEARCHING SYSTEM, METHOD AND P2P DEVICE FOR P2P DEVICE COMMUNITY
First Named Inventor/Applicant Name:	Hsin-Tai Wu
Customer Number:	84956
Filer:	Min-Lee Teng
Filer Authorized By:	
Attorney Docket Number:	TUTK-1405-003US
Receipt Date:	31-JAN-2021
Filing Date:	06-FEB-2015
Time Stamp:	23:16:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	6121_009US_POA.pdf	103191	no	2
			7bafd39a21a682dc03bb447428b86425d370d7f0		

Warnings:

Information:	
Total Files Size (in bytes):	103191
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.	



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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
14/616,478	02/06/2015	Hsin-Tai Wu	6121.009US

CONFIRMATION NO. 9534

POA ACCEPTANCE LETTER



OC000000123194984

11336
Litron Patent and Trademark Office
11F.-2, No.248, Sec. 3, Nanjing E. Rd.
Songshan District
Taipei City, 10595
TAIWAN

Date Mailed: 02/08/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/31/2021.

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.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/hsarwari/



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
14/616,478	02/06/2015	Hsin-Tai Wu	TUTK-1405-003US

CONFIRMATION NO. 9534

POWER OF ATTORNEY NOTICE



84956
HDLS IPR SERVICES
P.O. BOX 230970
CENTREVILLE, VA 20120

Date Mailed: 02/08/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/31/2021.

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

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/hsarwari/