In re Application of: J. Overton et al.
For: Network Distributed Tracking Wire Transfer Protocol
Attorney Docket No: 11958/62
Express Mail® mailing label number: EV 655 031 105 US
Date of Deposit: February 13, 2006

BRINKS HOFER GILSON & LIONE

730004 U.S. PTO 11354224 021306

UTILITY PATENT APPLICATION TRANSMITTAL

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

Transmitted herewith is:

☐ A new application under 37 C.F.R. §1.53(b).

☒ A ☒ Continuation, ☐ Divisional, or ☐ Continuation-in-part (CIP) under 37 C.F.R. §1.53(b) of prior application no. 09/661,222.

Prior application information: Examiner: _____ Art Unit: _____

☐ Maintenance of copendency of prior application: A request for extension of time and the appropriate fee have been filed in the pending prior application (or are being filed in the prior application concurrently herewith) to extend the period for response until _____.

For Continuation or Divisional Applications only: The entire disclosure of the prior application, from which an oath or declaration is supplied as indicated below, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference.

The following application elements and other papers are attached:

1. Application including: ☐ Application Data Sheet. See 37 CFR § 1.76.
   - ☒ Title page
   - ☒ Specification, including claims and Abstract (38 pages)
   - ☒ Drawings (12 sheet(s))
   - ☒ Appendices: two (2) sheets (143 frames) of microfiche
   - ☒ Declaration or ☐ Combined Declaration and Power of Attorney (two pages):
     - ☐ newly-executed (original or copy)
     - ☒ copy from a prior application (37 CFR §1.63(d))
     - ☐ This application is filed by fewer than all the inventors named in the prior application, 37 CFR §1.53(d)(4). Please DELETE the following inventors(s) named in prior nonprovisional application no: _____:

2. ☐ Small Entity Status:
   - ☐ Applicant hereby asserts entitlement to claim small entity status under 37 CFR §§ 1.9 and 1.27.
   - ☐ A small entity statement or assertion of entitlement to claim small entity status was filed in prior application no. _____/_____ and such status is still proper and desired.
   - ☐ Is no longer desired.

3. Fee calculation (after entry of any preliminary amendment(s) in Item #7 below):

Claims as Filed	Col. 1	Col. 2		Small Entity			Not a Small Entity	
For	No. Filed	No. Extra		Rate	Fee	or	Rate	Fee
Basic Fee					$ 150	or		$ 300
Total Claims	-20			x$25=	$	or	x$50=	$
Independent Claims	-3			x$100=	$	or	x$200=	$
Multiple Dependent Claims Present				+$180=	$	or	+$360=	$
Utility Application Size Fee (for each additional 50 sheets that exceeds 100 sheets, including specification and drawings)				x$125=	$	or	x$250=	$
Search Fee				+$250=	$	or	+$500=	$
Examination Fee				+$100=	$	or	+$200=	$
*If the difference in col. 1 is less than zero, enter "0" in col. 2.				Total	$	or	Total	$

4. Fee payment :
   - ☐ A check in the amount of $_____ to cover the filing fee is enclosed.
   - ☐ Please charge my Deposit Account No. 23-1925 in the amount of $_____. A duplicate copy of this sheet is enclosed.
   - ☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).
   - ☐ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A copy of this Transmittal is enclosed.
     - ☐ Any additional filing fees required under 37 CFR § 1.16.
     - ☐ Any patent application processing fees under 37 CFR §1.17.
   - ☐ The Director is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 23-1925.
     - ☐ Any filing fees under 37 CFR § 1.16 for presentation of extra claims.
     - ☐ Any patent application processing fees under 37 CFR § 1.17.
     - ☐ The issue fee set in 37 CFR § 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 CFR § 1.311(b).
5. ☐ Certified copy of priority document(s)
   ☐ is attached or ☐ has been filed in prior application no. _____ /_____.
6. ☐ English Translation Document
   ☐ is attached or ☐ has been filed in prior application no. _____ /_____.
7. ☒ Preliminary Amendment:
   - ☒ A Preliminary Amendment is attached (*note:* related application data required under 37 CFR §1.78, if any, appears in the Amendments to the Specification section of the Preliminary Amendment, including incorporations by reference).
   - ☐ A "Petition to Suspend Prosecution For the Time Necessary to File an Amendment (New Application Filed Concurrently)" is attached.
8. ☐ Information Disclosure Statement, including Form PTO-1449 (_____ sheets) and copies of references cited, if required.
9. ☒ An Assignment to Econnectix, LLC:
   - ☐ with accompanying Assignment Recordation Cover Sheet, is attached.
   - ☒ was previously recorded on July 11, 2003 at Reel 014254, Frame 0043.
10. ☐ Power of Attorney (_____ pages; ☐ by inventor ☐ by Assignee identified in item #9 above)
11. ☐ Nonpublication Request under 35 USC §122(b)(2)(B)(i)
12. ☒ Other: Petition to Suspend the Rules Under 37 C.F.R. §1.183.
13. ☒ Return Postcard
14. The power of attorney in the prior application is to: Joseph F. Hetz (Reg. No. 41,070).
    - ☒ The power appears in the original papers in the prior application.
    - ☐ The power does not appear in the original papers in the prior application, but was filed on: _____
    - ☐ A new power has been executed and is attached.
15. CORRESPONDENCE ADDRESS: please recognize the correspondence address for this application as the address associated with the following Customer Number:

Customer No. 00757 - Brinks Hofer Gilson Lione

16. PLEASE DIRECT all telephonic communications to:
    Kent E. Genin (tel: (312) 321-4200).

Respectfully submitted,

February 13, 2006
Date

Kent E. Genin (Reg. No. 37,834)

"Express Mail" mailing label number EV 655 031 105 US

Date of Deposit: February 13, 2006

Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

J. Overton et al.

Serial No. To be Assigned

Filing Date: Herewith

For NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

PETITION FOR SUSPENSION OF RULES UNDER 37 C.F.R. § 1.183

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

Dear Sir:

For the above-mentioned continuation application, we request a suspension of the requirement under 37 C.F.R. §§ 1.52 and 1.96 that a Computer Program Listing Appendix must be submitted in the form of text files on compact discs.

Although the parent application and its Microfiche Appendix are incorporated by reference in the above-mentioned application, it is unclear whether incorporation is insufficient to include the contents of the Microfiche Appendix. Accordingly, Applicants wish to submit a full copy of the contents of the Microfiche Appendix in the present application.

An executable, electronic version of the original program listing is no longer available. Because of this situation, we ask leave to submit in the above-referenced application a computer listing in the form of a copy of the original microfiche.

1. **Our source code was previously submitted on microfiche, and the original electronic executable version of the code does not exist.**

The above-referenced application is a continuation application. Its parent application (U.S. Application No. 09/661,222) was filed on September 13, 2000 with a Microfiche Appendix. That appendix included 2 sheets microfiche, with a total of 143 frames. At that time, the Microfiche Appendix was an appropriate method of submitting such a large listing of computer code, under the former Rule 1.96. 37 C.F.R. § 1.96 (1988) (*reproduced in* MPEP § 608.05(a)). The undersigned has inquired of the Applicant regarding the availability of an electronic executable version of the 2000 code, and has learned that it is no longer available other than as an image file (ADOBE .pdf format).

2. **The change in Rule 1.96 from microfiche submission to compact disc introduces an unintended obstacle for continuation applications.**

Rule 1.96's ASCII-text requirement did not exist when we filed the parent application five years ago. The former Rule 1.96 specified that large computer-code listings should be submitted as a Microfiche Appendix. 37 C.F.R. §1.96 (1998). Rule 1.96 was later revised so that such listings must now be submitted on compact disc. 65 Fed. Reg. 54,604, 54,629-30 (Sept. 8, 2000) (effective date corrected, 65 Fed. Reg. 54,629 (Dec. 18, 2000)). However, the change was not intended to hinder applications that were already under examination. The changes were directed to future applications, and did not affect pending applications. Indeed, the U.S. Patent and Trademark Office continued to allow microfiche submissions under the former Rule 1.96 until February 28, 2001. MPEP § 608.05(a).

As a continuation application, the above-referenced application has been unintentionally caught by the change in the Rules. We can find no specific mention of how the change in Rule 1.96 was intended to affect continuation practice. But overall, the change appears to have been made with the goal of streamlining the handling of future patent applications. It does not appear the change in Rule 1.96 was meant to hamper the examination of applications that were already before the Office.

The change to Rule 1.96 poses a difficulty now, at the time when Applicants wish to file a continuation application, because in some sense Applicants are retroactively required to have preserved an ASCII version of the source code from five years prior. The microfiche versions that were made and placed in storage in 2000—these now fall short of the revised requirements. It does not seem that the revisions to Rule 1.96 were intended to thus hamper the filing of continuation applications.

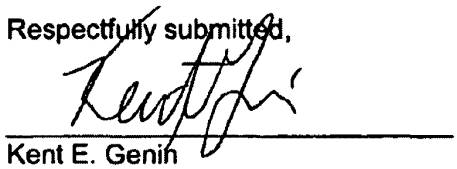
3. A microfiche submission in this case would be an adequate and full presentation of the source code to the Office and to the public.

The existing microfiche versions were previously considered an adequate representation of the source code being submitted. They were submitted under the former Rule 1.96 in the parent application that was filed in 2000. The microfiche of the computer code remains a good resource for Examiners and members of the public who wish to view the source code listing.

For the above reasons, Applicants petition for a suspension of Rule 1.96 to allow Applicants to submit the computer listing, which was previously provided in parent application no. 09/661,222, as an appendix to the present continuation application.

The Director is hereby authorized to charge the petition fee due under 37 C.F.R. §1.17(f) to Deposit Account No. 23-1925. A copy of this paper is enclosed.

Respectfully submitted,



Kent E. Genin
Registration No. 37,834
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, Illinois 60610
(312) 321-4200

"Express Mail" mailing label number EV 655 031 105 US

Date of Deposit: February 13, 2006

Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
J. Overton et al.)
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Serial No. To be Assigned)
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For NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL)

PRELIMINARY AMENDMENT

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

Dear Sir:

Please enter the following amendment and consider the following remarks:

BRINKS HOFER GILSON &LIONE

ABSTRACT OF THE DISCLOSURE

A network distributed tracking wire transfer protocol for storing and retrieving data across a distributed data collection. The protocol includes a location string for specifying the network location of data associated with an entity in the distributed data collection, and an identification string for specifying the identity of an entity in the distributed data collection. According to the protocol, the length of the location string and the length of the identification string are variable, and an association between an identification string and a location string can be spontaneously and dynamically changed. The network distributed tracking wire transfer protocol is application independent, organizationally independent, and geographically independent. A method for using the protocol in a distributed data collection environment and a system for implementing the protocol are also provided.

ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C ...). The first artifact folder for an artifact type receives the letter A, the second B, etc..
Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB

11 354224 - FA.

Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type.

☐ CD(s) containing:
- computer program listing ☐
  Doc Code: Computer Artifact Type Code: P
- pages of specification and/or sequence listing and/or table ☐
  Doc Code: Artifact Artifact Type Code: S
- content unspecified or combined ☐
  Doc Code: Artifact Artifact Type Code: U

☐ Stapled Set(s) Color Documents or B/W Photographs
Doc Code: Artifact Artifact Type Code: C

☒ Microfilm(s)
Doc Code: Artifact Artifact Type Code: F

☐ Video tape(s)
Doc Code: Artifact Artifact Type Code: V

☐ Model(s)
Doc Code: Artifact Artifact Type Code: M

☐ Bound Document(s)
Doc Code: Artifact Artifact Type Code: B

☐ Confidential Information Disclosure Statement or Other Documents marked Proprietary, Trade Secrets, Subject to Protective Order, Material Submitted under MPEP 724.02, etc.
Doc Code: Artifact Artifact Type Code X

☐ Other, description: _____
Doc Code: Artifact Artifact Type Code: Z

March 8, 2004

WE CLAIM:

1. A network distributed tracking wire transfer protocol comprising:

a variable length identification string, the identification string for specifying the identity of an entity in a distributed data collection; and

a variable length location string, the location string for specifying the network location of data associated with an entity in a distributed data collection;

wherein a relationship between the identification string and the location string can be spontaneously and dynamically created and modified.

2. The network distributed tracking wire transfer protocol defined in claim 1, wherein the protocol is application independent.

3. The network distributed tracking wire transfer protocol defined in claim 1, wherein the protocol is organizationally independent.

4. The network distributed tracking wire transfer protocol defined in claim 1, wherein the protocol is geographically independent.

5. A system having a network distributed tracking wire transfer protocol for storing and identifying data with a distributed data collection, comprising:

a data repository, the data repository for storing data in a distributed data collection;

a client entity, the client entity for manipulating data in the distributed data collection; and

a first server entity, the first server entity operative to locate data in the distributed data collection;

wherein the client entity transmits an identifier string to the first server entity along with a client request and the first server entity provides at least one location string to the client entity in response thereto.

6. The system defined in claim 5, further comprising a second server entity coupled to the first server entity.

7. The system defined in claim 5, wherein the first server entity maps the identifier string received from the client entity to the at least one location string.

8. The system defined in claim 7, wherein the mapping is performed using a hash operation.

9. The system defined in claim 6, wherein the first server entity transmits the client request to the second server entity if the first server entity cannot provide the at least one location string to the client entity.

10. The system defined in claim 9, wherein the second server entity maps the identifier string received from the first server entity to the at least one location string.

11. The system defined in claim 10, wherein the second server entity transmits the at least one location string to the first server entity for transmission to the client entity.

12. A method for storing and retrieving tracking information over a network using a wire transfer protocol, comprising the steps of:

providing a location string and an identification string, the location string for specifying the location of data associated with an entity in a distributed data collection and the identification string for specifying the identification of an entity in the distributed data collection;

storing information at a data repository entity by associating an identification string with each particular stored unit of information and by mapping the identification string to at least one location string associated with the data repository entity, the identification string and the at least one location

string for a particular unit of information being stored at a first server entity coupled to the data repository entity;

transmitting a request from a client entity to the first server entity to retrieve at least one location string associated with a particular stored unit of information, the request including the identification string associated with the particular stored unit of information; and

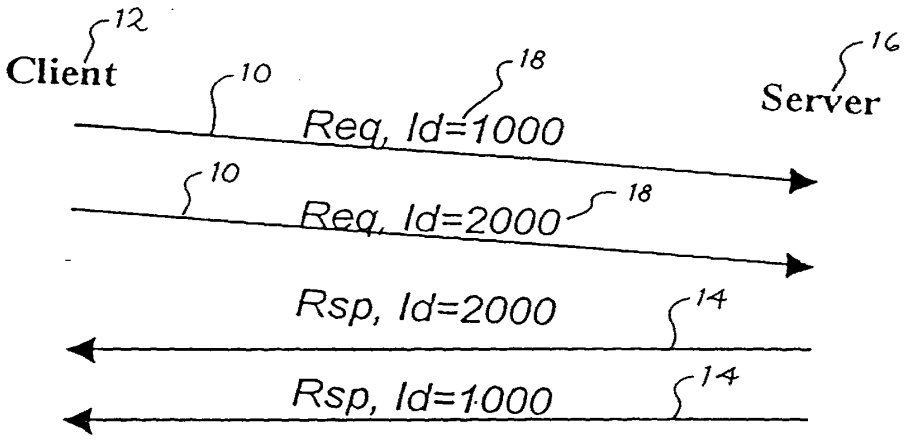
receiving the request at the first server entity and responding to the client entity by providing at least one location string associated with the particular stored unit of information to the client entity.

13. The method for storing and retrieving tracking information defined in claim 12, further comprising the step of transmitting the request to a second server entity prior to responding to the client entity, the second server entity coupled to the first server entity and having stored therewith the mapping of the identification string and the at least one location string for the particular unit of information.

14. The method for storing and retrieving tracking information defined in claim 13, wherein the second server entity responds to the client entity by providing the location string associated with the particular stored unit of information to the second client entity.

15. The method for storing and retrieving tracking information defined in claim 12, wherein the lengths of the identification string and the at least one location string are variable.

16. The method for storing and retrieving tracking information defined in claim 12, further comprising the step of spontaneously and dynamically manipulating the mapping of an identification string to a location string.



Use Of Request Identifiers

Fig. 1

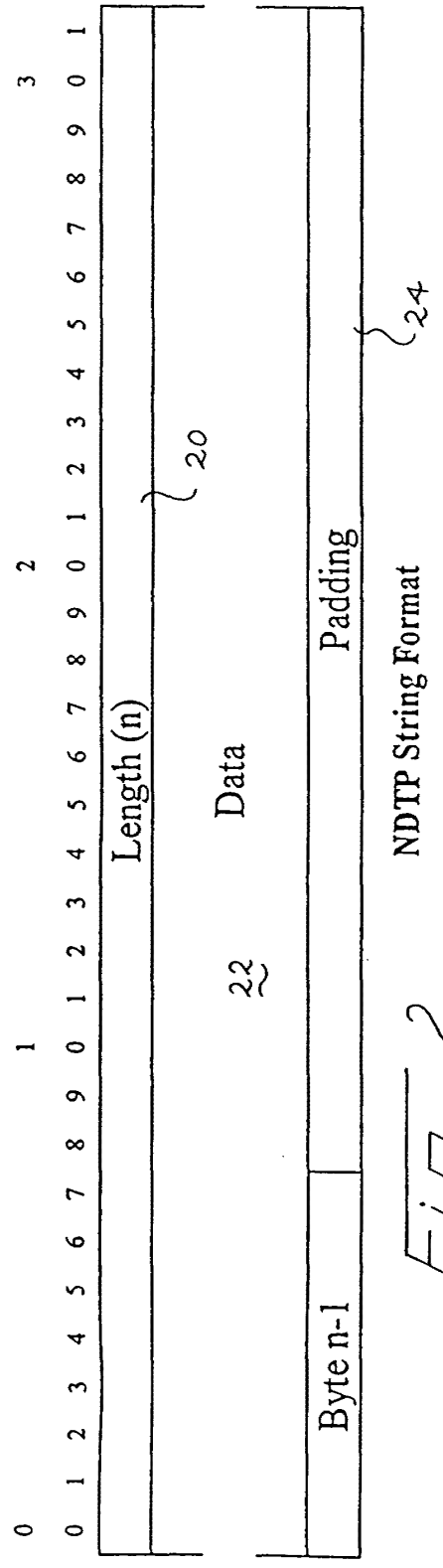

0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
Length (n)
20
Data
22
Byte n-1
Padding
24
NDTP String Format

Fig. 2

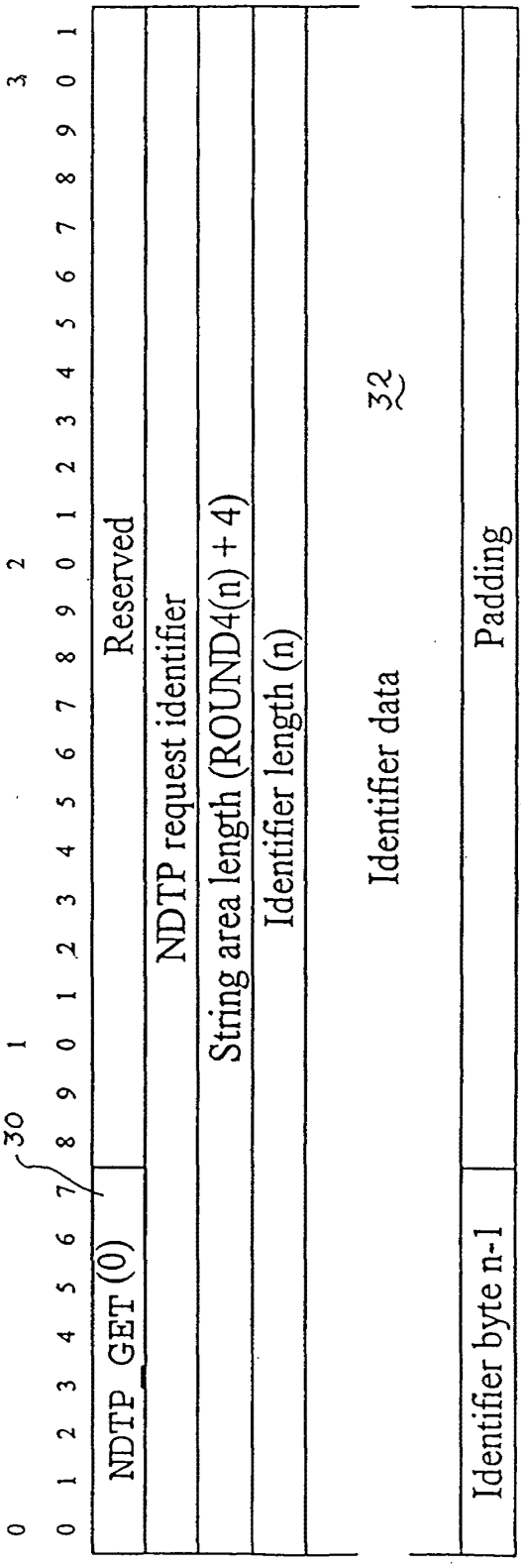

0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
30
NDTP_GET (0)
Reserved
NDTP request identifier
String area length (ROUND4(n) + 4)
Identifier length (n)
Identifier data
32
Identifier byte n-1
Padding
NDTP_GET Format

Fig. 3

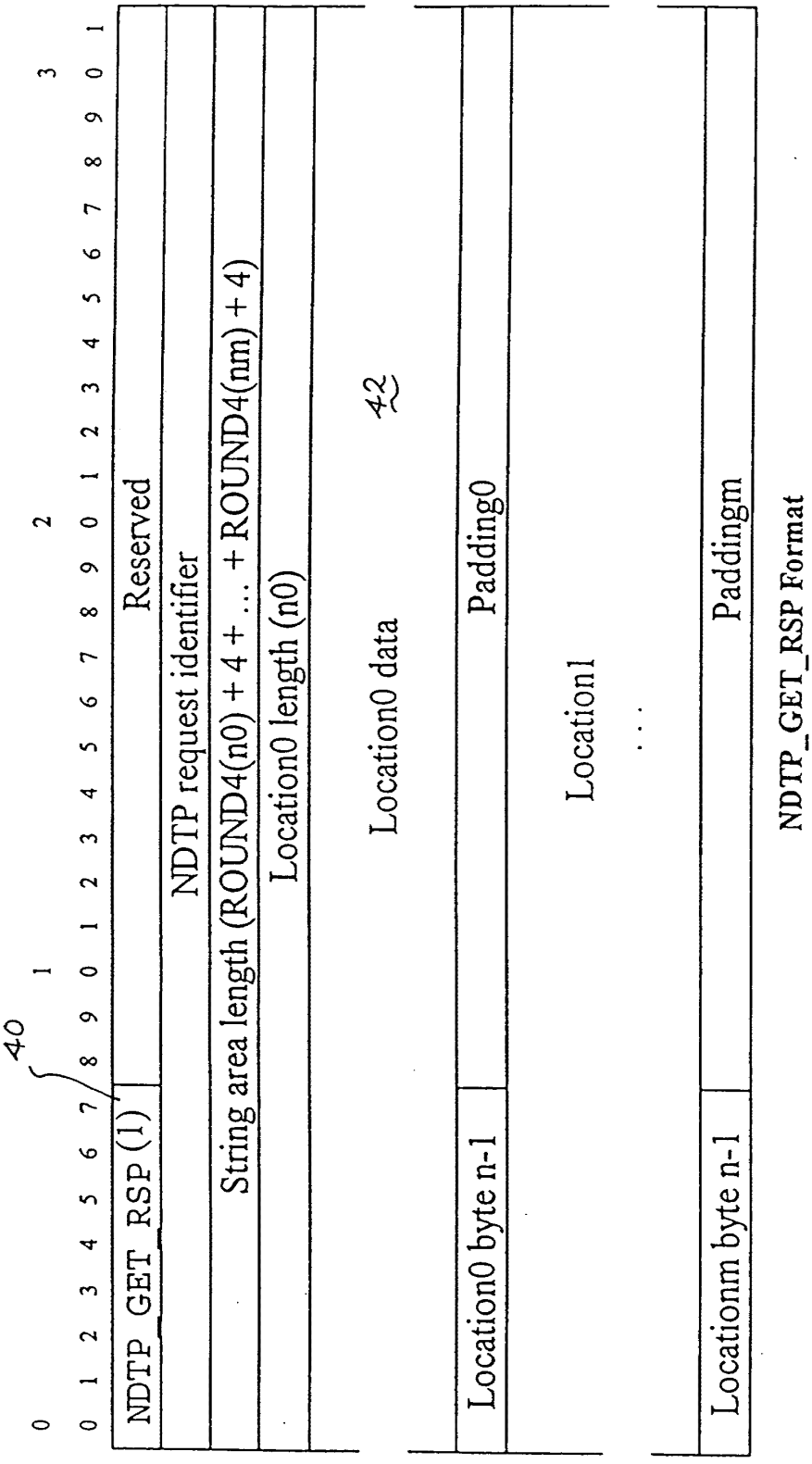

0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
40
NDTP_GET_RSP (1)
Reserved
NDTP request identifier
String area length (ROUND4(n0) + 4 + ... + ROUND4(nm) + 4)
Location0 length (n0)
Location0 data
42
Location0 byte n-1
Padding0
Location1
...
Locationm byte n-1
Paddingm
NDTP_GET_RSP Format

Fig. 4

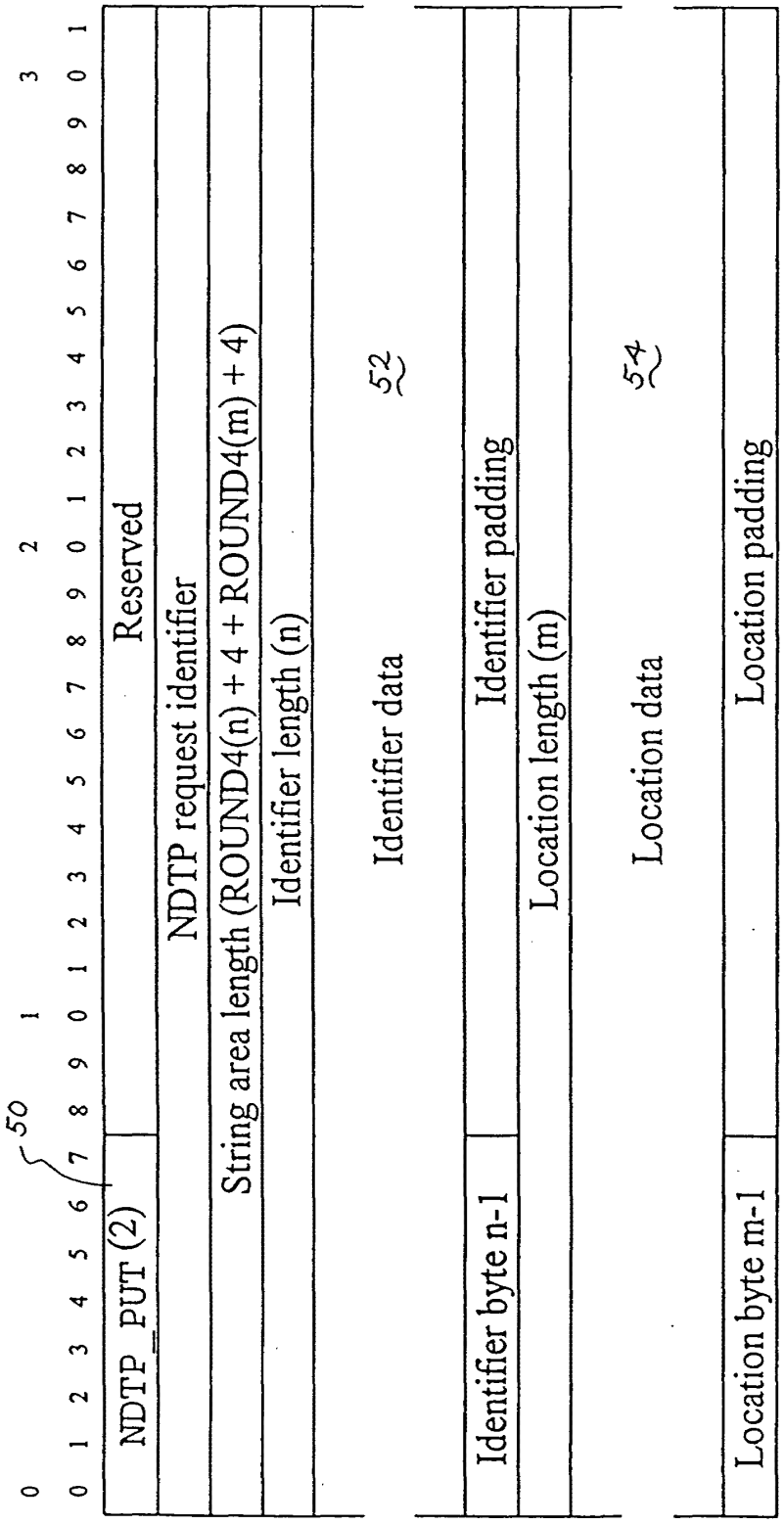
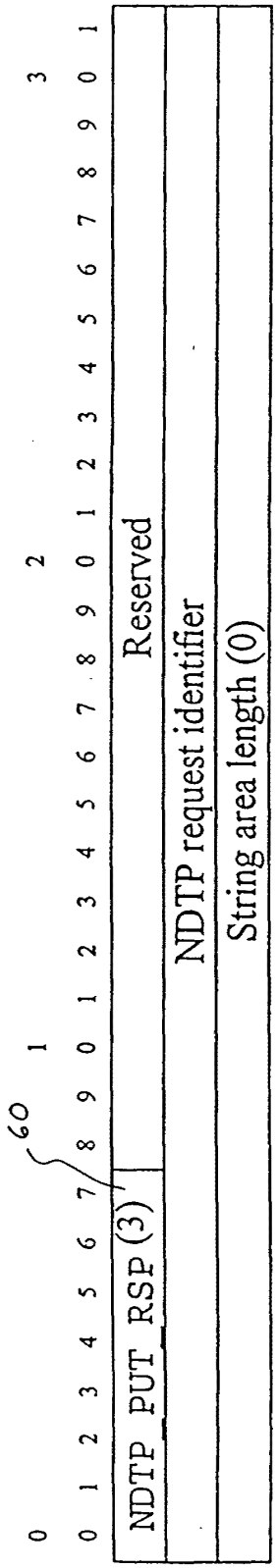

0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
50
NDTP_PUT (2)
Reserved
NDTP request identifier
String area length (ROUND4(n) + 4 + ROUND4(m) + 4)
Identifier length (n)
Identifier data
52
Identifier byte n-1
Identifier padding
Location length (m)
Location data
54
Location byte m-1
Location padding
NDTP_PUT Format

Fig. 5



NDTP_PUT_RSP Format

Fig. 6

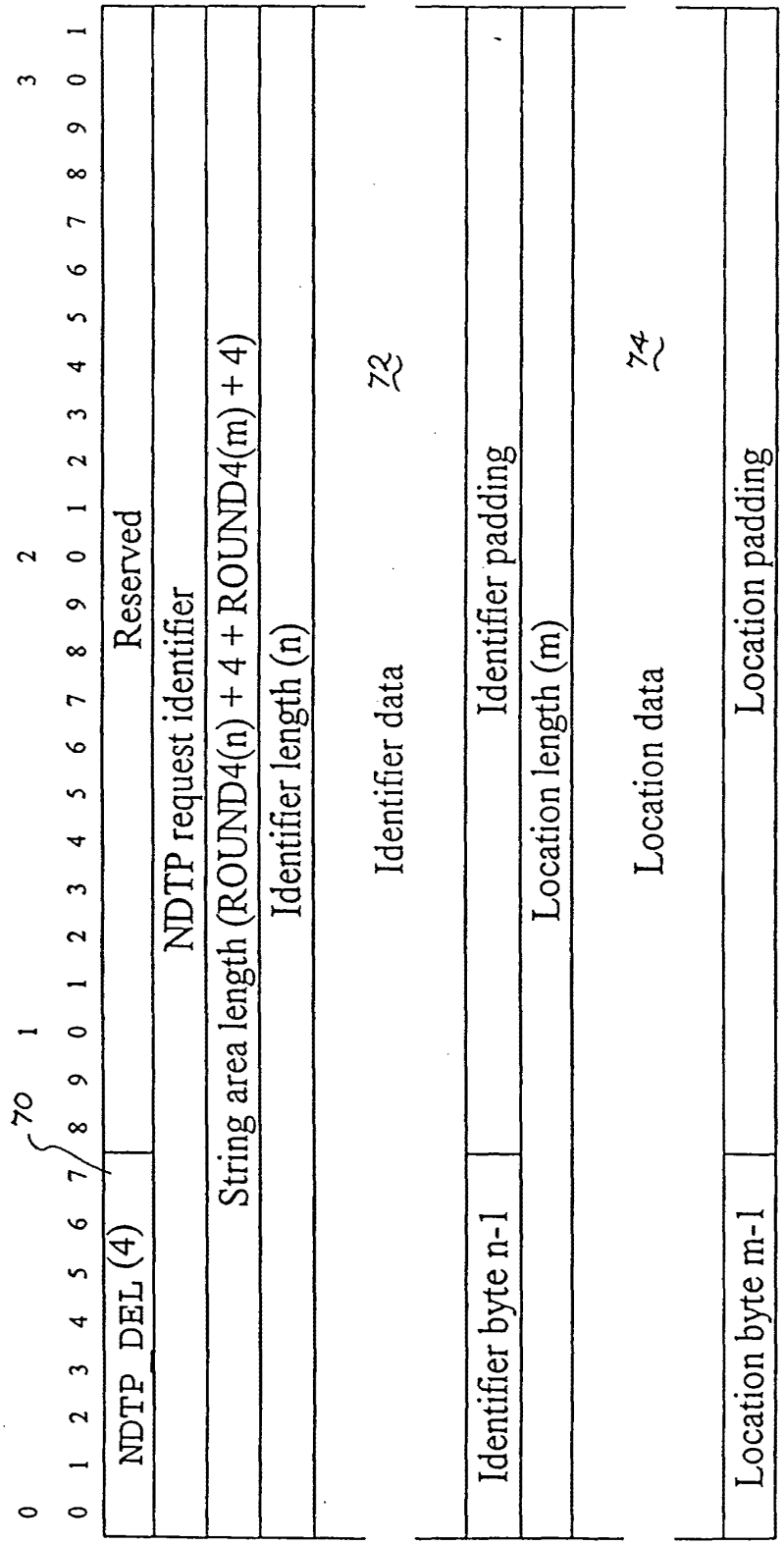
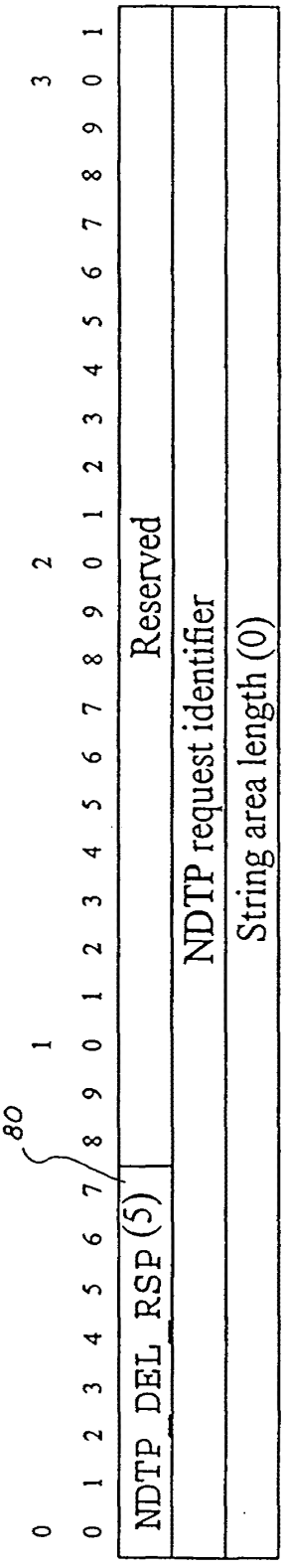

0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
70
NDTP_DEL (4)
Reserved
NDTP request identifier
String area length (ROUND4(n) + 4 + ROUND4(m) + 4)
Identifier length (n)
Identifier data
72
Identifier byte n-1
Identifier padding
Location length (m)
Location data
74
Location byte m-1
Location padding
NDTP_DEL Format

Fig. 7



NDTP_DEL_RSP Format

Fig. 8

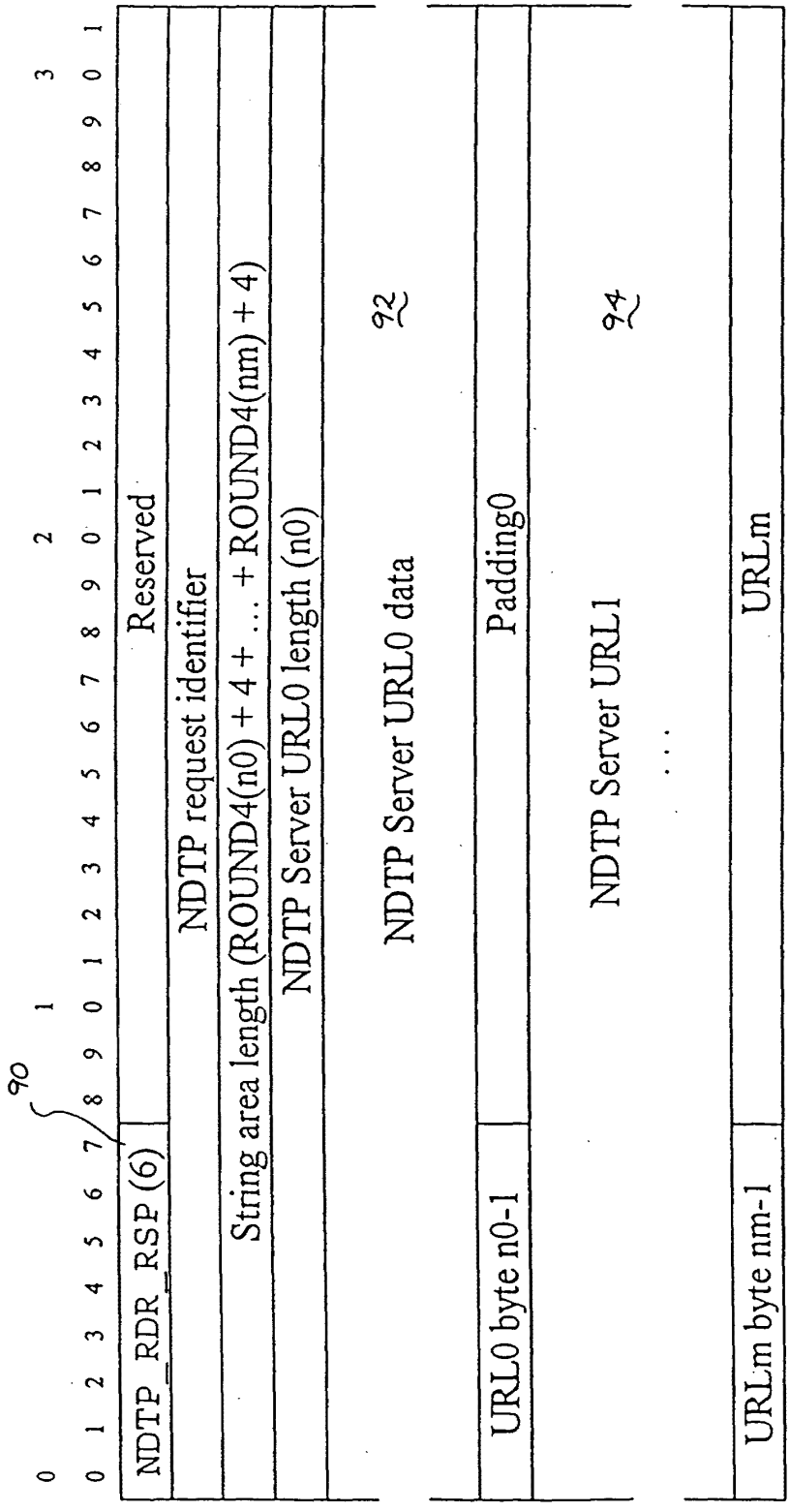
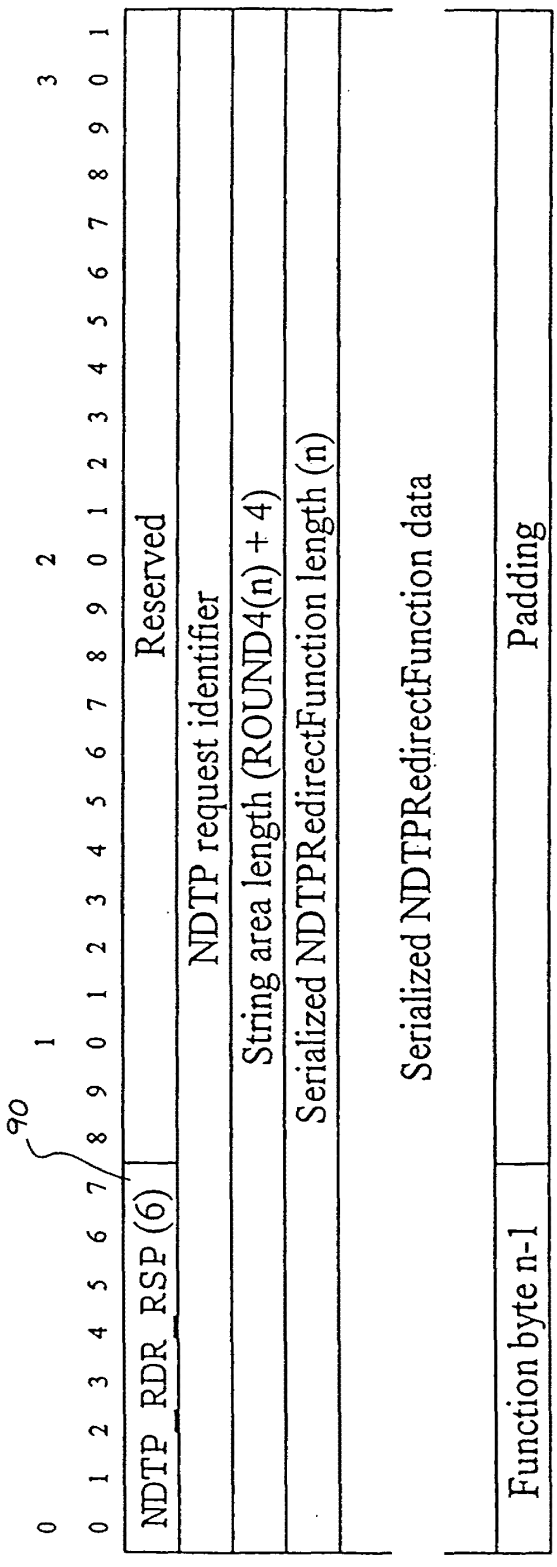

0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
90
NDTP_RDR_RSP (6)
Reserved
NDTP request identifier
String area length (ROUND4(n0) + 4 + ... + ROUND4(nm) + 4)
NDTP Server URL0 length (n0)
NDTP Server URL0 data
92
URL0 byte n0-1
Padding0
NDTP Server URL1
94
...
URLm byte nm-1
URLm
NDTP_RDR_RSP With Server Table

Fig. 9(a)



NDTP_RDR_RSP With Redirection Function

Fig. 9(6)

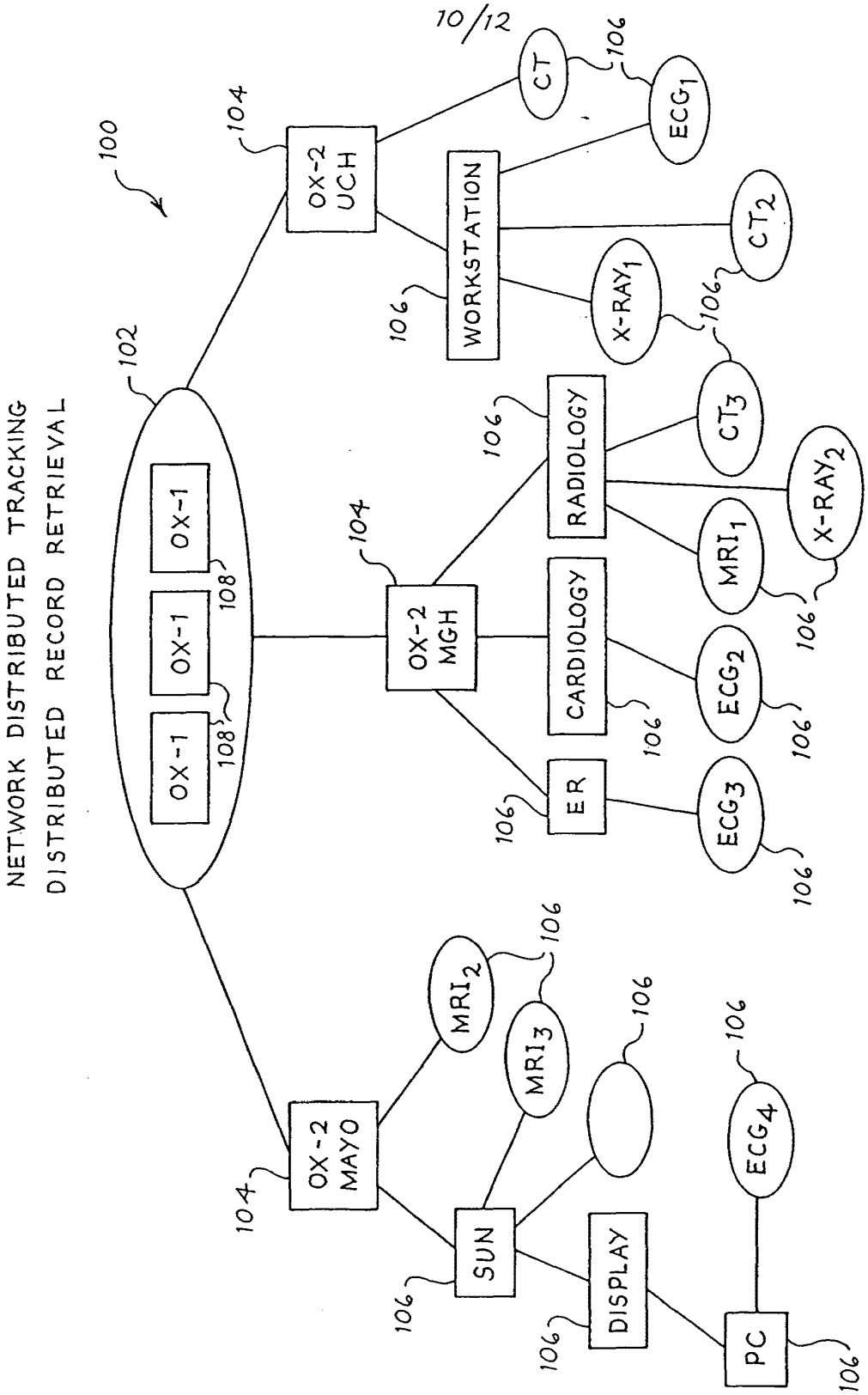

NETWORK DISTRIBUTED TRACKING
DISTRIBUTED RECORD RETRIEVAL
10/12
100
102
104
106
108
OX-1
OX-2 UCH
OX-2 MGH
OX-2 MAYO
WORKSTATION
RADIOLOGY
CARDIOLOGY
ER
SUN
DISPLAY
PC
CT
CT2
CT3
ECG1
ECG2
ECG3
ECG4
X-RAY1
X-RAY2
MRI1
MRI2
MRI3

Fig. 10

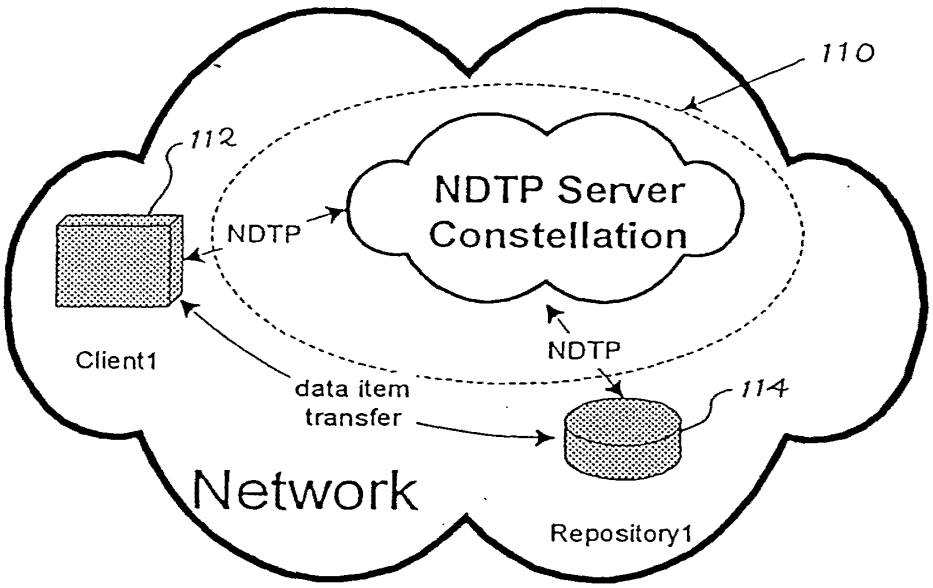


Fig. 11

NDTP Server Constellation Context

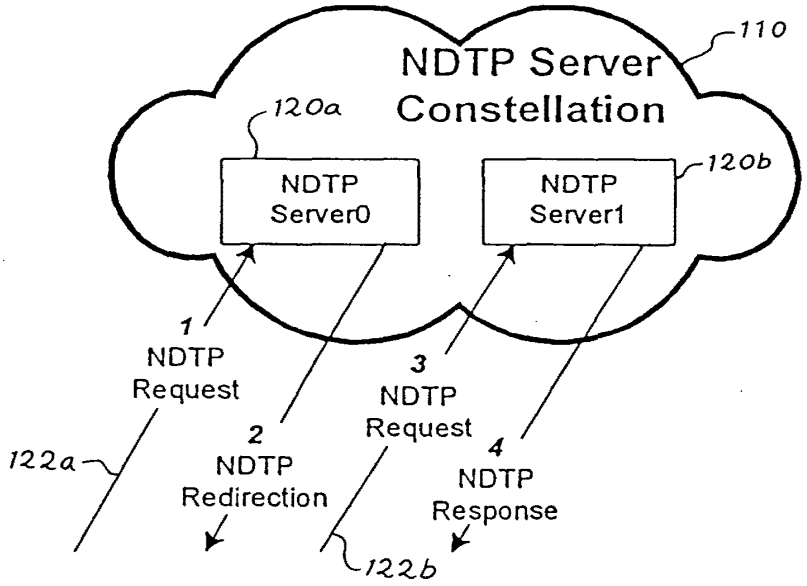
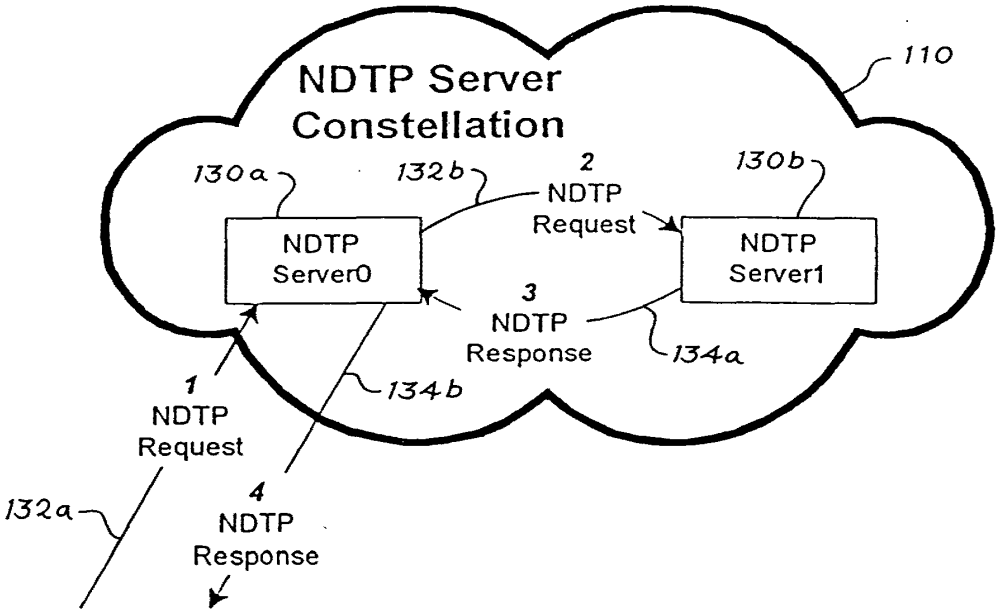


Fig. 12

NDTP Client-Centric Constellation



NDTP Server-Centric Constellation

Fig. 13

Case No. 10406/43

DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL, the specification of which:

- ☐ is attached hereto.
- ☒ was filed on September 13, 2000 as Application Serial No. 09/661,222.
- ☐ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

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

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
			☐ Yes	☐ No
(Number)	(Country)	(Day/Month/Year Filed)		

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

60/153,709	September 13, 1999
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

09/111,896	July 8, 1998	Pending
(Application Serial No.)	(Filing Date)	(Status-patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Case No. 10406/43

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REMARKS

Applicants have amended the application to add a reference to the parent applications in the fist line as required by 37 C.F.R. §1.78.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTOR:	JOHN K. OVERTON STEPHEN W. BAILEY
TITLE:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
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NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

RELATED APPLICATIONS

This application claims priority to provisional patent application serial no. 60/153,709, entitled SIMPLE DATA TRANSPORT PROTOCOL METHOD AND APPARATUS, filed on September 13, 1999, and to regular patent application no. 09/111,896, entitled SYSTEM AND METHOD FOR ESTABLISHING AND RETREIVING DATA BASED ON GLOBAL INDICES, filed on July 8, 1998.

MICROFICHE/COPYRIGHT REFERENCE

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FIELD OF THE INVENTION

This invention relates generally to the storage and retrieval of information, and in particular, to a protocol for dynamic and spontaneous global search and retrieval of information across a distributed network regardless of the data format.

BACKGROUND OF THE INVENTION

Data can reside in many different places. In existing retrieval systems and methods, a client seeking information sends a request to a server. Typically, only data that are statically associated with that server are returned. Disadvantageously, the search is also usually restricted to previously known systems. The search is thus conducted only where the server knows in advance to look.

Another disadvantage of known retrieval systems is the difficulty in accessing data in different forms. Known retrieval systems are typically

designed to search for data in limited forms. One example is where a client requests files based on a subject, like a person's name. In the search results, therefore, only text files of peoples' names may be retrieved. Another problem in current retrieval systems is that the client may receive text and image files in the search results, but could not seamlessly access the image files. Yet another problem in current retrieval systems is that video and sound files related to the request may not even be found in the search results. For example, a doctor might be able to retrieve medical records on a specific patient, but cannot view an MRI or X-Ray results associated with that record.

A distributed data collection is a system where data is stored and retrieved among multiple machines connected by a network. Typically, each machine in which some portion of the data in a distributed data collection may reside is called a "data repository machine", or simply a "data repository". One commonly asked question in a data repository environment is: Where is data associated with a particular entity in a distributed data collection? The data location is a key question when a distributed data collection has highly dynamic data distribution properties.

In networked environments where there are a large number of data repositories and any particular entity does not store data in all the repositories, a mechanism is needed that would permit queries to be directed only at data repositories with relevant information. It would also be beneficial to permit membership in the set of data repositories itself to be highly dynamic. Such a system would support on-the-fly addition and removal of data repositories from a distributed data collection seamlessly and without the need to reprogram the client and server participants.

BRIEF SUMMARY OF THE INVENTION

In view of the above, the invention provides a network distributed tracking wire transfer protocol, and a system and method for using the protocol in a networked environment. The network distributed tracking wire transfer protocol includes two basic components: identification strings for specifying the identity of an entity in the distributed data collection, and

location strings for specifying network locations of data associated with an entity. The protocol accommodates variable length identifier and location strings. Relationships between identification strings and location strings can be dynamically and spontaneously manipulated thus allowing the corresponding data relationships also to change dynamically, spontaneously, and efficiently. In addition, the network distributed tracking wire transfer protocol is application independent, organizationally independent, and geographically independent.

In another aspect of the invention, a system of components using the network distributed tracking protocol are provided for storing and identifying data with a distributed data collection. The components include (1) a data repository for storing data in the distributed data collection, (2) a client entity for manipulating data in the distributed data collection, and (3) a first server entity operative to locate data in the distributed data collection, which may be coupled to a client entity and/or data repository. In a network with these components, a client entity transmits an identifier string to the first server entity along with the client request, and the first server entity provides a set of location strings to the client entity in response thereto. The first server entity maps the identifier string received from the client entity to a set of location strings. The network may also include any number of additional server entities coupled to the first server entity.

According to yet another aspect of the invention, a method is provided for storing and retrieving tracking information over a network using a wire transfer protocol. A location string specifies the location of data associated with an entity in the distributed data collection and the identification string specifies the identification of an entity in a distributed data collection. A first data repository entity stores data by associating an identification string with each particular stored unit of data, and by mapping the identification string to a location string associated with the first data repository. The identification string and location string for the particular unit of data are at a first server entity coupled to the first data repository entity. A request is transmitted from a client entity to the first server entity to retrieve at least one location string

associated with the stored unit of data in the distributed data collection. The request includes the identification string associated with the particular stored unit of data. The request is received at the first server entity, which responds to the client entity by providing at least one location string associated with the particular stored unit of data to the client entity.

The request may also be transmitted to a second server entity prior to responding to the client entity, where the second server entity is coupled to the first server entity and includes the mapping of the identification string and location strings for the particular units of data. In such case, the second server entity responds to the client entity by providing the at least one location string associated with the particular stored unit of data to the client entity.

The network distributed tracking protocol of the invention is a networking protocol that efficiently manages mappings from one or more identifier strings to zero or more location strings. The protocol permits client entities to add and remove identifier/location associations, and request the current set of locations for an identifier or identifiers from server entities that comply with the protocol.

The protocol is designed for use in the larger context of a distributed data collection. As such, it supports an architecture in which information about where data associated with particular application entities can be managed and obtained independently of the data itself. The protocol and its associated servers thus maintain a mapping between entity identifiers and data locations. The identifier/location mapping maintained by the servers is very dynamic. Regardless of the expected system context in a distributed data collection, the protocol can be used for any application in which one-to-one or one-to-many associations among strings are to be maintained and accessed on a network.

In any context, the protocol supports identifier and location strings of up to 2^{32}-4 bytes in length, but in most applications it is expected that the strings are typically short. String length is not fixed by the protocol, except by the upperbound. Accordingly, string formats are controlled at a local level and not dictated by the protocol.

These and other features and advantages of the invention will become apparent upon a review of the following detailed description of the presently preferred embodiments of the invention, when viewed in conjunction with the appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an example of multiple outstanding protocol requests.

FIG. 2 is a layout of one presently preferred string format.

FIG. 3 is a layout of one presently preferred NDTP_GET message.

FIG. 4 is a layout of one presently preferred NDTP_GET_RSP message.

FIG. 5 is a layout of one presently preferred NDTP_PUT message.

FIG. 6 is a layout of one presently preferred NDTP_PUT_RSP message.

FIG. 7 is a layout of one presently preferred NDTP_DEL message.

FIG. 8 is a layout of one presently preferred NDTP_DEL_RSP message.

FIG. 9 is a layout of one presently preferred NDTP_RDR_RSP message, where FIG. 9(a) shows a server table layout, and FIG. 9(b) shows a redirection function layout.

FIG. 10 is a system block diagram showing a multi-server implementation environment of the network distributed tracking wire transfer protocol of the invention.

FIG. 11 is a system diagram showing an NDTP server constellation configuration.

FIG. 12 is a system diagram showing a client-centric constellation approach.

FIG. 13 is a system diagram showing a server-centric constellation approach.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS OF THE INVENTION

The following terms are used to describe the operation of the presently preferred network distributed tracking protocol (NDTP). An "identifier string" or an "identifier" is a unique string with which zero or more location strings are associated in an NDTP server. A "data location" or a "location" is a string that is a member of a set of strings associated with an identifier string in an NDTP server. An "NDTP client" or a "client" is a network-attached component that initiates update or lookup of identifier/location mappings from an NDTP server with NDTP request messages. An "NDTP server" or a "server" is a network-attached component that maintains a set of identifier/location mappings that are modified or returned in response to NDTP request messages from NDTP clients. The term "Network Byte Order" is the ordering of bytes that compose an integer of larger than a single byte as defined in the Internet Protocol (IP) suite. Preferably, Network Byte Order specifies a big-endian, or most significant byte first, representation of multibyte integers. In this specification a byte is preferably composed of eight bits.

Network Distributed Tracking Protocol (NDTP)

The Network Distributed Tracking Protocol (NDTP) efficiently tracks the location of data associated with an individual entity in a distributed data collection. NDTP is a transactional protocol, which means that each operation within NDTP consists of a request message from an NDTP client to an NDTP server, followed by an appropriate response message from the NDTP server to the NDTP client. NDTP defines an entity key (or "identifier") as a unique string used to refer to an entity about which a distributed query is performed.

The NDTP server treats the entity key as an unstructured stream of octets, which is assumed to be unique to a particular entity. The precise structure of the NDTP entity key and the mechanism for ensuring its uniqueness are a function of the application in which the NDTP server is used. In a customer oriented application, the NDTP entity key might be a unique customer identifier, for example, a Social Security Number, in either

printable or binary integer form, as is appropriate to the application. NDTP also defines a data location specifier as a string used to specify a data respository in which data associated with a particular entity may be found.

As with NDTP entity keys, the NDTP server treats NDTP data location specifiers as unstructured streams of octets. The structure of an NDTP data location specifier is a function of the application in which the NDTP server is used. For example, an NDTP data location specifier might be an Internet machine name, and a TCP/IP port number for a relational database server, or an HTTP Universal Resource Locator(URL), or some concatenation of multiple components.

The NDTP server efficiently maintains and dispenses one to zero or one to many relationships between entity keys and data location specifiers. In other words, an entity key may be associated with any number of data location specifiers. When data for a particular entity is added to a data repository, the NDTP server is updated to indicate an association between the entity key and the data repository's data location specifier. When a query is performed for an entity key, the NDTP server supplies the set of data repositories in which data may be found for that entity key.

General NDTP Mechanics

The protocol of the invention is designed to provide maximum transaction throughput from the NDTP server, associated clients, and associated data repositories when appropriate. The design goal is realized through two design principles:

1. NDTP messages should preferably be as short as possible to maximize the rate of NDTP transactions for a given network communication bandwidth.
2. NDTP messages should preferably be structured for efficient processing on existing machine architectures.

Design Optimizations.

Numerical fields of an NDTP message are preferably represented in binary integer format rather than ASCII or other printable format to minimize

host processing overhead and network utilization. Numerical fields of NDTP messages are also aligned on 32-bit boundaries to minimize the cost of manipulation on current machine architectures. Manipulating unaligned multibyte integer quantities on modern machine architectures usually incurs an extra cost ranging from mild to severe compared to manipulating the same quantities in aligned form.

In keeping with other network protocol standards including TCP/IP, multioctet integer quantities in NDTP are preferably encoded using the big endian integer interpretation convention, as set forth above.

To overcome network latency, NDTP is designed to support asynchronous operation, where many requests may be sent to an NDTP server before a response from any of them is received.

Each NDTP message is preceded by a fixed size, 12-octet header, using the preferred data structure:

```
typedef struct ndtp-hdr {
      uint8_T op;              /* opcode */
      uint8_t pad[3];
      uint32_t id;             /* transaction identifier */
      uint32_t size;           /* total request size
                                  following the header */
}ndtp_hdr_t;
```

where:

op:

NDTP message numerical operation code.

NDTP_GET:	get request
NDTP_GET_RSP:	get response
NDTP_PUT:	put request
NDTP_PUT_RSP:	put response
NDTP_DEL:	delete request
NDTP_DEL_RSP:	delete response
NDTP_RDR_RSP:	provide redirection

id:

Client supplied operation request used to distinguish responses from multiple outstanding NDTP asynchronous requests. Each "_RSP" message echoes the id field of the associated request.

size:

Size, in octets of the remainder of the NDTP message. The size field should always be a multiple of 4 octets.

Variably sized portions of NDTP messages are preferably defined with a size field rather than some other delimiter mechanism to facilitate efficient reading of NDTP messages. Requests may be made to the network layer to read the entire variably sized portion of an NDTP message, rather than reading small chunks while scanning for a delimiter. Furthermore, client and server resource management can be more efficient since the size of NDTP messages is known before reading.

The variably sized portions of NDTP messages are composed of zero or more NDTP stings:

```
typedef struct ndtp_str {
  uint32_t len;
  uint8_t data [];
{  ndtp_str_t;
```

Note that the C struct definitions in this document are schematic, and not necessarily fully compliant structures in the C programming language. Specifically, arrays denoted in this document with "[ ]" imply a dimension which is only known dynamically and this indefinite array size specifier is not allowed in C struct definitions. Note also the following:

len:

the number of significant octets of data following the len field in the data area.

data:

len octets of data, followed by up to 3 octets of padding, to ensure that the total length of the NDTP string structure is a multiple of 4 octets. The padding octets are not included in the len field.

Because variable sized portion NDTP messages are composed of zero or more NDTP stings and NDTP strings preferably occupy an even multiple of 4 octets, this ensures that the "size" field of NDTP message headers will preferably be a multiple of 4 octets.

Protocol Structure

An example of multiple outstanding NDTP requests and the use of request identifiers is shown in FIG. 1. NDTP preferably has a simple, stateless request/response structure. Each request message 10 sent by a client 12 has a corresponding response message 14 returned by the server 16. To maximize server 16 throughput and use of available network bandwidth, NDTP is asynchronous in nature. Many requests 10 from a single client 12 may be outstanding simultaneously, and responses 14 may or may not be returned from the server 16 in the order in which the requests 10 were issued. Each NDTP request 10 contains an NDTP request identifier 18 that is returned in the NDTP response 14 for the associated request 10. An NDTP client 12 uses a unique NDTP request identifier 18 for each NDTP request 10 that is outstanding at the same time to an NDTP server 16 if it wishes to correlate responses with requests.

There are four operations preferably supported by the protocol:

- Add a location association to an identifier.
- Delete a location association from an identifier.
- Get all locations associated with an identifier.
- Provide a redirect instruction to identify an alternative server.

The response to adding a location association to an identifier 18 is a simple acknowledgement. If the location is already associated with the identifier 18, adding the association has no effect, but the request 10 is still acknowledged appropriately. In other words, the NDTP add operation is idempotent. The response to deleting a location association from an identifier 18 is a simple acknowledgement. If the location is not currently associated with the identifier 18, deleting the association has no effect, but the request 10 is still acknowledged appropriately. In other words, the NDTP delete operation is idempotent. The response 14 to getting all locations associated

with an identifier 18 is a list of the locations presently associated with an identifier 18. If no locations are currently associated with an identifier 18, a list of length zero is returned.

Message Formats

NDTP messages 10, 14 preferably have a regular structure that consists of a message operation code, followed by a request identifier 18, followed by a string area length (in bytes) 20, followed by zero or more strings 22, as shown in FIG. 2. As those skilled in the art will appreciate, NDTP message formats are preferably independent of the network transport layer used to carry them. NDTP preferably defines mappings of these messages 10, 14 onto TCP and UDP transport layers (described in detail below), but other mappings could also be defined and it is likely that these NDTP message formats would not require change. For example, the notation ROUND4(x) means x, rounded up to the next multiple of 4.

Integer Format

Multibyte integers in NDTP messages are represented in network byte order; using the big-endian convention. In other words, the most significant byte of a multibyte integer is sent first, followed by the remainder of the bytes, in decreasing significance order.

String Format

Strings in NDTP are represented as counted strings, with a 32-bit length field 20, followed by the string data 22, followed by up to 3 bytes of padding 24 to make the total length of the string representation equal to ROUND4(length). This layout is shown diagrammatically in FIG. 2.

NDTP_GET Format

The `NDTP_GET` message has a message operation code 30 of 0, and a single NDTP string 32 which is the identifier string for which to get associated location strings. This layout is shown diagrammatically in FIG. 3.

NDTP_GET_RSP Format

The NDTP_GET_RSP message has a message operation code 40 of 1, and zero or more strings 42 that are the locations currently associated with the requested identifier. This layout is shown diagrammatically in FIG. 4.

NDTP_PUT Format

The NDTP_PUT message has a message operation code 50 of 2, and two NDTP strings 52, 54. The first string 52 is the identifier for which to add a location association, and the second string 54 is the location to add. This layout is shown diagrammatically in FIG. 5.

NDTP_PUT_RSP Format

The NDTP_PUT_RSP message has a message operation code 60 of 3, and zero NDTP strings. This layout is shown diagrammatically in FIG. 6.

NDTP_DEL Format

The NDTP_DEL message has a message operation code 70 of 4, and two NDTP strings 72, 74. The first string 72 is the identifier from which to delete a location association, and the second string 74 is the location to delete. This layout is shown diagrammatically in FIG. 7.

NDTP_DEL_RSP Format

The NDTP_DEL_RSP message has a message operation code 80 of 5, and zero NDTP strings. This layout is shown diagrammatically in FIG. 8.

NDTP_RDR_RSP Format

The NDTP_RDR_RSP message has a message operation code 90 of 6, and one or more NDTP strings 92, 94. Two layouts apply, which are shown diagrammatically in FIGS. 9(a) and 9(b).

A general description of the usage and operation of these protocol messages is provided below.

NDTP_GET Transaction

The NDTP_GET message contains a single NDTP string which is the entity key for which associated data locations are requested.

```
typedef struct ndtp_get {
  ndtp_hdr_t hdr;
  ndtp_str_t key;
} ndtp_get_t;
```

The NDTP_GET_RSP message contains zero or more NDTP strings which are the data location specifiers associated with the NDTP entity key:

```
typedef struct ndtp_get_rsp {
  ndtp_hdr_t hdr;
  uint32_t rsps;
  ndtp_str_t values[];
} ndtp_get_rsp_t;
```

NDTP_PUT Transaction

The NDTP_PUT messages contains two NDTP strings which are (1) the NDTP entity key and (2) the NDTP data location specifier which is to be associated with the NDTP entity key.

```
typedef struct ndtp_put {
  ndtp_hdr_t hdr;
  ndtp_str_t key;
  ndtp_str_t data;
} ndtp_put_t;
```

The NDTP_PUT_RSP message has no NDTP strings, and simply indicates that the requested entity key/data location specifier association was added:

```
typedef struct ndtp_put_rsp {
  ndtp_hdr_t hdr;
} ndtp_put_rsp_t;
```

The requested entity key/data location specifier association is added in addition to any other associations already maintained by the NDTP server. If

the requested entity key/data location specifier association is already in effect, the NDTP_PUT still succeeds and results in an NDTP_PUT_RSP message.

NDTP_DELETE Transaction

The NDTP_DEL message contains two NDTP strings which are (1) the NDTP entity key and (2) the NDTP data location specifier which is to be unassociated with the NDTP entity key:

```
typedef struct ndtp_del {
  ndtp_hdr_t hdr;
  ndtp_str_t key;
  ndtp_str_t data;
} ndtp_del_t;
```

The NDTP_DEL_RSP message has no NDTP strings, and simply indicates that the requested entity key/data location specifier association was deleted.

```
typedef struct ndtp_del_rsp {
  ndtp_hdr_t hdr;
} ndtp_del_rsp_t;
```

If the requested entity key/data location specifier association is not in effect, the NDTP_DEL still succeeds and results in an NDTP_DEL_RSP message.

NDTP_RDR_RSP Message

NDTP supports a distributed server implementation for which two principle redirection methods apply: (1) embedded redirection links, and (2) passed functions. The passed functions method in turn has two variants: (a) a well-known function, and (b) a communicated function. (These methods and variants are described in further detail below.)

Network Front End

The NDTP server network front end preferably maximizes NDTP transaction throughput including concurrent NDTP requests from a single client as well NDTP requests from multiple concurrent clients.

Network Communication Mechanism

NDTP defines a transaction oriented protocol, which can be carried over any of a variety of lower level network transport protocols. For example:

TCP/IP: TCP/IP provides a ubiquitously implemented transport which works effectively on both local area and wide area networks. An NDTP client using TCP/IP preferably connects with the NDTP server at an established TCP port number, and then simply writes NDTP request messages through the TCP/IP connection to the server, which then writes NDTP response messages back to the client through the same TCP/IP connection in the reverse direction. TCP/IP implementations perform buffering and aggregation of many small messages into larger datagrams, which are carried more efficiently through the network infrastructure. Running NDTP on top of TCP/IP will take advantage of this behavior when the NDTP client is performing many NDTP requests. For example, a data repository which is undergoing rapid addition of data records associated with various entities will perform many rapid NDTP_PUT operations to the NDTP server that can all be carried on the same NDTP TCP/IP connection.

UDP/IP: If an NDTP client only performs occasional, isolated NDTP operations, or there are a vast number of clients communicating with an NDTP server, TCP/IP will not offer the best possible performance because many traversals of the network are required to establish a TCP/IP connection, and yet more network traversals are required to transfer actual NDTP messages themselves. For such isolated NDTP transactions, depending upon the application and network infrastructure in use, it is beneficial to have the NDTP server employ UDP/IP, which is a widely available connectionless datagram protocol.

However, UDP/IP does not support reliable data transfer, or any congestion control mechanism. This means that NDTP clients using UDP/IP must implement reliability and congestion control maintaining transaction timeouts and performing exponential retry backoff timers, precisely analogous to the congestion control mechanism implemented by Ethernet, and other well known UDP protocols. Those skilled in the art will note that the NDTP

protocol is stateless from the standpoint of the NDTP server, which means that there is no congestion control or reliability burden on the server; it is all implemented in a distributed manner by the NDTP UDP/IP clients.

Still Higher Performance (ST): Both TCP/IP and to a lesser degree UDP/IP suffer from high host CPU overhead. Like the relatively long latency of TCP/IP, this host CPU consumption is considered just the "cost of doing business" where TCP/IP provides ubiquitous connectivity. If an NDTP server were running in a more constrained environment, where ubiquitous connectivity was not required, its absolute performance could be improved substantially by using a different protocol that is optimized to reduce CPU overhead and latency, such as the Scheduled Transfer (St) protocol.

None of these network implementation issues are particularly unique to NDTP, however. All similar protocols face similar tradeoffs, and what art exists to improve the performance of such protocols applies fully to NDTP as well.

NDTP Query Processing

Servicing NDTP query requests does not require high latency operations, such as disk I/O. Therefore, the NDTP server network front end preferably services NDTP query requests in a FIFO style by reading the NDTP_GET message, performing the lookup for the entity key in the NDTP server string store, and writing the NDTP_GET_RSP message. Each NDTP query is independent of any other NDTP transactions (other queries or updates), so it is possible to process multiple NDTP queries simultaneously on multiprocessor machines. The NDTP server permits this by not performing multiprocessor locking in the NDTP query processing path.

The current prototype NDTP server preferably does not create multiple read service threads per NDTP connection, so multiprocessing will only occur while processing queries from different NDTP connections. Nonetheless, the NDTP server could be extended to support multiprocessing of NDTP queries from a single NDTP connection if this turned out to be advantageous.

NDTP Update Processing

Unlike NDTP queries, processing NDTP updates requires the high latency operation of committing the change to nonvolatile storage. To maintain high performance on NDTP updates, the NDTP server network front end preferably supports multiple concurrent asynchronous update transactions. Also, each update is preferably performed atomically to avoid creating an inconsistent state in the string store. Currently, the string store supports only a single mutator thread, which means that all NDTP updates are serialized through the string store mutator critical code sections. As is traditional in transactional systems, the string store mutation mechanism is implemented as a split transaction.

When an NDTP update is processed, a call is made to the string store mutation function, which returns immediately indicating either that the mutation is complete, or that the completion will be signaled asynchronously through a callback mechanism. The mutator function might indicate an immediate completion on an NDTP_PUT operation if the entity key/data location specifier mapping was already present in the database. In this case, the network front end will immediately write the update response message back to the client.

For updates which are not immediately completed, the network front end maintains a queue of NDTP updates for which it is awaiting completion. When the completion callback is called by the string store log file update mechanism, the network front end writes the NDTP update response messages for all completed updates back to the clients. If no new NDTP update requests are arriving from NDTP clients, and there are some incomplete updates in the update queue, the network front end preferably calls the string store log buffer flush function to precipitate the completion of the incomplete updates in update queue.

Multiple Connection Handling

Handling multiple clients in a single server process requires that the server process not block waiting for events from a single client, such as newly

received data forming an NDTP request message, or clearing a network output buffer so an NDTP response message can be written. The NDTP server network front end may be conditionally compiled to use either of two standard synchronous I/O multiplexing mechanisms, select or poll, or to use threads to prevent blocking the server waiting for events on individual connections. The select and poll interfaces are basically similar in their nature, but different in the details. When compiled for synchronous I/O multiplexing, the NDTP server network front end maintains an input buffer for each connection. The multiplexing function is called to determine if any of the connections have input available, and if so, it is read into the connection's input buffer. Once a complete NDTP request is in the buffer, it is acted upon. Similarly, the network front end maintains an output buffer for each connection, and if there is still a portion of an NDTP response message to send, and the connection has some output buffer available, more of the NDTP response message is sent.

The threaded version of the NDTP server network front end preferably creates two threads for each NDTP connection, one for reading and one for writing. While individual threads may block as input data or output buffer is no longer available on a connection, the thread scheduling mechanism ensures that if any of the threads can run, they will. The threaded version of the NDTP server is most likely to offer best performance on modern operating systems, since it will permit multiple processors of a system to be used, and the thread scheduling algorithms tend to be more efficient than the synchronous I/O multiplexing interfaces. Nonetheless, the synchronous I/O multiplexing versions of NDTP server will permit it to run on operating systems with poor or nonexistent thread support.

A more detailed description of the mapping operation in both a TCP and UDP environment appears below.

TCP Mapping

As those skilled in the art will appreciate, the Transmission Control Protocol (TCP) is a connection-oriented protocol that is part of a universally

implemented subset of the Internet Protocol (IP) suite. TCP provides reliable, bi-directional stream data transfer. TCP also implements adaptive congestion avoidance to ensure data transfer across a heterogeneous network with various link speeds and traffic levels.

NDTP is preferably carried on TCP in the natural way. An NDTP/TCP client opens a connection with a server on a well-known port. (The well-known TCP (and UDP) port numbers can be selected arbitrarily by the initial NDTP implementer. Port numbers that do not conflict with existing protocols should preferably be chosen.) The client sends NDTP requests 10 to the server 16 on the TCP connection, and receives responses 14 back on the same connection. While it is permissible for a single client 12 to open multiple NDTP/TCP connections to the same server 16, this practice is discouraged to preserve relatively limited connection resources on the NDTP server 16. The asynchronous nature of NDTP should make it unnecessary for a client 12 to open multiple NDTP/TCP connections to a single server 16.

If protocol errors are detected on an NDTP/TCP connection, the NDTP/TCP connection should be closed immediately. If further NDTP/TCP communication is required after an error has occurred, a new NDTP/TCP connection should be opened. Some examples of detectable protocol errors include:

- Illegal NDTP message operation code;
- Nonzero String Area Length in `NDTP_PUT_RSP` or `NDTP_GET_RSP`;
- Inconsistent String Area Length and String Length(s) in `NDTP_GET`, `NDTP_GET_RSP`, `NDTP_PUT` or `NDTP_DEL`;
- Unexpected NDTP request identifier by client.

Due to the reliable nature of TCP, NDTP/TCP servers 16 and clients 12 need not maintain any additional form of operation timeout. The only transport errors that can occur will result in gross connection level errors. A client 12 should assume that any NDTP requests 10 for which it has not received responses 14 have not been completed. Incomplete operations may be retried. However, whether unacknowledged NDTP requests 10 have

actually been completed is implementation dependent. Any partially received NDTP messages should also be ignored.

UDP Mapping

As those skilled in the art will appreciate, the Unreliable Datagram Protocol (UDP) is a best-effort datagram protocol that, like TCP, is also part of the universally implemented subset of the IP suite. UDP provides connectionless, unacknowledged datagram transmission. The minimal protocol overhead associated with UDP can deliver extremely high performance if used properly.

NDTP/UDP clients 12 send UDP datagrams with NDTP request messages 10 to a well-known UDP port (see above). NDTP/UDP servers 16 return NDTP response messages 14 to the client 12 selected local UDP port indicated in the NDTP/UDP datagram containing the requests 10. NDTP/UDP does not require any form of connection or other association to be established in advance. An NDTP interchange begins simply with the client request message 10.

For efficiency, the mapping of NDTP on to UDP permits multiple NDTP messages to be sent in a single UDP datagram. UDP datagrams encode the length of their payload, so when a UDP datagram is received, the exact payload length is available. The recipient of an NDTP/UDP datagram will read NDTP messages from the beginning of the UDP datagram payload until the payload is exhausted. Thus, a sender of an NDTP/UDP datagram is free to pack as many NDTP messages as will fit in a UDP datagram.

The largest possible UDP datagram payload is presently slightly smaller than 64K bytes. In addition, there may be a performance penalty sending UDP datagrams that are larger than the maximum datagram size allowed by the physical network links between the sender and intended recipient. IP provides mechanisms for discovering this maximum transfer size, called the Path Maximum Transfer Unit (Path MTU), but a discussion of these mechanisms is beyond the scope of this specification. An

implementation of NDTP/UDP should preferably respect these datagram size limitations.

Unlike TCP, UDP does not provide reliable data delivery. Therefore, an NDTP/UDP client 12 implementation should implement a timeout mechanism to await the response for each outstanding NDTP request 10. The exact duration of this response timer is implementation dependent, and may be set adaptively as a client 12 receives responses from a server 16, but a reasonable default maximum value is preferably 60 seconds. If a response 14 is not received within the response timeout, the client 12 may retransmit the request 10. NDTP/UDP servers 16 need not maintain any timeout mechanisms.

Depending upon the exact timeout values selected, the client 12 retry mechanism may place some requirements on a client's 12 use of the NDTP request identifier 18 field. If the response timer is shorter than the maximum lifetime of a datagram in the network, it is possible that a delayed response will arrive after the response timer for the associated request has expired. An NDTP/UDP client 12 implementation should ensure that this delayed response is not mistaken for a response to a different active NDTP request 10. Distinguishing current responses from delayed ones is called *antialiasing*. One presently preferred way to perform antialiasing in NDTP/UDP is to ensure that NDTP request identifier 18 values are not reused more frequently than the maximum datagram lifetime.

NDTP/UDP client 12 implementations that use the NDTP request identifier 18 for antialiasing should ignore (i.e., skip) NDTP messages within a NDTP/UDP datagram with invalid NDTP request identifier 18 values. Client 12 or server 16 NDTP/UDP implementations detecting any other protocol error should also preferably discard the remainder of the current NDTP/UDP datagram without processing any further NDTP requests from that datagram. Some examples of such detectable errors include:

- Illegal NDTP message operation code;
- Nonzero String Area Length in `NDTP_PUT_RSP` or `NDTP_GET_RSP`;

- Inconsistent String Area Length and String Length(s) in `NDTP_GET`, `NDTP_GET_RSP`, `NDTP_PUT` or `NDTP_DEL`;
- Inconsistent NDTP message length and UDP datagram length.

Because NDTP/UDP messages are limited to the length of a single UDP datagram payload, NDTP/UDP cannot be used to transfer long NDTP messages. For example, it would be very difficult to send an `NDTP_GET` message with NDTP/UDP for a 64K byte identifier string. This case is avoidable by a client 12 realizing that an NDTP message is too long to send as a UDP datagram and using NDTP/TCP instead. However, a greater limitation is that NDTP currently provides no mechanism for an NDTP server 16 to indicate that a response is too large to fit in a UDP datagram. In this case, the NDTP server 16 should not send a response 14, and it may or may not chose to complete the request 10. The recovery mechanism in this case preferably is, after several unsuccessful attempts to use NDTP/UDP, a client 12 may try again with NDTP/TCP.

Because UDP does not provide any form of congestion avoidance it is possible that the simple retry strategy specified for NDTP/UDP can create network congestion. Network congestion can cause a severe degradation in the successful delivery of *all* network traffic (not just NDTP traffic, nor just the traffic from the particular client/server 12, 16 pair) through a congested network link. Congestion will occur when an NDTP/UDP implementation is sending datagrams faster than can be accommodated through a network link. Sending a large number of NDTP/UDP datagrams all at once is the most likely way to trigger such congestion. Sending a single NDTP/UDP datagram, assuming it is smaller than the Path MTU, and then waiting for a response 14 is unlikely to create congestion. Therefore, the use of NDTP/UDP should be confined to contexts where clients 12 send few outstanding requests at a time, or where network congestion is avoided through network engineering techniques.

Those skilled in the art will appreciate that network congestion is a highly dynamic property that is a function of network traffic from all sources through a network link and will vary over time over any given network path.

An NDTP/UDP client 12 implementation can recover from network congestion by switching to NDTP/TCP after several failed retries using NDTP/UPD. Failure due to network congestion may be indistinguishable from failure due to UDP packet size limitations, but since the recovery strategy is the same in both cases, there is no need to distinguish these cases.

NDTP/UDP Congestion Avoidance

Given the stateless, transactional nature of NDTP, NDTP/UDP generally performs much better than NDTP/TCP. This performance improvement is measurable both in terms of the maximum sustainable transaction rate of an NDTP server 16, and the latency of a single response to an NDTP client 12. In the same way as the Domain Name Service (DNS), NDTP fits naturally in the UDP model. It is a working assumption of NDTP (and DNS) that for every NDTP transfer, there will be an associated transfer of real data that is an order of magnitude or more greater in size than the NDTP protocol traffic. This property will naturally limit the amount of NDTP traffic on a network. However, in applications where NDTP traffic reaches high levels, particularly at network 'choke points' which are not within the control of network engineers, it may be desirable to support a congestion avoidance mechanism for NDTP/UDP.

However, those skilled in the art will appreciate that the other main future requirement of NDTP, security (described below), implies an existing, durable association between NDTP clients 12 and NDTP servers 16. This association is much like (and in the case of SSL, it is) a network connection. Therefore, depending upon what security technology is applied, developing a congestion avoidance mechanism for NDTP/UDP may be an irrelevant exercise.

Server Redirection Mechanism

NDTP provides two mechanisms for server redirection. The redirection mechanisms allow cluster and hierarchical topologies, and mixtures of such topologies (described in detail below). The first redirection mechanism supported by NDTP, embedded redirection links, uses an application specific

convention to return redirection pointers as NDTP data location strings. For example, if location strings are W3C URLs, a URL with the schema *ndtp:* could be a server indirection pointer. An NDTP_GET_RSP message may contain any mixture of real data location strings and NDTP server redirection pointers. In this case, the client must issue the same NDPT_GET query message to other NDTP servers indicated by the redirection pointers. The total set of data location strings associated with the supplied identifier string is the collection of all the data location strings returned from all the NDTP servers queried. The embedded redirection link technique does not require any specific NDTP protocol support. Therefore, it could be used within the NDTP protocol as is, and does not require further description in this specification.

The second redirection mechanism, which is specified as a future extension of NDTP, is having the server return an NDTP_RDR_RSP message in response to an NDTP request for which the NDTP server has no ownership of the supplied identifier string. Those skilled in the art will note that unlike the embedded redirection links mechanism, the NDTP_RDR_RSP mechanism applies to all NDTP requests, not just NDTP_GET.

As mentioned above, the second redirection mechanism has two variants. The first variant of the NDTP_RDR_RSP function mechanism specifies a well-known function that all NDTP server and client implementations know when they are programmed, and the NDTP_RDR_RSP message carries a table of NDTP server URLs. The format of the NDTP_RDR_RSP message with an NDTP server URL table is shown in FIG. 9(a).

The appropriate NDTP server is selected from the table in the NDTP_RDR_RSP message by applying a well-known function to the identifier string and using the function result as an index into the NDTP server table. The well-known function preferably applied is the *hashpjw* function presented by Aho, Sethi and Ullman in their text *Compilers, Principles, Techniques and Tools*:

```
uint32_t
hash (uint8_t *s, uint32_t slen, uint32_t size)
{
  uint32_t g;
  uint32_t i;
      unit32_t h = 0;
  uint8_t c;

  for (i = 0; i < slen; i++) {
    c = s[i];
    h = (h << 4) + c;
    g = (h & 0xf0000000);
    if (g) {
      h ^= g >> 24;
      h ^= g;
    }
  }
  return h % size;
}
```

In this case, the *size* parameter is the number of elements in the NDTP server URL table returned in the NDTP_RDR_RSP message. For the hashpjw function to behave correctly, the *size* parameter must be a prime number, therefore the NDTP server URL table must also have a prime number of elements. Those skilled in the art will appreciate that the same NDTP server may appear multiple times in the NDTP server URL table. For example, if the server URL table has 2039 elements, by putting one NDTP server URL in the first 1019 table elements, and a second NDTP server URL in the second 1020 table elements, the responsibility for the index string space will be split roughly in half.

The second variant of the NDTP_RDR_RSP function mechanism specifies that a general function description will be sent to the NDTP client in the NDTP_RDR_RSP message. The NDTP client will apply this function to

the identifier string and the output of the function will be the NDTP server URL to which to send NDTP requests for the particular identifier string. The advantage of this technique over the well-know function approach is that it allows application-specific partitions of the identifier string space. This can permit useful administrative control. For example, if General Electric manages all identifiers beginning with the prefix "GE", a general function can be used to make this selection appropriately. The disadvantage of using a general function is it may be less efficient to compute than a well-known function.

There are a variety of possible mechanisms for sending function descriptions. NDTP is expected to be applied in environments that make extensive use of the Java programming platform. Therefore the `NDTP_RDR_RSP` mechanism preferably uses a feature of the Java programming language called "serialized representation" to communicate generalized functions in the `NDTP_RDR_RSP` message. A serialized form of a Java object is a stream of bytes that represents the precise state of the object, including its executable methods. For example, the Java Remote Method Invocation (RMI) mechanism uses serialized objects to send executable code to a remote platform for execution. The NDTP_RDR_RSP message contains the serialized form of an object implementing this Java interface:

```
interface NDTPRedirectFunction {
    String selectServer(byte[] identifier);
}
```

The format of the NDTP_RDR_RSP message with a Java Serialized form of the NDTP redirection function is specifically identified in FIG. 9(b).

The NDTP server redirection mechanism also permits construction of NDTP server clusters (described below). It is expected that the identifier string hash function will be defined at the time NDTP is implemented, but the actual list of NDTP servers 90 will change from application to application and within a single application throughout the lifetime of the system. Therefore, it

is necessary for clients to be able to discover updated NDTP server lists, and any other relevant dynamic parameters of the server selection function as these inputs change.

Hierarchical Server Topology

While the NDTP server topology supported by the server redirection mechanism described above and shown in FIGS. 9(a) and 9(b) is an extremely powerful and general scaling technique, suitable for diverse topology deployments, some applications might still benefit from a specifically hierarchical server topology. An NDTP server hierarchy 100, such as that shown in FIG. 10, permits identifier/location association data to be owned and physically controlled by many different entities. An NDTP server cluster should be managed by a single administrative entity 102, and the distribution of data can be for performance and scaling purposes. Furthermore, a server hierarchy would provide some fault isolation so portions of the identifier/location association data can be accessed and updated in the presence of failures of some NDTP servers 104. Finally, an NDTP server hierarchy can localize NDTP update operations (`NDTP_PUT` and `NDTP_DEL`), which can improve performance and reduce network load.

A hierarchical NDTP server topology also allows organizations to maintain their own local NDTP server 104 or NDTP server cluster 102 that manages associations to data locations that are within the organizations' control. Upper tier NDTP servers 108 would be used to link the various leaf NDTP servers 104.

Server Constellations

The NDTP server organization also allows NDTP servers to be combined in various ways to build server constellations that offer arbitrary server performance scalability and administrative control of the location of portions of the identifier/data location relationship mappings. Figure 11 illustrates an NDTP server constellation 110 as it relates to a client 112 and a data repository 114. In FIG. 10, the client 112 and data repository 114 of FIG. 11 were merged into the single client entity 106 for ease of discussion.

Their distinction can now be separated and identified in order to illustrate the storage and retrieval of data in a distributed data collection.

As shown in FIG. 11, a client 112 consults the server constellation 110, which may be construed in either of two forms (see FIGS. 12 and 13), and which returns location strings in response to a client 112 request. Once the client 112 has the location string for a particular unit of data, the client 112 contacts and retrieves information directly from the data repository 114. In one embodiment, if the client 112 contains a data repository 114, internal application logic would facilitate this interaction. Those skilled in the art will appreciate that the term "data collection" is being employed rather than the term "database" because database frequently invokes images of Relational Database Systems (which is only one application of the protocol); an NDTP data collection could just as easily be routing tables as it could be files or records in a RDBS database.

NDTP server constellations 110 preferably have two basic organizational paradigms: Client-Centric and Server-Centric. NDTP supports both by design, and both approaches apply to all aspects of managing the relationships between identifiers and locations, such as data retrieval, index manipulation, and server redirection. Each will be discussed separately below.

Client-Centric Approach

The first basic pattern that NDTP supports is driven by the client 112, and can be called "client-centric". Referring to FIG. 12, a single client (not shown) asks a server 120a in the server constellation 110 for operations that the client desires executed (represented by arrow 1 in FIG. 12). If the client doesn't receive the data requested, it will receive a redirection response message (`NDTP_RDR_RSP`) from the contacted server 120a (arrow 2). The client then uses the information it receives to ask another server 120b for the operations the client wants to initiate (arrow 3). A successful response from the second server 120b is then sent to the client (arrow 4).

This design constructs operating patterns for (1) redirection, (2) index operations, and (3) hierarchical or cluster topologies. The important point is that the Network Distributed Tracking Protocol is designed to support highly configurable methods for processing index-related operations.

NDTP supports two specific redirection mechanisms, which are not mutually exclusive and may be combined in any way within a single NDTP server constellation 110. This formation may increase performance when many clients (not shown) participate, since client processing is emphasized rather than server processing. The first NDTP redirection mechanism uses a distinctively encoded location string for each NDTP server 120a,b that contains additional location strings associated with the identifier string supplied in the NDTP request 122a,b. This is an embedded redirection link. For example, if location strings are some form of HTTP URL, a URL with the schema specifier *ndtp:* would indicate a redirection. Using this scheme, the location strings associated with an identifier string may be spread among multiple NDTP servers 120a,b. In addition to redirection, in FIG. 12, all index manipulation operations continue to apply, but they are directed at the correct NDTP server 110b for which they apply: NDTP_GET, NDTP_PUT, NDTP_DEL.

The second NDTP redirection mechanism uses a NDTP_RDR_RSP message to indicate that the server 120a to which the NDTP request 122a was directed does not contain any of the location strings associated with the identifier string supplied in the NDTP request 122a. The NDTP_RDR_RSP message contains all the information required for the originator of the NDTP request 122a to reissue the original NDTP request 122b to a different NDTP server 120b that does have location strings associated with the identifier string supplied in the NDTP request 122b. This information may be an array of NDTP server hosts from which one is selected by applying a well-known function to the identifier string supplied in the NDTP request 122b, or the communicated function to apply as well as a list or other description of the NDTP server hosts from which to choose, as described above.

Figure 12 illustrates a cluster topology for client interaction with NDTP servers 120. A single client queries a first server 120a (Server0), learns of a new index location (Server1), and then contacts that server 120b (Server1) for the operations it wishes to execute on the index that the client identifies. The basic idea is that a client asks a server 120a to process an index operation. If the contacted server 120a does not have all the information, as for example in a redirect, then it passes the request to another server 120b. If the second server 120b is appropriate it responds appropriately, or it passes the request on to another server (not shown), and so on. Figure 12 could also illustrate a hierarchical topology if a client (not shown) contacted another client in a handoff as shown in FIG. 10, where a client 106 "asks up" to another client 106, and so on.

Behind the scenes, the server constellation 110 could also be using a hierarchical organization or a cluster organization for managing indices. The important point of this topology is pushing processing emphasis toward clients (not shown) rather than toward servers 120a,b. Such protocol design has scale implications as the number of participating machines/mechanisms increases, since it distributes aggregate processing.

Server-Centric Approach

The second basic pattern that the Network Distributed Tracking Protocol provides is a "Server-Centric Approach". Figure 13 shows the server constellation 110 characterizing "server-centric" functionality. In this figure, an NDTP server 130a (Server0) receives a request 132a from a client (not shown). The server 130a (Server0) passes the request to a second server 130b (Server1), which is an appropriate server for the process, and the second server 130b returns a response 134a to the first server 130a (Server0). If the second server 130a (Server1) was not appropriate, it could pass the request to another server (not shown), and so on. Each NDTP server 130a,b will combine the results of NDTP requests 132a,b it has performed of other NDTP servers 130a,b with whatever responses 134a,b it generates locally for the original NDTP request 132a, and the combined

response 134b will be the appropriate response for the original NDTP request 132a.

This design constructs operating patterns for (1) index operations and (2) hierarchical or cluster topologies. The important point is that the Network Distributed Tracking Protocol is designed to support highly configurable methods for processing index-related operations, but this method emphasizes server-processing rather than client-processing. In FIG. 13, all index manipulation operations continue to apply, but they are directed at the correct NDTP server 130a,b for which they apply: NDTP_GET, NDTP_PUT, NDTP_DEL.

Figure 13 illustrates an hierarchical topology for client interaction with NDTP servers 130. A single client queries a first server 130a (Server0), which is not appropriate, and so the first server 130a (not the client) itself contacts an appropriate server 130b (Server1) for operations it "passes through" to execute on the index that the client has identified. Alternatively, FIG. 13 could illustrate a cluster topology if a server 130a contacted another server 130b in a what is known as a "peer" handoff. The important point of this topology is that it pushes processing emphasis toward servers 130a,b rather than toward clients. Since index processing services can be centralized, administration of the indices can be administered more conveniently in certain cases.

The simplest NDTP server constellation 110 is a single server 130, and the protocol is designed to permit massive scale with a single or simple server constellation. Highly configurable installations are possible using "client-centric" or "server-centric" techniques. NDTP server constellations 110 composed of more than one NDTP server may use any combination of the two approaches for performance optimization and data ownership properties. Client-centric and server-centric approaches can be used to build NDTP server clusters, NDTP server trees, NDTP server trees of NDTP server clusters, or any other useful configuration.

NDTP design thus explicitly addresses the emerging "peer-to-peer" topologies called "pure" and "hybrid". The "pure" peer-to-peer approach

emphasizes symmetric communication among peers, and is achievable through the "server-centric" approach. The "hybrid" peer-to-peer approach emphasizes asymmetric communication among non-peer participants, and is achievable through the "client-centric" approach. Beyond the pure and hybrid approaches that NDTP allows, as described above, NDTP permits any additional mixtures between client-centric and server-centric approaches to provide superior configurability and performance tuning.

Security

NDTP preferably has no provisions for security. Three key features of security should therefore be provided:

- Data privacy (encryption)
- Client 12 authentication
- Client 12 authorization

NDTP/TCP will be extended using SSL/X.509 to support these security features in a straightforward, 'industry standard' way.

Adding security to NDTP/UDP also requires technology other than SSL. For example, IPSec supports securing all IP traffic, not just TCP between two endpoints. IPSec is a somewhat more heavyweight technology than SSL, and the rate of adoption in industry is somewhat slow. Nonetheless, it can provide the relevant capabilities to NDTP/UDP.

Additional Transport Layers

The early-adopter portion of the industry is in a state of turmoil regarding network transport protocols. On one hand, TCP has provided decades of solid service, and is so widely implemented that the mainstream computer industry could not imagine using another protocol to replace it. On the other hand, TCP lacks several features that may be necessary to enable the next step in network applications. In particular, the TCP design assumed pure software implementations by relatively powerful host computer computers. However, developments in network technology have increased the packet rate that a TCP implementation must handle to deliver full network speed beyond the capabilities of even increasingly powerful host computers.

To take the next step, much of the packet processing work must be off-loaded to hardware, and TCP's design makes this very difficult.

It is unclear whether it will become possible to implement the relevant portions of TCP in hardware in a timely fashion. If this does not happen, one of the many new transport layers currently under development (ST, SCTP, VI, etc.) may emerge as a market leader in high performance networking. In this case, a layering of NDTP on top of a new hardware accelerated transport would permit NDTP servers to deliver greatly increased transaction rates. Even with the use of a hardware accelerated transport layer, however, the only benefit to a typical NDTP client would be lower cost of service due to cheaper NDTP server platform requirements. On the flip side, NDTP clients could likely still use a cheaper software implementation of the new transport because of individual clients' modest performance demands.

As can be seen, the Network Distributed Tracking Protocol is a networking protocol that runs on top of any stream (e.g. TCP) or datagram (e.g. UDP) network transport layer. The goal of NDTP is to support a network service that efficiently manages mappings from each individual key string, an identifier, to an arbitrary set of strings, locations. NDTP permits protocol participating clients to add and remove identifier/location associations, and request the current set of locations for an identifier from protocol servers.

NDTP is designed for use in the larger context of a distributed data collection. As such, it supports an architecture, in which information about where data associated with particular application entities, can be managed and obtained independently of the data itself. One way to understand this is as a highly dynamic DNS for data. DNS maintains a mapping between names and machines. NDTP and its associated servers maintain a mapping between entity identifiers and data locations. The identifier/location mapping maintained by NDTP servers is much more dynamic (more frequent updates), than the domain name/IP address mapping maintained by DNS. NDTP is designed to support very fast, very diverse, and very large scale mapping manipulations.

Regardless of the expected system context of NDTP in a distributed data collection, those skilled in the art will appreciate that NDTP can be used for any application in which one-to-zero or one-to-many associations among strings are to be maintained and accessed on a network. In applications of NDTP other than distributed databases, the term identifier is likely to make sense in most cases, but the term location may not. In any context, however, although NDTP supports identifier and location strings of up to 2^{32}-4 bytes in length, it is a general assumption that the strings are typically short.

Those skilled in the art will note that the invention provides for the management and manipulation of indices and their associated relationships. Even more importantly, it is the manipulation of dynamic and spontaneous relationships between indices and locations, not the indices and locations, that is the core significance. The Network Distributed Tracking Protocol was written to manipulate these relationships, of which indices (identifiers) and locations are components of the aggregate solution.

It is to be understood that a wide range of changes and modifications to the embodiments described above will be apparent to those skilled in the art, and are contemplated. It is therefore intended that the foregoing detailed description be regarded as illustrative, rather than limiting, and that it be understood that it is the following claims, including all equivalents, that are intended to define the spirit and scope of the invention.

AMENDMENTS TO THE SPECIFICATION

On page 1, please amend the paragraph beginning on line 4 to read as follows:

This application is a continuation of U.S. application serial no. 09/661,222 filed September 13, 2000, pending, the entirety of which is hereby incorporated by reference, which claims the benefit of U.S. ~~claims priority to provisional~~ patent application serial no. 60/153,709, entitled SIMPLE DATA TRANSPORT PROTOCOL METHOD AND APPARATUS, filed on September 13, 1999, and which is a continuation-in-part of U.S. ~~to regular patent~~ application no. 09/111,896, entitled SYSTEM AND METHOD FOR ESTABLISHING AND RETRIEVING DATA BASED ON GLOBAL INDICES, filed on July 8, 1998, abandoned.

PTO/SB/06 (12-04)
Approved for use through 7/31/2006. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 11,354,224

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))				150			300
SEARCH FEE (37 CFR 1.16(k), (i), or (m))				250			500
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))				100			200
TOTAL CLAIMS (37 CFR 1.16(i))	16 minus 20 =		X$ 25		OR	X$50	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	X$100			X$200	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			180			360	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1000

APPLICATION AS AMENDED – PART II

AMENDMENT A		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDI-TIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDI-TIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					180		OR	360	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

AMENDMENT B		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDI-TIONAL FEE ($)	OR	RATE ($)	ADDI-TIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T 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.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/354,224	02/14/2006	John K. Overton	11958/62

CONFIRMATION NO. 7078

00757
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

FORMALITIES LETTER

Date Mailed: 04/06/2006

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
  Applicant must submit $ **300** *to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **$1130** for a Large Entity

- **$300** Statutory basic filing fee.
- **$130** Surcharge.

- The application search fee has not been paid. Applicant must submit **$500** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **$200** to complete the examination fee for a large entity

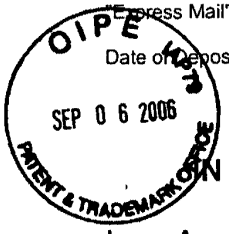
Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

A copy of this notice MUST be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 3 - OFFICE COPY

"Express Mail" mailing label number EV 316 037 505 US

Date of Deposit: September 6, 2006



Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

J. Overton et al.

Serial No.: 11/354,224

Filed: February 13, 2006

For: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

Attention: Manager, Application Branch

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION FILING DATE GRANTED

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

Attn.: Mail Stop Missing Parts

Dear Sir:

In accordance with the Notice to File Missing Parts of Application Filing Date Granted dated April 6, 2006, a copy of which is attached, enclosed herewith for filing are the following documents:

☐ Fully executed Declaration for Patent Application and Power of Attorney for the above-referenced patent application.

☒ Applicant:

☒ claims small entity status. See 37 CFR1.27.

☐ is other than small entity

☒ Checks totaling $565 for:

- ☒ Filing Fee of $150.
- ☒ Surcharge of $65.
- ☐ Additional Claim Fees of $_____.
- ☒ Search Fee of $250.
- ☒ Examination Fee of $100.
- ☐ Application Size Fee (for each additional 50 sheets that exceeds 100 sheets, including specification and drawings) of $.

☒ Petition for Extension of Time (37 C.F.R. § 1.136(a)) to file missing parts (in duplicate).

☒ Other: Second Preliminary Amendment.

☒ The Commissioner is hereby authorized to charge any deficiencies in fees or credit overpayment to Deposit Account No. 23-1925. A duplicate copy of this paper is enclosed.

Respectfully submitted,

Dated: September 6, 2006

Kent E. Genin
Registration No. 37,834
Attorney for Applicant(s)

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
(312)321-4200

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/354,224	02/14/2006	John K. Overton	11958/62

CONFIRMATION NO. 7078

00757
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

FORMALITIES LETTER

Date Mailed: 04/06/2006

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

09/08/2006 WABDELR1 00000013 231925 11354224

01 FC:2011 150.00 DA
02 FC:2111 250.00 DA
03 FC:2311 100.00 DA
04 FC:2051 65.00 DA

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
  Applicant must submit $ **300** *to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- To avoid abandonment, a surcharge (for late submission of filing fee, search fee, examination fee or oath or declaration) as set forth in 37 CFR 1.16(f) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **$1130** for a Large Entity

- **$300** Statutory basic filing fee.
- **$130** Surcharge.

- The application search fee has not been paid. Applicant must submit **$500** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **$200** to complete the examination fee for a large entity

Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

A copy of this notice MUST be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 2 - COPY TO BE RETURNED WITH RESPONSE

"Express Mail" mailing label number EV 316 037 505 US

Date of Deposit: September 6, 2006



Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
J. Overton et al.	
Serial No. 11/354,224	Examiner: To be Assigned
Filing Date: February 13, 2006	Group Art Unit: 2144
For NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	

SECOND PRELIMINARY AMENDMENT

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

Dear Sir:

Prior to Examination on the merits, please enter the following amendment and consider the following remarks:

BRINKS HOFER GILSON &LIONE

AMENDMENTS TO THE CLAIMS

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

1-16. (Canceled).

17. (New) A system for managing data stored in a distributed network, the system comprising:

a data repository configured to store data, wherein the data is associated with an identifier string;

a data location server network comprising a plurality of data location servers, at least one of the plurality of data location servers containing location information associated with the identifier string, wherein each of the plurality of data location servers comprises a portion of the location information in the distributed data collection based on a hash function used to organize the location information across the plurality of data location servers.

18. (New) The system of claim 17, wherein the location information comprises any portion of a hash table generated with the hash function.

19. (New) The system of claim 17, wherein the data repository comprises a plurality of data repositories and wherein each of the plurality of data location servers are configured to be responsive to a request to store data in a data repository to execute the hash function and store the data on one of the plurality of data repositories in the distributed network based on a result of the hash function.

20. (New) A system for managing location information and providing location information to location queries, the system comprising:

a location server configured to recognize a transfer protocol comprising an identifier and at least one location associated with the identifier, wherein the identifier uniquely specifies an entity and wherein each location specifies a location of data in a network pertaining to the entity;

wherein the location server contains location information corresponding to at least one entity, the location information formatted according to the transfer protocol; and

programming logic stored on the location server responsive to a location query identifying a desired entity to return a location message, the location message comprising locations associated with the desired entity, wherein the location server returns the location message if the location server contains location information for the desired entity.

21. (New) The system of claim 20, wherein the location server returns a redirect message if the queried location server lacks location information for the desired entity, the redirect message comprising a list of at least one other location server known to have location information relevant to the location query.

22. (New) The system of claim 21, wherein the list of at least one other location server comprises a list of location servers in the plurality of location servers and a corresponding list of each of the entities having location information on the respective location servers.

23. (New) The system of claim 20, wherein each of the location servers stores at least a portion of a total amount of location information on a persistent storage device.

24. (New) The system of claim 20, wherein the location information in the location server is maintained in an indexed location store.

25. (New) The system of claim 24, wherein the location store comprises a string store indexed by a hash table.

26. (New) The system of claim 24, wherein the location store comprises a string store indexed by a hash table distributed across a plurality of clients.

27. (New) The system of claim 24, wherein the location store comprises a string store indexed by a hash table distributed across a plurality of servers.

28. (New) The system of claim 24, wherein the location query identifying the desired entity comprises a unique identifier for the desired entity, and wherein the programming logic stored on the location server further comprises programming logic for applying an index function to the identifier to retrieve at least a portion of the locations associated with the unique identifier in the location store.

29. (New) The system of claim 28, wherein the location store comprises a string store and the index function comprises a hash function.

30. (New) A method of handling location queries in a network, the network comprising a plurality of location servers containing location information correlating each of a plurality of identifiers with at least one location, the method comprising:

receiving a location query from a client at one of the plurality of location servers, the location query requesting an identifier's location;

sending a location response message to the client if the queried location server contains location information relevant to an entity identified in the query, the location response message comprising location information identifying at least one application server containing information relevant to the entity identified in the query; and

sending a redirect message to the client if the queried location server does not contain data location information relevant to the entity identified in the query, the redirect message comprising containing location information relevant to the entity identified in the query.

31. (New) The method of claim 30, further comprising applying information in the location query from the client to an indexing function to

determine if the queried location server contains location information relevant to the entity identified in the query.

32. (New) The method of claim 31, wherein each of the plurality of location servers comprises an indexed table of identifiers and associated locations, and wherein applying information in the location query comprises applying an identifier in the location query to a hash function.

REMARKS

Applicants have cancelled claims 1-16 and added new claims 17-32. Applicants submit that claims 17-32 are fully supported by the originally filed specification. Entry and consideration of claims 17-32 is respectfully requested.

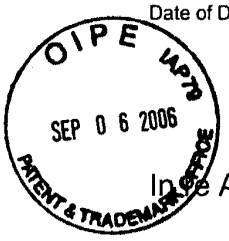
Respectfully submitted,

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

Kent E. Genin
Registration No. 37,834
Attorney for Applicants

"Express Mail" mailing label number EV 316 037 505 US

Date of Deposit: September 6, 2006



Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

J. Overton et al.

Serial No: 11/354,224

Examiner: Unknown

Filed: February 13, 2006

Group Art Unit: 2144

For: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

PETITION AND FEE FOR EXTENSION OF TIME (37 CFR § 1.136(a))

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

Dear Sir:

This is a petition for an extension of the time to respond to the Notice to File Missing Parts dated April 6, 2006 for a period of three month(s).

☒ Applicant:

☒ claims small entity status. See 37 C.F.R. §1.27.

☐ is other than small entity.

	Extension Months	**Other Than Small Entity**	**Small Entity**
☐	One Month	$120.00	$60.00
☐	Two Months	$450.00	$225.00
☒	Three Months	$1,020.00	$510.00
☐	Four Months	$1,590.00	$795.00
☐	Five Months	$2,160.00	$1,080.00

09/08/2006 WABDELR1 00000013 231925 11354224

05 FC:2253 510.00 DA

Fee Payment

☐ Attached is a check for $_____ for the Petition fee.

☐ Attached is a credit card authorization form for $_____ for the Petition fee.

☒ Charge Petition fee to Deposit Account No. 23-1925. A duplicate copy of this Petition is attached.

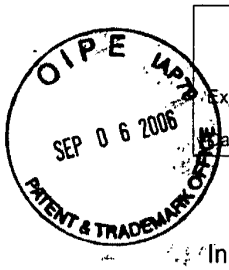
☒ Charge any additional fee required or credit for any excess fee paid to Deposit Account No. 23-1925. A duplicate copy of this Petition is attached.

Respectfully submitted,

Dated: September 6, 2006

Kent E. Genin
Registration No. 37,834
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
(312)321-4200



U.S.P.S. EXPRESS MAIL "POST OFFICE TO ADDRESSEE" SERVICE
DEPOSIT INFORMATION

Express Mail Label No.: EV 316 037 505 US

Date of Deposit: September 6, 2006

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	J. Overton et al.	
Appln. No.:	11/354,224	Examiner: Unknown
Filed:	February 13, 2006	Art Unit: 2144
For:	Network Distributed Tracking Wire Transfer Protocol	

Attorney Docket No: 11958/62

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

TRANSMITTAL

Sir:

Attached is/are:

☒ Transmittal (in duplicate); Petition and Fee for Extension of Time (in duplicate); Response to Notice to File Missing Parts (in duplicate); Copy of Notice to File Missing Parts; Second Preliminary Amendment; Request for Correction of Filing Receipt (in duplicate); Copy of Filing Receipt; Copy of Express Mail Receipt and Title Page of Application

☒ Return Receipt Postcard.

Fee calculation:

☐ No additional fee is required.

☐ Small Entity.

☒ An extension fee in an amount of $510 for a three-month extension of time under 37 C.F.R. § 1.136(a).

☐ A petition or processing fee in an amount of $_____ under 37 C.F.R. § 1.17(_____).

☐ An additional filing fee has been calculated as shown below:

					Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	or	Rate	Add'l Fee
Total		Minus			x $25=			x $50=	
Indep.		Minus			X100=			x $200=	
First Presentation of Multiple Dep. Claim					+$180=			+ $360=	
					Total	$		Total	$

Fee payment:

☐ A check in the amount of $_____ is enclosed.

☒ Please charge Deposit Account No. 23-1925 in the amount of $1075.00. A copy of this Transmittal is enclosed for this purpose.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

September 6, 2006
Date

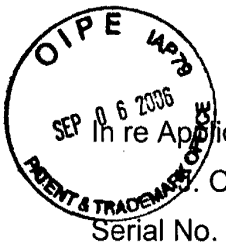
Kent E. Genin (Reg. No. 37,834)

BRINKS HOFER GILSON & LIONE
NBC Tower – Suite 3600, 455 N. Cityfront Plaza Drive, Chicago, IL 60611-5599

BRINKS HOFER GILSON &LIONE

"Express Mail" mailing label number EV 316 037 505 US

Date of Deposit: September 6, 2006



Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

J. Overton et al.

Serial No. 11/354,224 | Group Art Unit No. 2144

Filing Date: February 13, 2006

For NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

REQUEST FOR CORRECTION OF FILING RECEIPT

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

Attention: Application Processing Division
Customer Correction Branch

Sir:

Applicants request the issuance of a corrected filing receipt (copy enclosed) for the above-referenced patent application, and in support of this request respectfully states:

The filing date is incorrectly listed as being "February 14, 2006" and should be listed as being --February 13, 2006--. Support for this correction is shown on the attached copies of the Express Mail receipt and Title Page of the application which was filed on February 13, 2006.

The Commissioner is hereby authorized to charge any fees required to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Kent E. Genin
Registration No. 37,834
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

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SEP 0 6 2006
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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

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
11/354,224	02/14/2006	2144	0.00	11958/62	12	16	3

00757
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

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U.S. DOCKET

CONFIRMATION NO. 7078

FILING RECEIPT

OC000000018479720

Date Mailed: 04/06/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. 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 mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. 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 (if appropriate).**

Applicant(s)

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

Assignment For Published Patent Application

Econnectix, LLC

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 09/661,222 09/13/2000
which claims benefit of 60/153,709 09/14/1999 *
and is a CIP of 09/111,896 07/08/1998 ABN
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications

If Required, Foreign Filing License Granted: 03/16/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US11/354,224

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Network distributed tracking wire transfer protocol

Preliminary Class

709

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The

date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign 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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Label 11-F, April 2004

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PO ZIP Code: 60699	Day of Delivery: ☑ Next ☐ 2nd ☐ 2nd Del. Day	Postage: $ 14.46	
Date Accepted: Mo. 2 Day 13 Year 06	Scheduled Date of Delivery: Month Day	Return Receipt Fee: $	
Time Accepted: 0835 ☐ AM ☑ PM	Scheduled Time of Delivery: ☑ Noon ☐ 3 PM	COD Fee: $	Insurance Fee: $
Flat Rate ☐ or Weight: lbs. 13 oz. 5	☐ Military ☐ 2nd Day ☐ 3rd Day	Total Postage & Fees: $ 14.46	
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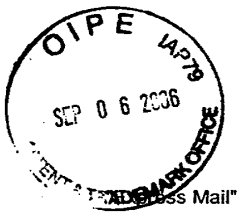
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Date of Deposit: February 13, 2006

Our Case No.11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTOR:	JOHN K. OVERTON STEPHEN W. BAILEY
TITLE:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
ATTORNEY:	KENT E. GENIN BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, ILLINOIS 60610 (312) 321-4200

PTO/SB/06 (12-04)
Approved for use through 7/31/2006. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: 11,354,224

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))				150			300
SEARCH FEE (37 CFR 1.16(k), (l), or (m))				250			500
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))				100			200
TOTAL CLAIMS (37 CFR 1.16(i))	16 minus 20 =		X$ 25		OR	X$50	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	X$100			X$200	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			180			360	
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1000

APPLICATION AS AMENDED – PART II

2-13-06

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
AMENDMENT A	Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	x =		OR	x =	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					180		OR	360	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
AMENDMENT B	9-6-06									
	Total (37 CFR 1.16(i))	* 16	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	* 3	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T 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.

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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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
11/354,224	02/13/2006	2144	565	11958/62	12	16	3

CONFIRMATION NO. 7078

00757
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

UPDATED FILING RECEIPT



OC000000020453460

Date Mailed: 09/15/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. 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 mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. 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 (if appropriate).**

Applicant(s)

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

Assignment For Published Patent Application

Econnectix, LLC

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 09/661,222 09/13/2000 PAT 7,103,640
which claims benefit of 60/153,709 09/14/1999 *
and is a CIP of 09/111,896 07/08/1998 ABN
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications

If Required, Foreign Filing License Granted: 03/16/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US11/354,224

Projected Publication Date: 12/28/2006

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

Network distributed tracking wire transfer protocol

Preliminary Class

709

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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APPLICATION NUMBER	FILING OR 371(c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/354,224	02/13/2006	John K. Overton	11958/62

CONFIRMATION NO. 7078

757
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL60610

Title: Network distributed tracking wire transfer protocol

Publication No. US-2007-0011267-A1
Publication Date: 01/11/2007

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 703-305-3028.

Pre-Grant Publication Division, 703-605-4283

PLUS Search Results for S/N 11354224, Searched Wed Oct 15 16:20:05 EDT 2008

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

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PLUS Search Results for S/N 11354224, Searched Wed Oct 15 16:20:08 EDT 2008

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

757 7590 10/28/2008

BRINKS HOFER GILSON & LIONE
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EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	
MAIL DATE	DELIVERY MODE
10/28/2008	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.	Applicant(s)	
	11/354,224	OVERTON ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2441	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *13 February 2006 and 06 September 2006*.

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

3)☐ 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

4)☒ Claim(s) *17-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-32* is/are rejected.

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

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

Application Papers

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

10)☒ The drawing(s) filed on *13 February 2006* 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).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

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).

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-19, 21, 22, and 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "the distributed data collection" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the queried location server" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the entities" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the queried location server" in lines 7-8 and 12-13. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the query" in lines 8-9, 11, 14, and 15. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the queried location server" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the query" in line 4. There is insufficient antecedent basis for this limitation in the claim.

As for claims 18, 19, 22, 31, and 32 which claim dependency from claims 17, 21,

and 30 these claims are also rejected under 35 U.S.C. 112 second paragraph per the rationale of claims 17, 21, and 30.

Claim Rejections - 35 USC § 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 17-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed systems of 17-19 and 20-29 are software per se. Please refer to MPEP 2106.

Claim Rejections - 35 USC § 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 –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 17-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Bestavros et al (US Patent #6,370,584).

(Claim 17 discloses) a system for managing data stored in a distributed network, the system comprising: a data repository configured to store data, wherein the data is associated with an identifier string (Bestavros et al shows a group of hosts forms a repository which contains data associated to clients requests (column 2, line 64 - column 3, line 13).); a data location server network comprising a plurality of data

location servers, at least one of the plurality of data location servers containing location information associated with the identifier string, wherein each of the plurality of data location servers comprises a portion of the location information in the distributed data collection based on a hash function used to organize the location information across the plurality of data location servers (Bestavros et al shows each host contains information on rerouting information and the information is based on a hash function (column 2, line 64 - column 3, line 54)).

(Claim 18 discloses) the system of claim 17, wherein the location information comprises any portion of a hash table generated with the hash function (Bestavros et al shows the location information is a value based on the hash function (column 3, lines 22-35)).

(Claim 19 discloses) the system of claim 17, wherein the data repository comprises a plurality of data repositories and wherein each of the plurality of data location servers are configured to be responsive to a request to store data in a data repository to execute the hash function and store the data on one of the plurality of data repositories in the distributed network based on a result of the hash function (Bestavros et al shows each host receives requests and can route the requests to another host according to hash values obtained from a hash function (column 3, lines 22-54)).

(Claim 20 discloses) a system for managing location information and providing location information to location queries, the system comprising: a location server configured to recognize a transfer protocol comprising an identifier and at least one location associated with the identifier, wherein the identifier uniquely specifies an entity

and wherein each location specifies a location of data in a network pertaining to the entity (Bestavros et al shows a host receives a request for data with the requestors address which is used to specify where to route the request to (column 2, line 64 – column 3, line 54).); wherein the location server contains location information corresponding to at least one entity, the location information formatted according to the transfer protocol (Bestavros et al shows each host has a table containing where requests are routed to (column 3, lines 36-54).); and programming logic stored on the location server responsive to a location query identifying a desired entity to return a location message, the location message comprising locations associated with the desired entity, wherein the location server returns the location message if the location server contains location information for the desired entity (Bestavros et al shows a host is able to service or redirect a request (column 3, lines 14-21)).

(Claim 21 discloses) the system of claim 20, wherein the location server returns a redirect message if the queried location server lacks location information for the desired entity, the redirect message comprising a list of at least one other location server known to have location information relevant to the location query (Bestavros et al shows the host reroutes the request if the hose does not have the data (column 3, lines 14-54)).

(Claim 22 discloses) the system of claim 21, wherein the list of at least one other location server comprises a list of location servers in the plurality of location servers and a corresponding list of each of the entities having location information on the respective location servers (Bestavros et al shows each host has a table of where to route the requests to (column 3, lines 14-54)).

(Claim 23 discloses) the system of claim 20, wherein each of the location servers stores at least a portion of a total amount of location information on a persistent storage device (Bestavros et al shows each device stores a table (column 3, lines 36-54)).

(Claim 24 discloses) the system of claim 20, wherein the location information in the location server is maintained in an indexed location store (Bestavros et al shows location information is stored in a table (column 3, lines 36-54)).

(Claim 25 discloses) the system of claim 24, wherein the location store comprises a string store indexed by a hash table (Bestavros et al shows the data may include where previous requests are rerouted and includes hash values (column 3, lines 21-54)).

(Claim 26 discloses) the system of claim 24, wherein the location store comprises a string store indexed by a hash table distributed across a plurality of clients (Bestavros et al shows the hosts are computers which are clients (column 3, lines 36-54)).

(Claim 27 discloses) the system of claim 24, wherein the location store comprises a string store indexed by a hash table distributed across a plurality of servers (Bestavros et al shows the table is stored by hosts (column 3, lines 36-54)).

(Claim 28 discloses) the system of claim 24, wherein the location query identifying the desired entity comprises a unique identifier for the desired entity, and wherein the programming logic stored on the location server further comprises programming logic for applying an index function to the identifier to retrieve at least a portion of the locations associated with the unique identifier in the location store

(Bestavros et al shows the request is a hash value which may be used to reroute the request if needed (column 3, lines 21-54)).

(Claim 29 discloses) the system of claim 28, wherein the location store comprises a string store and the index function comprises a hash function (Bestavros et al shows the data may include where previous requests are rerouted and includes hash values (column 3, lines 21-54)).

(Claim 30 discloses) a method of handling location queries in a network, the network comprising a plurality of location servers containing location information correlating each of a plurality of identifiers with at least one location, the method comprising: receiving a location query from a client at one of the plurality of location servers, the location query requesting an identifier's location (Bestavros et al shows a host receives a request (column 3, lines 3-13).); sending a location response message to the client if the queried location server contains location information relevant to an entity identified in the query, the location response message comprising location information identifying at least one application server containing information relevant to the entity identified in the query (Bestavros et al shows a request is services by a host if the host has the information (column 3, lines 14-54).); and sending a redirect message to the client if the queried location server does not contain data location information relevant to the entity identified in the query, the redirect message comprising containing location information relevant to the entity identified in the query (Bestavros et al shows the request is redirected if the host is not able to service the request (column 3, lines 14-54)).

(Claim 31 discloses) the method of claim 30, further comprising applying information in the location query from the client to an indexing function to determine if the queried location server contains location information relevant to the entity identified in the query (Bestavros et al shows the request has the address of the client which is used to process the hash function (column 3, lines 14-54)).

(Claim 32 discloses) the method of claim 31, wherein each of the plurality of location servers comprises an indexed table of identifiers and associated locations, and wherein applying information in the location query comprises applying an identifier in the location query to a hash function (Bestavros et al shows each host stores a table and also processes the request in a hash function (column 3, lines 14-54)).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 17, 20, and 30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 18 of U.S. Patent No. 7,103,640. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 17, 20, and 30 cover the scope of the claims in U.S. Patent 7,103,640.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chung et al (US Patent #6,470,389) teaches hosting a network service on a cluster of servers. Low et al (US Patent #6,131,095) teaches accessing a target entity over a communications network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is (571)272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J Gillis
Examiner
Art Unit 2441

/B. J. G./
Examiner, Art Unit 2441
10/16/2008

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2445

Notice of References Cited	Application/Control No. 11/354,224	Applicant(s)/Patent Under Reexamination OVERTON ET AL.	
	Examiner Brian J. Gillis	Art Unit 2441	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,370,584	04-2002	Bestavros et al.	709/238
*	B	US-6,470,389	10-2002	Chung et al.	709/227
*	C	US-6,131,095	10-2000	Low et al.	707/10
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008								
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	29	✓								
	30	✓								
	31	✓								
	32	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	Art Unit
	Brian J Gillis	2441

SEARCHED			
Class	Subclass	Date	Examiner
709	217	10/16/2008	BJG
709	223	10/16/2008	BJG
709	238	10/16/2008	BJG

SEARCH NOTES		
Search Notes	Date	Examiner
Ordered PLUS search	10/16/2008	BJG

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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CONFIRMATION NO. 7078

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/354,224	02/13/2006	709	2441	11958/62

APPLICANTS

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

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

This application is a CON of 09/661,222 09/13/2000 PAT 7,103,640
which claims benefit of 60/153,709 09/14/1999 *
and is a CIP of 09/111,896 07/08/1998 ABN
(*)Data provided by applicant is not consistent with PTO records.

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
03/16/2006

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No					
Verified and Acknowledged	/BRIAN J GILLIS/ Examiner's Signature	BJG Initials	IL	12	16	3

ADDRESS

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CHICAGO, IL 60610
UNITED STATES

TITLE

Network distributed tracking wire transfer protocol

FILING FEE RECEIVED		
565	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

BIB (Rev. 05/07).

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	hash near10 location near10 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:23
L2	1	hash near20 location near20 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:23
L3	1	hash near20 location near20 (identifier near5 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:23
L4	229	hash near20 location near20 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:24
L5	90	hash near5 location near5 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:24
L6	17	5 and (@ad<="20000913" @rlad<="20000913")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:24
L7	15	5 and (@ad<="19990914" @rlad<="19990914")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 08:25
L8	5	("5764906" "6418441" "6377986" "5475817" "6131095").pn.	USPAT	OR	OFF	2008/10/16 09:52

L9	6	((location identifi$6) near5 string) near10 (query request) near10 (location address) same hash	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 10:23
L10	95	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 10:32
L11	16	10 and (@ad<="19980708" @rlad<="19980708")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 10:33
L12	0	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location) same (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 10:39
L13	2	(hash adj3 function) near20 (address$3 location) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 10:40
L14	11	(hash adj3 function) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 10:41
L15	3	(US-6470389-$ or US-6370584-$ or US-6167427-$).did.	USPAT	OR	OFF	2008/10/16 12:39
L16	1	15 and repository	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 12:39
L17	2	15 and table	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 13:04

L20	6326	709/217.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 15:10
L21	7885	709/223.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 15:10
L22	3775	709/238.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/16 15:10
S1	2	"20070011267"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/15 13:06
S2	6	"7103640"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/10/15 15:04

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Date: March 2, 2009 Name: Sara E. Vessely Signature: Sara E. Vessely

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.:	7078

Attorney Docket No: 11958/62

INFORMATION DISCLOSURE STATEMENT

MAIL STOP AMENDMENT
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

In accordance with the duty of disclosure under 37 CFR §1.56 and §§1.97-1.98, and more particularly in accordance with 37 CFR §1.97(c), Applicant hereby cites the following reference(s):

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Applicant is enclosing Form PTO-1449 (three sheets), along with a copy of each listed reference for which a copy is required under 37 CFR §1.98(a)(2). Pursuant to the undersigned attorney's obligation and duties under 37 C.F.R. §§ 1.56 and 1.98(a)(3) and (c), either English language abstracts, partial translations, or full translations are included for patent documents which are not in English for the express purpose of providing a concise explanation of the references to the Patent and Trademark Office with the opportunity to evaluate the same. Applicant respectfully requests the Examiner's consideration of the above reference(s) and entry thereof into the record of this application.

Pursuant to 35 U.S.C. 120, the above-identified application is a continuation application that relies on the priority of U.S. Patent No. 7,103,640 (U.S. Patent Application Serial No. 09/661,222) filed on September 13, 2000. A copy of at least some of the non-patent literature, foreign patents and foreign patent publications cited in the enclosed PTO-1449 have been previously cited and filed with the US Patent and Trademark Office in U.S. patent application no. 09/661,222 filed on September 13, 2000. Thus, pursuant to 37 CFR 1.98(d), copies of the previously cited and filed non-patent literature, foreign patents and foreign patent publications that are cited in the enclosed PTO-1449 are not included herewith. Instead, applicant respectfully requests the Examiner to review the copies of the non-patent literature, foreign patents and

foreign patent publications included in the file history of the U.S. patent application no. 09/661,222 filed on September 13, 2000. Copies of any non-patent literature, foreign patents and foreign patent publications cited in the enclosed PTO-1449 that were not previously cited and filed in U.S. patent application no. 09/661,222 filed on September 13, 2000, are enclosed herewith. Also, pursuant to MPEP 609(a)(II), copies of any non-patent literature, foreign patents and foreign patent publications that were cited in an international application under the Patent Cooperation Treaty and are also cited in the enclosed PTO-1449.

Commonly Owned Applications

Pursuant to 37 CFR §1.56, Applicant and Applicant's attorney hereby make of record in the above-identified patent application the existence of the below described activities in the below-identified commonly owned co-pending published patent applications, which are related to the above-identified patent application. **Applicant respectfully requests the Examiner to review the claims and the prosecution history, including any Office Actions issued by the U.S. Patent and Trademark Office, for the following patents and patent applications:**

U.S. Patent Application Serial No. 09/111,896 – Non-Final Office Action mailed March 30, 2000; Final Office Action mailed September 12, 2001; Now Abandoned;

U.S. Patent No. 7,103,640 – U.S. Patent Application Serial No. 09/661,222 – Non-Final Office Action mailed February 25, 2004; Response filed February 25, 2004; Non-Final Office Action mailed February 9, 2005; Response filed August 9, 2005; Notice of Allowance mailed November 14, 2005;

U.S. Patent No. 7,233,978 – U.S. Patent Publication No. US 2002/0032787 A1 - U.S. Patent Application Serial No. 09/872,736 – Non-Final Office Action mailed August 22, 2005; Response filed February 22, 2006; Final Office Action mailed June 1, 2006; Request for Continued Examination filed November 1, 2006; Notice of Allowance mailed February 13, 2007;

U.S. Patent Publication No. US 2003/0065653 A1 – U.S. Patent

Application Serial No. 10/102,179 filed March 19, 2002 – Non-Final Office Action mailed February 27, 2003; Now Abandoned;

U.S. Patent Publication No. US 2008/0005275 A1 – U.S. Patent Application Serial No. 11/803,332 filed May 14, 2007; and

U.S. Patent Publication No. US 2004/0205055 A1 – U.S. Patent Application Serial No. 10/646,350 – Non-Final Office Action mailed June 21, 2007; Response filed November 21, 2007; Response filed February 28, 2008; Final Office Action mailed May 28, 2008; Response filed September 19, 2008; Non-Final Office Action mailed February 3, 2009.

By submitting this Statement, Applicant is attempting to fully comply with the duty of candor and good faith mandated by 37 CFR §1.56. As such, this Statement is not intended to constitute an admission that any of the enclosed references, or other information referred to therein, constitutes "prior art" or is otherwise "material to patentability," as that phrase is defined in 37 CFR §1.56(a).

Applicant has calculated a processing fee in the amount of $180.00 to be due under 37 CFR §1.17(p) in connection with the filing of this Information Disclosure Statement. Applicant has enclosed a check covering this fee, or authorized charging the fee to a deposit account or credit card, as indicated in the Transmittal accompanying this Information Disclosure Statement.

Respectfully submitted,

March 2, 2009
Date

Michael E. Hussey
(Reg. No. 63,265)

BRINKS HOFER GILSON &LIONE

FORM PTO-1449		SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.		CONFIRMATION NO. 7078

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
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	A2	4,636,858	01/1987	Hague		
	A3	4,728,978	03/1988	Inoue et al.		
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EXAMINER	DATE CONSIDERED

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

FORM PTO-1449	SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A40	5,764,906	06/1998	Edelstein et al.		
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	A42	5,781,725	07/1998	Saito		
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EXAMINER	DATE CONSIDERED

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

FORM PTO-1449	SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A81	6,212,280	04/2001	Howard, Jr. et al.		
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EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
	A96	EP 0 568 161 A1	01/1992	Europe		
	A97	EP 0 889 422 A2	01/1999	Europe		
	A98	EP 0 919 912 A2	06/1999	Europe		
	A99	WO 86/05610	09/1986	WIPO		
	A100	WO 98/15910	04/19998	WIPO		
	A101	WO 98/00624	07/1998	WIPO		
	A102	WO 98/31138	07/1998	WIPO		
	A103	WO 00/032526	01/2000	WIPO		

EXAMINER INITIAL	OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
	A104	Communication relating to the results of the Partial International Search Report for PCT Application No. PCT/US01/18013 dated April 15, 2002.
	A105	D.G. Bourke et al., Programmable Module and Circuit for Machine-Readable Unique Serial Number, IBM Technical Disclosure Bulletin, Vol. 27, No. 4A, Sep. 1, 1984, pp. 1942-1944.
	A106	Kleinholz, L. et al., Supporting Cooperative Medicine: The Bermed Project, IEEE Multimedia, Vol. 1, No. 4, Dec. 21, 1994, pp. 44-53.
	A107	Method for Network Naming and Routing, IBM Technical Disclosure Bulletin, Vol. 37, No. 9, Sep. 1, 1994, pp. 255-256.
	A108	Minimizing Locking to Access Global Shared Data, IBM Technical Disclosure Bulletin, Feb. 1995, pp. 619-622.

EXAMINER	DATE CONSIDERED

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

FORM PTO-1449	SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.	

EXAMINER INITIAL	OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
	A109	R. Muniz et al., A Robust Software Barcode Reader Using The Hough Transform, Abstract, 1999, International Conference on Information Intelligence and Systems (Oct. 31 to Nov. 3, 1999).
	A110	D. Fresonke, In-fab Identification of Silicon Wafers With Clean, Laser Marked Barcodes, Abstract, 1994, IEEE/Semi Advanced Semiconductor Manufacturing Conference and Workshop (Nov. 14 to Nov. 16, 1994).
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EXAMINER	DATE CONSIDERED

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

Electronic Patent Application Fee Transmittal

Application Number:	11354224
Filing Date:	13-Feb-2006
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Filer:	Michael E. Hussey/Sara Vessely
Attorney Docket Number:	11958/62

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	65	65

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**245**

Electronic Acknowledgement Receipt	
EFS ID:	4887432
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	02-MAR-2009
Filing Date:	13-FEB-2006
Time Stamp:	17:52:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$245
RAM confirmation Number	3686
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	**Document Description**	**File Name**	**File Size(Bytes)/ Message Digest**	**Multi Part /.zip**	**Pages (if appl.)**
1		11958_62_Amdmt_EOT_IDS_030209_24.pdf	4299381 cdaac9a3d61835ed0b2c8268e49e6e1ea6194627	yes	24
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Miscellaneous Incoming Letter		1	1	
	Amendment/Req. Reconsideration-After Non-Final Reject		2	2	
	Claims		3	7	
	Applicant Arguments/Remarks Made in an Amendment		8	12	
	Extension of Time		13	14	
	Information Disclosure Statement Letter		15	20	
	Information Disclosure Statement (IDS) Filed (SB/08)		21	24	
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	31887 9157993e934599036c63c68c18424551cc051787	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	4331268		

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.

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: March 2, 2009 Name: Sara E. Vessely Signature: Sara E. Vessely

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/62		

TRANSMITTAL

MAIL STOP AMENDMENT
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Response to Office Action dated October 28, 2008 (11 pgs.); Petition And Fee For Extension Of Time (37 CFR § 1.136(a)) (2 pgs.); Information Disclosure Statement (6 pgs.); PTO-1449 (4 pgs.); Transmittal (1 pg.)

Fee calculation:

☐ No additional fee is required.

☒ Small Entity.

☒ An extension fee in an amount of $65.00 for a one-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $180.00 under 37 CFR § 1.17(p).

☒ An additional filing fee has been calculated as shown below:

						Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra		Rate	Add'l Fee	OR	Rate	Add'l Fee
Total	17	Minus	20	0		x $26=	$		x $52=	
Indep.	3	Minus	3	0		x 110=			x $220=	
First Presentation of Multiple Dep. Claim						+$195=			+ $390=	
						Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $245.00 for One-month Extension of Time and Processing Fee for Information Disclosure Statement.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

03/02/2009
Date

Michael E. Hussey (Reg. No. 63,265)

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being filed electronically with the U.S. Patent and Trademark Office on

Date: March 2, 2009 Name: Sara E. Vessely Signature: Sara E. Vessely

PATENT
Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No: 11958/62		

RESPONSE TO OFFICE ACTION DATED OCTOBER 28, 2008

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

Dear Sir:

In response to the Non-final Office Action dated October 28, 2008, the Applicant respectfully requests entry of the following amendments in the above-identified application and consideration of the following remarks. Also enclosed for consideration is an Information Disclosure Statement. This amendment and response is being timely filed with a one (1) month extension of time, which is also enclosed.

Amendments to the claims begin on page 2 of this paper.

Remarks begin on page 7 of this paper.

Amendment to the Claims

Claims 1-16 (Cancelled).

17. (Currently Amended) A system for managing data stored in a distributed network, the system comprising:

a data repository configured to store a data entity, wherein an identifier string identifies the data entity ~~is associated with an identifier string~~; and

a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers ~~containing~~ includes location information associated with the identifier string, ~~wherein~~ each one of the plurality of data location servers comprises a processor and a portion of the data location information, ~~in the distributed data collection~~ the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string.

18. (Previously Presented) The system of claim 17, wherein the location information comprises any portion of a hash table generated with the hash function.

19. (Currently Amended) The system of claim 17, wherein the data repository comprises a plurality of data ~~repositories~~ repository servers and wherein each of the plurality of data location servers [[are]] is configured, ~~to be responsive~~ in response to a request to store data in [[a]] the data repository, to execute the hash function and store the data on one of the plurality of data ~~repositories~~ repository servers ~~in the distributed network~~ based on a result of the hash function.

20. (Currently Amended) A system for managing data location information and providing the data location information in response to location queries, the system comprising:

a location server configured to receive a location addition request, the location addition request formatted in conformance with ~~recognize~~ a transfer protocol, the location addition request comprising an identifier and at least one location to associate ~~associated~~ with the identifier, wherein the identifier ~~uniquely specifies~~ identifies an entity and wherein each of the at least one location specifies a location of data in a network pertaining to the entity;

wherein the location server includes a processor ~~contains location information corresponding to at least one entity, the location information formatted according to the transfer protocol~~; and

programming logic stored on the location server, wherein the programming logic is configured to return, in response ~~responsive~~ to a location query ~~identifying~~ related to a desired entity, ~~to return~~ a location message, the location message in conformance with the transfer protocol and comprising at least one location ~~locations~~ associated with the desired entity, wherein the ~~location server returns~~ programming logic is further configured to return the location message if the location server contains location information for the desired entity, and wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity.

21. (Cancelled)

22. (Currently Amended) The system of claim [[21]] 20, wherein the list of at least one other location server comprises a list of a plurality of location servers in the ~~plurality of location servers~~ network and a corresponding list of a plurality of ~~each of the~~ entities having location information on the respective one of the plurality of location servers.

23. (Currently Amended) The system of claim 20, wherein each of [[the]] a plurality of location servers in the network stores ~~at least~~ only a portion of ~~a total amount of~~ the data location information ~~on a persistent storage device~~.

24. (Previously Presented) The system of claim 20, wherein the location information in the location server is maintained in an indexed location store.

25. (Currently Amended) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table.

26. (Currently Amended) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of clients.

27. (Currently Amended) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of servers.

28. (Currently Amended) The system of claim 24, wherein the location query identifying the desired entity comprises a unique identifier for the desired entity, and wherein the programming logic stored on the location server further comprises programming logic ~~for applying~~ configured to apply an index function to the unique identifier to retrieve at least a portion of the locations associated with the unique identifier in the indexed location store.

29. (Currently Amended) The system of claim 28, wherein the indexed location store comprises a string store and the index function comprises a hash function.

Claims 30-32 (Cancelled).

33. (New) The system of claim 17, wherein each one of the data location servers is configured to return all location information associated with a respective one of the data entities in response to a request for any location information associated with the respective one of the data entities.

34. (New) The system of claim 17, wherein the location information includes a hash table and the hash table includes an association between a hash of the string identifier and at least one identifier of the at least one of the plurality of data location servers.

35. (New) A method of handling location queries in a network, the network comprising a plurality of location servers including data location information, the method comprising:

correlating each one of a plurality of identifiers with at least one of a plurality of locations in the network, each one of the plurality of identifiers identifying a respective one of a plurality of data entities, wherein the data entities are stored in corresponding locations in the network;

receiving a location query from a client at one of the plurality of location servers, the location query requesting location information identifying a location of a data entity included in the data entities;

determining which of the plurality of location servers includes the location information;

sending a location response message to the client in response to determining the one of the plurality of location servers includes the location information, the location response message comprising the location information; and

sending a redirect message to the client in response to determining the one of the plurality of location servers fails to include the location information, the redirect message identifying which of the plurality of location servers includes the location information.

36. (New) The method of claim 35, further comprising applying an identifier of the data entity to an indexing function to determine which of the location servers includes the location information.

37. (New) The method of claim 36, wherein each one of the plurality of location servers comprises a portion of an indexed table of the identifiers and corresponding associated locations, and wherein determining which of the plurality of location servers

includes the location information comprises applying one of the identifiers to a hash function to look up corresponding associated locations in the indexed table, the one of the identifiers identifying the data entity.

REMARKS

I. Overview

Claims 17- 20, 22-29, and 33-37 are pending. Claims 21 and 30-32 are cancelled without prejudice. Claims 17, 19, 20, 22, 23, 25-29 are amended. Claims 33-37 are newly added. No new matter was added. Support for the amendments may be found in at least paragraphs 64 and 126-132 of the specification. Applicant respectfully requests reconsideration in view of the amendments and the following remarks.

II. Claim Rejections – 35 USC §112

Claims 17-19, 21, 22, and 30-32 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to provide sufficient antecedent basis. Claims 21 and 30-32 are cancelled rendering their rejections moot. Claims 17-19 and 22 now provide sufficient antecedent basis for all of the features of the respective claims. Accordingly, Applicant respectfully requests withdrawal of the 35 USC §112, second paragraph, rejections of claims 17-19, 21, 22, and 30-32.

III. Claim Rejections – 35 USC §101

Claims 17-29 were rejected under 35 USC §101 as being directed to non-statutory subject matter, software per se. Claim 17 includes the features of "a system ... comprising ... a data location server network comprising a plurality of data location servers, wherein ... each one of the plurality of data location servers comprises a processor." Therefore, claim 17 is directed to statutory subject matter. Claims 18 and 19 depend from claim 17 and include the features of claim 17. Claim 20 includes the features of "A system ... comprising ...a location server ... wherein the location server includes a processor." Therefore, claim 20 is also directed to statutory subject matter. Claim 21 was cancelled rendering its rejection moot. Claims 22-29 depend from claim 20 and include the features of claim 20. Accordingly, Application respectfully requests withdrawal of the 35 USC §101 rejections of claims 17-29.

IV. Claim Rejections – 35 USC §102

Claims 17-32 were rejected under 35 USC §102(e) as being anticipated by US Patent No. 6,370,584 to Bestavros et al. ("Bestavros"). Claims 21 and 30-32 were cancelled rendering their respective rejections moot. As explained below, Bestavros does not describe all of the features of claims 17-20 and 22-29.

A. Claim 17

Bestavros fails to describe all of the features of Claim 17. For example, Bestavros fails to describe the features of Claim 17 of "each one of the plurality of data location servers comprises ... a portion of the data location information, the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers." (Emphasis Applicant's) In contrast, Bestavros describes a host device that uses "a predetermined criteria for determining whether to service or reroute a request" (Bestavros, Col. 3, lines 36-38) (Emphasis Applicant's). Bestavros does describe a "hash function," but the hash function is used "to determine which host will service a request" for load balancing purposes. (Bestavros, Col. 3, lines 30-35.) Therefore, Bestavros fails to describe "each one of the plurality of data location servers comprises ... a portion of the data location information, the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers." (Emphasis Applicant's)

There is another reason Bestavros fails to describe all of the features of claim 17. Bestavros fails to describe the features of claim 17 of "a data repository configured to store a data entity, wherein an identifier string identifies the data entity" and "each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string" (Emphasis Applicant's). In contrast, the IP address and port number associated with the client device are used as inputs into the hash function in Bestavros. (Bestavros, Col. 3, lines 28-31.)

B. Claims 18-19

Claims 18 and 19 depend from, and include the features of, claim 17. Thus, for at least the foregoing reasons, claims 18 and 19 are also allowable.

Bestavros also fails to describe the features of claim 19 of "a data repository configured to store a data entity," "a data location server network comprising a plurality of data location servers," and "wherein the data repository comprises a plurality of data repository servers and wherein each of the plurality of data location servers is configured, in response to a request to store data in the data repository, to execute the hash function and store the data on one of the plurality of data repository servers based on a result of the hash function" (Emphasis Applicant's). Instead, Bestavros describes client devices 54, 56, and 58 sending requests to hosts 38, 40, 42, 44, 46, 48, 50 and 52 to promote load sharing among the host devices. (Bestavros, Col. 4, lines 15-18; Fig. 2.) Furthermore, Bestavros is silent on a data repository configured to store a data entity.

C. Claim 20

Bestavros fails to describe all of the features of claim 20. For example, Bestavros fails to describe the features of Claim 20 of "a location server configured to receive a location addition request, the location addition request formatted in conformance with a transfer protocol, the location addition request comprising an identifier and at least one location to associate with the identifier, wherein the identifier identifies an entity and wherein each of the at least one location specifies a location of data in a network pertaining to the entity." Bestavros is silent on "a location server configured to receive a location addition request."

Bestavros fails to describe the features of claim 20 of "the redirect message comprising a list of at least one other location server known to have the location information for the desired entity" (Emphasis Applicant's). Instead, Bestavros describes a rerouting request function that reroutes a request depending on whether the host that received the request has data available for a response. (Bestavros, Col. 4, lines 27-30).

Furthermore, Bestavros fails to describe the features of claim 20 of "programming logic is configured to return, in response to a location query related to a desired entity, a

location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity." Bestavros is silent on "a location query related to a desired entity" as recited in Claim 20. In contrast, Bestavros describes a host device that uses "a predetermined criteria for determining whether to service or reroute a request" (Bestavros, Col. 3, lines 36-38) (Emphasis Applicant's).

B. Claims 22-29

Claims 22-29 depend from, and include the features of, claim 20. Thus, for at least the foregoing reasons, claims 22-29 are also allowable.

Claim 22 is also allowable because Bestavros fails to describe the features of claim 22 of "wherein the list of at least one other location server comprises a list of a plurality of location servers in the network and a corresponding list of a plurality of entities having location information on the respective one of the plurality of location servers." (Emphasis Applicant's) Instead, Bestavros describes a rerouting request function that reroutes a request depending on whether the host that received the request has data available for a response. (Bestavros, Col. 4, lines 27-30).

For at least the foregoing reasons, Bestavros does not describe all of the features of claims 17-20 and 22-29. Therefore, Applicant respectfully requests withdrawal of the 35 USC §102 rejections of claims 17-32.

Bestavros also fails to describe all of the features of newly added claims 33-37. For example, Bestavros fails to describe the features of independent claim 35 of "determining which of the plurality of location servers includes the location information" and "sending a location response message to the client in response to determining the one of the plurality of location servers includes the location information, the location response message comprising the location information."

V. Claim Rejections – Double Patenting

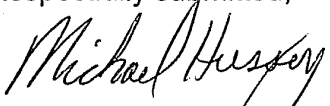
Claims 17, 20, and 30 were rejected on the grounds of non-statutory obviousness type double patenting. Applicant respectfully disagrees with the double patenting

rejections but will submit, in order to expedite prosecution, an appropriate Terminal Disclaimer upon indication that the claims are allowable over any remaining rejections.

VI. Conclusion

For the foregoing reasons, all pending claims distinguish over the prior art, and with this amendment and response, the present pending claims of this application are allowable. Should a telephone conference be deemed beneficial in expediting allowance/examination of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,



Michael E. Hussey
Attorney Reg. No. 63,265
Attorney for Applicant

MEH/sev
Attachments:

BRINKS HOFER GILSON & LIONE
CUSTOMER NO. 27879
Telephone: 317-636-0886
Facsimile: 317-634-6701

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being filed electronically with the U.S. Patent and Trademark Office on

Date: March 2, 2009 Name: Sara E. Vessely Signature: Sara E. Vessely

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of: John K. Overton et al.		
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.: 7078
Attorney Docket No.: 11958/62		

PETITION AND FEE FOR EXTENSION OF TIME (37 CFR § 1.136(a))

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is a petition for an extension of the time to respond to Office Action dated October 28, 2008, for a period of one-month(s).

Applicant is: ☒ small entity (per 37 CFR 1.27) ☐ other than small entity

	Extension Months	Other Than Small Entity	Small Entity
☒	One Month	$130.00	$65.00
☐	Two Months	$490.00	$245.00
☐	Three Months	$1,110.00	$555.00
☐	Four Months	$1,730.00	$865.00
☐	Five Months	$2,350.00	$1,175.00

Payment Method:

☐ Check in the amount of $_____ is enclosed to cover the fees listed above.

☐ Payment by credit card in the amount of $_____ to cover the fees listed above. Form PTO-2038 is enclosed for this purpose.

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

☒ The Commissioner is hereby authorized to charge $65.00 to cover the fees listed above to Deposit Account No. 23-1925.

☒ The Commissioner is hereby authorized to charge any deficiencies in fees or credit overpayment to Deposit Account No. 23-1925.

Respectfully submitted,

Dated: 03/02/2009

Michael E. Hussey, Reg. No. 63,265
Attorney for Applicant(s)

BRINKS HOFER GILSON & LIONE
CUSTOMER NO. 27879
Telephone: (317) 636-0886
Facsimile: (317) 634-6701

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/354,224	02/13/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			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 $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	03/02/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 17	Minus	** 20	= 0	X $26 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $110 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
//REGINA D. BALTIMORE//

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Address: COMMISSIONER FOR PATENTS
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

757 7590 04/17/2009

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	

ART UNIT	PAPER NUMBER
2441	

MAIL DATE	DELIVERY MODE
04/17/2009	PAPER

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

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

UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
11354224	2/13/2006	OVERTON ET AL.	11958/62

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER
Brian J. Gillis

ART UNIT	PAPER
2441	04152009

DATE MAILED:

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

Commissioner for Patents

Response to Amendment

The reply filed on March 2, 2009 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): The Double Patenting rejection in the Non Final rejection mailed October 28, 2008 has not been properly addressed. See 37 CFR 1.111. Since the above-mentioned reply appears to be bona fide, applicant is given ONE (1) MONTH or THIRTY (30) DAYS from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is (571)272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Larry D Donaghue/
Primary Examiner, Art Unit 2454

PTO-90C (Rev.04-03)

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: May 5, 2009 Name: Sara E. Vessely Signature: Sara E. Vessely

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/62		

TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Power of Attorney by Assignee and Correspondence Address Indication (1 pg.); Assignment (4 pgs.); Transmittal (1 pg.)

Fee calculation:

☒ No additional fee is required.

☒ Small Entity.

☐ An extension fee in an amount of $_____ for a _____-month extension of time under 37 CFR § 1.136(a).

☐ A petition or processing fee in an amount of $_____ under 37 CFR § 1.17(_____).

☐ An additional filing fee has been calculated as shown below:

						Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra		Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus				x $26=			x $52=	
Indep.		Minus				x 110=			x $220=	
First Presentation of Multiple Dep. Claim						+$195=			+ $390=	
						Total	$		Total	$

Fee payment:

☐ Please charge Deposit Account No. 23-1925 in the amount of $_____ for _____.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

05/05/2009
Date

Michael E. Hussey (Reg. No. 63,265)

Attorney Docket No. 11958/62

Inventors: John K. Overton and Stephen W. Bailey

Title of Appln.: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

POWER OF ATTORNEY BY ASSIGNEE AND CORRESPONDENCE ADDRESS INDICATION

The specification of the above-identified patent application:

☐ is attached hereto.

☒ was filed on February 13, 2006 as U.S. application No. 11/354,224.

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

Econnectix Corporation, a corporation under the laws of the State of Delaware, ("ASSIGNEE") certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

☒ An assignment from the inventor(s) of the patent application identified above,

- ☐ a copy of which was recorded in the Patent and Trademark Office at Reel , frame , or
- ☒ a copy thereof which is attached hereto and another copy thereof which is being recorded concurrently herewith pursuant to 37 CFR 3.11; OR

☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From to .
   The document was recorded in the Patent and Trademark Office at Reel , Frame , or a copy thereof is attached.
2. From to .
   The document was recorded in the Patent and Trademark Office at Reel , Frame , or a copy of which is attached.

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

ASSIGNEE hereby revokes all previously granted powers of attorney in the above identified patent application and appoints the Practitioners associated with the following Customer Number as its attorneys, with full power of substitution and revocation, to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent(s), to transact all business in the United States Patent and Trademark Office connected therewith, and to act on ASSIGNEE'S behalf before the competent International Authorities in connection with any and all international applications filed by ASSIGNEE:

Customer No.: 27879

Please recognize or change the correspondence address for this application to the address associated with the above-mentioned Customer Number. Please direct all telephonic and facsimile communications to:

Michael E. Hussey
Tel.: 317-636-0886; Fax: 317-634-6701

The undersigned hereby authorizes the Practitioners associated with the above Customer Number to accept and follow instructions from John K. Overton as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the Practitioners and the undersigned. In the event of a change in the persons from whom instructions may be taken, the Practitioners will be so notified by the undersigned.

The undersigned (whose title is supplied below) is empowered to act on behalf of ASSIGNEE.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature _____ Date: 2009-04-28

Name: John K. Overton

Title: Chief Executive Officer

Case No. 11958/62

ASSIGNMENT

WHEREAS, John K. Overton and Stephen W. Bailey, hereinafter called the "Assignors", have made the invention described in the United States patent application entitled NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL, for a full description of which reference is here made to an application for Letters Patent of the United States filed on February 13, 2006, and assigned Application Serial No. 11/354,224;

WHEREAS, Econnectix Corporation, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 14 Peoria Street, Suite 2H, Chicago, IL 60607, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATED: 2009-04-29

John K. Overton

DATED: _____

Stephen W. Bailey

Case No. 11958/62

ASSIGNMENT

WHEREAS, John K. Overton and Stephen W. Bailey, hereinafter called the "Assignors", have made the invention described in the United States patent application entitled NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL, for a full description of which reference is here made to an application for Letters Patent of the United States filed on February 13, 2006, and assigned Application Serial No. 11/354,224;

WHEREAS, Econnectix Corporation, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 14 Peoria Street, Suite 2H, Chicago, IL 60607, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATED: _____

John K. Overton

DATED: 2009-05-03

Stephen W. Bailey

Electronic Acknowledgement Receipt	
EFS ID:	5278982
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	05-MAY-2009
Filing Date:	13-FEB-2006
Time Stamp:	15:33:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		11958_62_POA_Assignment_050509_6.pdf	1152171 5bcee88107042dceafe52b333dbfda7378fba7fb	yes	6

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Power of Attorney	2	6
Warnings:			
Information:			
	Total Files Size (in bytes):	1152171	

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.

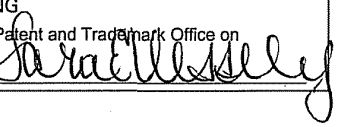
New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish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

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being filed electronically with the U.S. Patent and Trademark Office on

Date: May 8, 2009 Name: Sara E. Vessely Signature: 

PATENT
Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No:	11958/62	

RESPONSE TO OFFICE ACTION OF APRIL 17, 2009

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

Dear Sir:

In response to the Office Action of April 17, 2009, the Applicants respectfully request consideration of the following remarks in the above-referenced patent application. Also enclosed for submission are a terminal disclaimer and a supplemental declaration.

Listing of the claims begin on page 2 of this paper.

Remarks begin on page 6 of this paper.

Listing of the Claims

This listing of claims contains no amendments and is being provided for the convenience of the Examiner:

Claims 1-16 (Cancelled).

17. (Previously Presented) A system for managing data stored in a distributed network, the system comprising:

a data repository configured to store a data entity, wherein an identifier string identifies the data entity; and

a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers includes location information associated with the identifier string, each one of the plurality of data location servers comprises a processor and a portion of the data location information, the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string.

18. (Previously Presented) The system of claim 17, wherein the location information comprises any portion of a hash table generated with the hash function.

19. (Previously Presented) The system of claim 17, wherein the data repository comprises a plurality of data repository servers and wherein each of the plurality of data location servers is configured, in response to a request to store data in the data repository, to execute the hash function and store the data on one of the plurality of data repository servers based on a result of the hash function.

20. (Previously Presented) A system for managing data location information and providing the data location information in response to location queries, the system comprising:

a location server configured to receive a location addition request, the location addition request formatted in conformance with a transfer protocol, the location addition request comprising an identifier and at least one location to associate with the identifier, wherein the identifier identifies an entity and wherein each of the at least one location specifies a location of data in a network pertaining to the entity;

wherein the location server includes a processor; and

programming logic stored on the location server, wherein the programming logic is configured to return, in response to a location query related to a desired entity, a location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity, wherein the programming logic is further configured to return the location message if the location server contains location information for the desired entity, and wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity.

21. (Cancelled)

22. (Previously Presented) The system of claim 20, wherein the list of at least one other location server comprises a list of a plurality of location servers in the network and a corresponding list of a plurality of entities having location information on the respective one of the plurality of location servers.

23. (Previously Presented) The system of claim 20, wherein each of a plurality of location servers in the network stores only a portion of the data location information.

24. (Previously Presented) The system of claim 20, wherein the location information in the location server is maintained in an indexed location store.

25. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table.

26. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of clients.

27. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of servers.

28. (Previously Presented) The system of claim 24, wherein the location query identifying the desired entity comprises a unique identifier for the desired entity, and wherein the programming logic stored on the location server further comprises programming logic configured to apply an index function to the unique identifier to retrieve at least a portion of the locations associated with the unique identifier in the indexed location store.

29. (Previously Presented) The system of claim 28, wherein the indexed location store comprises a string store and the index function comprises a hash function.

Claims 30-32 (Cancelled).

33. (Previously Presented) The system of claim 17, wherein each one of the data location servers is configured to return all location information associated with a respective one of the data entities in response to a request for any location information associated with the respective one of the data entities.

34. (Previously Presented) The system of claim 17, wherein the location information includes a hash table and the hash table includes an association between a hash of the string identifier and at least one identifier of the at least one of the plurality of data location servers.

35. (Previously Presented) A method of handling location queries in a network, the network comprising a plurality of location servers including data location information, the method comprising:

correlating each one of a plurality of identifiers with at least one of a plurality of locations in the network, each one of the plurality of identifiers identifying a respective one of a plurality of data entities, wherein the data entities are stored in corresponding locations in the network;

receiving a location query from a client at one of the plurality of location servers, the location query requesting location information identifying a location of a data entity included in the data entities;

determining which of the plurality of location servers includes the location information;

sending a location response message to the client in response to determining the one of the plurality of location servers includes the location information, the location response message comprising the location information; and

sending a redirect message to the client in response to determining the one of the plurality of location servers fails to include the location information, the redirect message identifying which of the plurality of location servers includes the location information.

36. (Previously Presented) The method of claim 35, further comprising applying an identifier of the data entity to an indexing function to determine which of the location servers includes the location information.

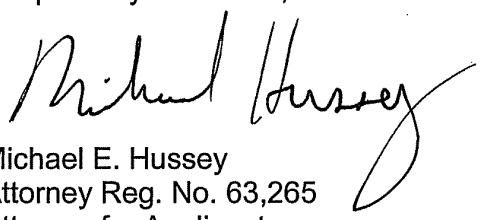
37. (Previously Presented) The method of claim 36, wherein each one of the plurality of location servers comprises a portion of an indexed table of the identifiers and corresponding associated locations, and wherein determining which of the plurality of location servers includes the location information comprises applying one of the identifiers to a hash function to look up corresponding associated locations in the indexed table, the one of the identifiers identifying the data entity.

REMARKS

Double Patenting Rejections

The reply filed on March 2, 2009 was deemed not fully responsive to the Non-Final Office Action dated October 28, 2008 on the grounds that the double patenting rejection was not properly addressed. The Non-Final Office Action dated October 28, 2008 rejected claims 17, 20, and 30 on the ground of non statutory obviousness-type double patenting as being unpatentable over claim 18 of U.S. Patent No. 7,103,640. To expedite prosecution of this application, a terminal disclaimer is being submitted with this response. The submission of the terminal disclaimer overcomes the non-statutory double patent rejections of claims 17, 20, and 30. Applicants respectfully request withdrawal of the double patenting rejections of claims 17, 20, and 30.

Respectfully submitted,



Michael E. Hussey
Attorney Reg. No. 63,265
Attorney for Applicants

MEH/sev

BRINKS HOFER GILSON & LIONE
CUSTOMER NO. 27879
Telephone: 317-636-0886
Facsimile: 317-634-6701

PTO/SB/26(1-08)

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A PRIOR PATENT	Docket Number (Optional) 11958/62

In re Application of: John K. Overton and Stephen W. Bailey

Application No. 11/354,224

Filed: February 13, 2006

For: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

The owner*, Econnectix Corporation, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173, as presently shortened by any terminal disclaimer, of prior Patent No. 7,103,640. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 to 156 and 173 of the prior patent, as presently shortened by any terminal disclaimer, in the event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/ organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney of record. Registration No. 63,265

Signature	05/08/2009 Date
Michael E. Hussey Typed or Printed Name	317-636-0886 Telephone No.

☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included.
☐ A check in the amount of the fee is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Deposit Account No. 23-1925.

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

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Attorney Docket No. 11958/62

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR §1.63)

As a below named inventor, I hereby declare:

My residence, mailing address, and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor or an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled:

NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

the specification of which (check one)

☐ is attached hereto.

☒ was filed on February 13, 2006 as United States Application No. 11/354,224 and was amended on February 13, 2006 and September 6, 2006.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge my duty to disclose to the United States Patent and Trademark Office all information that I know to be material to patentability as defined in 37 C.F.R. §1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or (f), or §365(b) of any foreign application(s) for patent or inventor's or plant breeder's rights certificate(s), or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's or plant breeder's rights certificate(s) or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):			Priority NOT Claimed
(Number)	(Country)	(Filing Date, MM/DD/YYYY)	☐
(Number)	(Country)	(Filing Date, MM/DD/YYYY)	☐

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

60/153,709	09/14/1999	Expired
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: pending, or abandoned)
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: pending, or abandoned)

I hereby claim the benefit under 35 U.S.C. §120 of any United States applications(s), or §365(c) of any PCT International Application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

09/661,222	09/13/2000	Patented
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: patented, pending, abandoned)
09/111,896	07/08/1998	Abandoned
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: patented, pending, abandoned)
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor
John K. Overton

Sole or first inventor's signature — Date
2009-04-28

Residence (City, State/Foreign Country)
Chicago, IL

Citizenship
US

Mailing Address
5825 South Blackstone, Chicago, IL 60637

Full name of second joint inventor, if any
Stephen W. Bailey

Second inventor's signature — Date

Residence (City, State/Foreign Country)
Chicago, IL

Citizenship
US

Mailing Address
5617 South Dorchester Avenue, Chicago, IL 60637

Attorney Docket No. 11958/62

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION
(37 CFR §1.63)

As a below named inventor, I hereby declare:

My residence, mailing address, and citizenship are as stated below next to my name;

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NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

the specification of which (check one)

☐ is attached hereto.

☒ was filed on February 13, 2006 as United States Application No. 11/354,224 and was amended on February 13, 2006 and September 6, 2006.

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Prior Foreign Application(s):			Priority NOT Claimed
(Number)	(Country)	(Filing Date, MM/DD/YYYY)	☐
(Number)	(Country)	(Filing Date, MM/DD/YYYY)	☐

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Full name of sole or first inventor
John K. Overton

Sole or first inventor's signature Date

Residence (City, State/Foreign Country)
Chicago, IL

Citizenship
US

Mailing Address
5825 South Blackstone, Chicago, IL 60637

Full name of second joint inventor, if any
Stephen W. Bailey

Second inventor's signature Date
2009-05-01

Residence (City, State/Foreign Country)
Chicago, IL

Citizenship
US

Mailing Address
5617 South Dorchester Avenue, Chicago, IL 60637

Electronic Patent Application Fee Transmittal	
Application Number:	11354224
Filing Date:	13-Feb-2006
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Filer:	Michael E. Hussey/Sara Vessely
Attorney Docket Number:	11958/62
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory disclaimer	2814	1	70	70
		Total in USD ($)		**70**

Electronic Acknowledgement Receipt	
EFS ID:	5302110
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	08-MAY-2009
Filing Date:	13-FEB-2006
Time Stamp:	15:46:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$70
RAM confirmation Number	1935
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	**Document Description**	**File Name**	**File Size(Bytes)/ Message Digest**	**Multi Part /.zip**	**Pages (if appl.)**
1		11958-62_Resp_TermDisc_Decl_050809_12.pdf	2383787 e37cda95a4dcdd787e817ac210c35bf75d729aa7	yes	12
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Miscellaneous Incoming Letter		1	1	
	Amendment/Req. Reconsideration-After Non-Final Reject		2	2	
	Claims		3	6	
	Applicant Arguments/Remarks Made in an Amendment		7	7	
	Terminal Disclaimer Filed		8	8	
	Oath or Declaration filed		9	12	
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	29979 c8e3a89a1013ba97b29b223b424d59bb89feab0d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2413766		

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.

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: May 8, 2009 Name: Sara E. Vessely Signature: Sara E. Vessely

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/62		

TRANSMITTAL

MAIL STOP AMENDMENT
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Response to Office Action dated April 17, 2009 (6 pgs.); Terminal Disclaimer to Obviate a Double Patenting Rejection Over a Prior Patent (1 pg.); Supplemental Declaration (4 pgs.); Transmittal (1 pg.)

Fee calculation:

☐ No additional fee is required.

☒ Small Entity.

☐ An extension fee in an amount of $_____ for a _____-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $70.00 under 37 CFR § 1.20(d).

☐ An additional filing fee has been calculated as shown below:

						Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra		Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus				x $26=			x $52=	
Indep.		Minus				x 110=			x $220=	
First Presentation of Multiple Dep. Claim						+$195=			+ $390=	
						Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $70.00 for Terminal Disclaimer.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

05/08/2009
Date

Michael E. Hussey (Reg. No. ~~63,265~~)

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/354,224	02/13/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			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 $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 05/08/2009

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	X $26 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

AMENDMENT

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/BRENDA HINES/

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

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

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	11/354,224	OVERTON ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 5/8/09	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
Janice Ford 7103640

U.S. Patent and Trademark Office

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

757 7590 09/02/2009

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	

ART UNIT	PAPER NUMBER
2441	

MAIL DATE	DELIVERY MODE
09/02/2009	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.	Applicant(s)	
	11/354,224	OVERTON ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2441	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *08 May 2009*.

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

3)☐ 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

4)☒ Claim(s) *17-20,22-29 and 33-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-20,22-29 and 33-37* is/are rejected.

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

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

Application Papers

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

10)☒ The drawing(s) filed on *13 February 2006* 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).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

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).

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03022009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 17, 20, and 35 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 10, and 14 of U.S. Patent No. 7,233,978. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 17, 20, and 35 cover the scope of the claims in U.S. Patent 7,233,978.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on March 2, 2009 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is (571)272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J Gillis
Examiner
Art Unit 2441

/B. J. G./
Examiner, Art Unit 2441
8/27/2009
/Larry D Donaghue/
Primary Examiner, Art Unit 2454

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	2	"09872736"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 12:09
L14	2	"20070011267"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L10	2	"6466980".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:30
L15	7	"7103640"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L11	0	"7272625 6453404 7349902 20010013059 6594253".pn.	US-PGPUB; USPAT	OR	OFF	2009/08/27 15:32
L4	4	("20020112048" "20030065653" "20040205055" "20080005275").pn.	US-PGPUB	OR	OFF	2009/08/27 13:48
L3	90	("4553261" "4636858" "4728978" "4800488" "4825406" "4835372" "4914571" "5008700" "5124814" "5193185" "5208623" "5291399" "5319401" "5347600" "5384643" "5414841" "5454101" "5455648" "5475871" "5479654" "5491511" "5499113" "5522077" "5537547" "5550981" "5551027" "5557790" "5560005" "5576952" "5579067" "5610653" "5617570" "5625841" "5649247" "5664170" "5669029"	USPAT	OR	OFF	2009/08/27 13:47

		"5724575" "5740428" "5764889" "5764906" "5774670" "5781725" "5784565" "5802518" "5809161" "5809331" "5809495" "5813006" "5832487" "5848246" "5864482" "5872973" "5875302" "5903889" "5907837" "5913210" "5915240" "5918214" "5920702" "5940844" "5950173" "5961610" "5966705" "5974124" "5974409" "5978773" "5987519" "5995965" "6032175" "6047332" "6055544" "6058193" "6092189" "6108787" "6131095" "6154738" "6188766" "6201931" "6202070" "6209095" "6212280" "6377896" "6418441" "6438652" "6463454" "6466980" "6578068" "6711408" "7103640" "7233978").pn.				
L23	5	("5764906" "6418441" "6377986" "5475817" "6131095").pn.	USPAT	OR	OFF	2009/08/27 15:37
L9	3	("5950173" "5978773" "5913210").pn.	USPAT	OR	OFF	2009/08/27 15:29
L13	4	("5995965" "6374253" "5724575" "5345586").pn.	USPAT	OR	OFF	2009/08/27 15:35
L7	5	("7103640" "7233978" "2002032787" "20030065653" "20080005275" "20040205055").pn.	US-PGPUB; USPAT	OR	OFF	2009/08/27 13:58
L6	4	("7103640" "7233978" "2002032787" "20030065653" "2008005275" "20040205055"). pn.	US-PGPUB; USPAT	OR	OFF	2009/08/27 13:58
L12	5	("7272625" "6453404" "7349902" "20010013059" "6594253").pn.	US-PGPUB; USPAT	OR	OFF	2009/08/27 15:32
L24	6	((location identifi$6) near5 string) near10 (query request) near10 (location address) same hash	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37

L28	2	(hash adj3 function) near20 (address$3 location) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L25	123	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L27	0	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location) same (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L29	13	(hash adj3 function) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L30	3	(US-6470389-$ or US-6370584-$ or US-6167427-$).did.	USPAT	OR	OFF	2009/08/27 15:37
L5	94	3 4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 13:48
L33	7135	709/217.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L34	9104	709/223.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L35	4262	709/238.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37

L16	1	hash near10 location near10 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L17	1	hash near20 location near20 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L18	1	hash near20 location near20 (identifier near5 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L19	279	hash near20 location near20 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L20	115	hash near5 location near5 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L22	15	L20 and (@ad<="19990914" @rlad<="19990914")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L21	17	L20 and (@ad<="20000913" @rlad<="20000913")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L26	16	L25 and (@ad<="19980708" @rlad<="19980708")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37
L31	1	L30 and repository	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37

L32	2	L30 and table	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/08/27 15:37

8/27/2009 3:52:54 PM
C:\Documents and Settings\bgillis1\My Documents\EAST\Workspaces\11354224.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	Art Unit
	Brian J Gillis	2441

SEARCHED			
Class	Subclass	Date	Examiner
709	217	8/27/2009	BJG
709	223	8/27/2009	BJG
709	238	8/27/2009	BJG

SEARCH NOTES		
Search Notes	Date	Examiner
Ordered PLUS search	10/16/2008	BJG
Updated EAST search	8/27/2009	BJG
Spoke to Larry Donaghue regarding Double Patenting	8/27/2009	BJG

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	Art Unit
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009							
	1	-	-							
	2	-	-							
	3	-	-							
	4	-	-							
	5	-	-							
	6	-	-							
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	10	-	-							
	11	-	-							
	12	-	-							
	13	-	-							
	14	-	-							
	15	-	-							
	16	-	-							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							
	21	✓	-							
	22	✓	✓							
	23	✓	✓							
	24	✓	✓							
	25	✓	✓							
	26	✓	✓							
	27	✓	✓							
	28	✓	✓							
	29	✓	✓							
	30	✓								
	31	✓								
	32	✓								
	33		✓							
	34		✓							
	35		✓							
	36		✓							

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009							
	37		✓							

FORM PTO-1449		SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.		CONFIRMATION NO. 7078

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	4,553,261	11/1985	Froessl		
	A2	4,636,858	01/1987	Hague		
	A3	4,728,978	03/1988	Inoue et al.		
	A4	4,800,488	01/1989	Agrawal et al.		
	A5	4,825,406	04/1989	Bean et al.		
	A6	4,835,372	05/1989	Gombrich et al.		
	A7	4,914,571	04/1990	Baratz et al.		
	A8	5,008,700	04/1991	Okamoto		
	A9	5,124,814	06/1992	Takahashi et al.		
	A10	5,193,185	03/1993	Lanter		
	A11	5,208,623	05/1993	Takahashi		
	A12	5,291,399	03/1994	Chaco		
	A13	5,319,401	06/1994	Hicks		
	A14	5,347,600	09/1994	Barnsley		
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	A39	5,764,889	06/1998	Ault et al.		

EXAMINER	/Brian Gillis/	DATE CONSIDERED	08/27/2009

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /BJG/

FORM PTO-1449	SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A40	5,764,906	06/1998	Edelstein et al.		
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EXAMINER /Brian Gillis/	DATE CONSIDERED 08/27/2009

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /BJG/

FORM PTO-1449	SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.	

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
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FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
	A96	EP 0 568 161 A1	01/1992	Europe		
	A97	EP 0 889 422 A2	01/1999	Europe		
	~~A98~~	~~EP 0 919 912 A2~~	~~06/1999~~	~~Europe~~		
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	A102	WO 98/31138	07/1998	WIPO		
	A103	WO 00/032526	01/2000	WIPO		

EXAMINER INITIAL	OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
	~~A104~~	~~Communication relating to the results of the Partial International Search Report for PCT~~ Application No. PCT/US01/18013 dated April 15, 2002.
	A105	D.G. Bourke et al., Programmable Module and Circuit for Machine-Readable Unique Serial Number, IBM Technical Disclosure Bulletin, Vol. 27, No. 4A, Sep. 1, 1984, pp. 1942-1944.
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EXAMINER /Brian Gillis/	DATE CONSIDERED 08/27/2009

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /BJG/

FORM PTO-1449	SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.	

EXAMINER INITIAL	OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
	A109	R. Muniz et al., A Robust Software Barcode Reader Using The Hough Transform, Abstract, 1999, International Conference on Information Intelligence and Systems (Oct. 31 to Nov. 3, 1999).
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	A112	V.L. Callaghan et al., Structures and Metrics for Image Storage and Interchange, Journal of Electronic Imaging, Vol. 2, No. 2, Apr. 1, 1993, pp. 126-137.
	A113	Beitz et al., Service Location in an Open Distributed Environment, Second International Workshop on Services in Distributed and Networked Environments, IEEE Computer Society Press, June 1995, pp. 28-34.
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EXAMINER	/Brian Gillis/	DATE CONSIDERED	08/27/2009

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /BJG/

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being filed electronically with the U.S. Patent and Trademark Office on

Date: October 27, 2009 Name: Sara E. Vessely Signature: Sara E Vessely

PATENT
Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No:	11958/62	

RESPONSE TO FINAL OFFICE ACTION OF SEPTEMBER 2, 2009

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

Dear Sir:

In response to the Final Office Action of September 2, 2009, the Applicants respectfully request consideration of the following remarks in the above-referenced patent application. Also enclosed for submission is a terminal disclaimer.

Listing of the claims begin on page 2 of this paper.

Remarks begin on page 6 of this paper.

Listing of the Claims

This listing of claims contains no amendments and is being provided for the convenience of the Examiner:

Claims 1-16 (Cancelled).

17. (Previously Presented) A system for managing data stored in a distributed network, the system comprising:

a data repository configured to store a data entity, wherein an identifier string identifies the data entity; and

a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers includes location information associated with the identifier string, each one of the plurality of data location servers comprises a processor and a portion of the data location information, the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string.

18. (Previously Presented) The system of claim 17, wherein the location information comprises any portion of a hash table generated with the hash function.

19. (Previously Presented) The system of claim 17, wherein the data repository comprises a plurality of data repository servers and wherein each of the plurality of data location servers is configured, in response to a request to store data in the data repository, to execute the hash function and store the data on one of the plurality of data repository servers based on a result of the hash function.

20. (Previously Presented) A system for managing data location information and providing the data location information in response to location queries, the system comprising:

a location server configured to receive a location addition request, the location addition request formatted in conformance with a transfer protocol, the location addition request comprising an identifier and at least one location to associate with the identifier, wherein the identifier identifies an entity and wherein each of the at least one location specifies a location of data in a network pertaining to the entity;

wherein the location server includes a processor; and

programming logic stored on the location server, wherein the programming logic is configured to return, in response to a location query related to a desired entity, a location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity, wherein the programming logic is further configured to return the location message if the location server contains location information for the desired entity, and wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity.

21. (Cancelled)

22. (Previously Presented) The system of claim 20, wherein the list of at least one other location server comprises a list of a plurality of location servers in the network and a corresponding list of a plurality of entities having location information on the respective one of the plurality of location servers.

23. (Previously Presented) The system of claim 20, wherein each of a plurality of location servers in the network stores only a portion of the data location information.

24. (Previously Presented) The system of claim 20, wherein the location information in the location server is maintained in an indexed location store.

25. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table.

26. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of clients.

27. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of servers.

28. (Previously Presented) The system of claim 24, wherein the location query identifying the desired entity comprises a unique identifier for the desired entity, and wherein the programming logic stored on the location server further comprises programming logic configured to apply an index function to the unique identifier to retrieve at least a portion of the locations associated with the unique identifier in the indexed location store.

29. (Previously Presented) The system of claim 28, wherein the indexed location store comprises a string store and the index function comprises a hash function.

Claims 30-32 (Cancelled).

33. (Previously Presented) The system of claim 17, wherein each one of the data location servers is configured to return all location information associated with a respective one of the data entities in response to a request for any location information associated with the respective one of the data entities.

34. (Previously Presented) The system of claim 17, wherein the location information includes a hash table and the hash table includes an association between a hash of the string identifier and at least one identifier of the at least one of the plurality of data location servers.

35. (Previously Presented) A method of handling location queries in a network, the network comprising a plurality of location servers including data location information, the method comprising:

correlating each one of a plurality of identifiers with at least one of a plurality of locations in the network, each one of the plurality of identifiers identifying a respective one of a plurality of data entities, wherein the data entities are stored in corresponding locations in the network;

receiving a location query from a client at one of the plurality of location servers, the location query requesting location information identifying a location of a data entity included in the data entities;

determining which of the plurality of location servers includes the location information;

sending a location response message to the client in response to determining the one of the plurality of location servers includes the location information, the location response message comprising the location information; and

sending a redirect message to the client in response to determining the one of the plurality of location servers fails to include the location information, the redirect message identifying which of the plurality of location servers includes the location information.

36. (Previously Presented) The method of claim 35, further comprising applying an identifier of the data entity to an indexing function to determine which of the location servers includes the location information.

37. (Previously Presented) The method of claim 36, wherein each one of the plurality of location servers comprises a portion of an indexed table of the identifiers and corresponding associated locations, and wherein determining which of the plurality of location servers includes the location information comprises applying one of the identifiers to a hash function to look up corresponding associated locations in the indexed table, the one of the identifiers identifying the data entity.

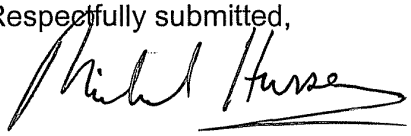
REMARKS

Double Patenting Rejections

The Final Office Action dated September 2, 2009, rejected claims 17, 20, and 35 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 10, and 14 of U.S. Patent No. 7,233,978. To expedite prosecution of this application, a terminal disclaimer is being submitted with this response. The submission of the terminal disclaimer overcomes the non-statutory double patent rejections of claims 17, 20, and 35. Applicants respectfully request withdrawal of the double patenting rejections of claims 17, 20, and 35.

Because no grounds were provided for rejecting dependent claims 18-19, 22-29, 33-34, and 36-37, the submission of the terminal disclaimer also overcomes the rejection of dependent claims 18-19, 22-29, 33-34, and 36-37. Applicants respectfully request withdrawal of the rejections of claims 18-19, 22-29, 33-34, and 36-37. The present pending claims of this application are allowable and Applicants respectfully request the Examiner to issue a Notice of Allowance for this application.

Respectfully submitted,



Michael E. Hussey
Attorney Reg. No. 63,265
Attorney for Applicants

MEH/sev

BRINKS HOFER GILSON & LIONE
CUSTOMER NO. 27879
Telephone: 317-636-0886
Facsimile: 317-634-6701

PTO/SB/26(1-08)

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A PRIOR PATENT	Docket Number (Optional) 11958/62

In re Application of: John K. Overton and Stephen W. Bailey

Application No. 11/354,224

Filed: February 13, 2006

For: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

The owner*, Econnectix Corporation, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173, as presently shortened by any terminal disclaimer, of prior Patent No. 7,233,978. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 to 156 and 173 of the prior patent, as presently shortened by any terminal disclaimer, in the event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/ organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney of record. Registration No. 63,265

Signature	10/27/2009 Date
Michael E. Hussey Typed or Printed Name	317-636-0886 Telephone No.

☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included.
☐ A check in the amount of the fee is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Deposit Account No. 23-1925.

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

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal	
Application Number:	11354224
Filing Date:	13-Feb-2006
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Filer:	Michael E. Hussey/Sara Vessely
Attorney Docket Number:	11958/62
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory disclaimer	2814	1	70	70
		Total in USD ($)		**70**

Electronic Acknowledgement Receipt	
EFS ID:	6339003
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	Network distributed tracking wire transfer protocol
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	27-OCT-2009
Filing Date:	13-FEB-2006
Time Stamp:	15:59:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$70
RAM confirmation Number	2278
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees) Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees) Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	**Document Description**	**File Name**	**File Size(Bytes)/ Message Digest**	**Multi Part /.zip**	**Pages (if appl.)**
1		11958_62_Resp_TermDisc_102709_8.pdf	1786421 e76bee44698c01fdb7db5d0d19fd9ea3331eddc9	yes	8
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Miscellaneous Incoming Letter		1	1	
	Amendment After Final		2	2	
	Claims		3	6	
	Applicant Arguments/Remarks Made in an Amendment		7	7	
	Terminal Disclaimer Filed		8	8	
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	29979 315e33da6c43759174e09e59d2faf7f0d35e46e4	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1816400		

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.

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: October 27, 2009 Name: Sara E. Vessely Signature: Sara E Vessely

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/62		

TRANSMITTAL

MAIL STOP AF
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Response to Final Office Action dated September 2, 2009 (6 pgs.); Terminal Disclaimer to Obviate a Double Patenting Rejection Over a Prior Patent (1 pg.); Transmittal (1 pg.)

Fee calculation:

☐ No additional fee is required.

☒ Small Entity.

☐ An extension fee in an amount of $_____ for a _____-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $70.00 under 37 CFR § 1.20(d).

☐ An additional filing fee has been calculated as shown below:

						Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra		Rate	Add'l Fee	OR	Rate	Add'l Fee
Total	17	Minus	17	0		x $26=			x $52=	
Indep.	3	Minus	3	0		x 110=			x $220=	
First Presentation of Multiple Dep. Claim						+$195=			+ $390=	
						Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $70.00 for Terminal Disclaimer.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

10/27/2009
Date

Michael E. Hussey (Reg. No. 63,265)

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/354,224	02/13/2006	

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☒		OR	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			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			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 $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	10/27/2009	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 17	Minus	** 20	= 0	X $26 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $110 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/PARTHENIA MERRILL/

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

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

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	11/354,224	OVERTON ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 10/27/09	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

Felicia D. Roberts

7,233,978

U.S. Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

757 7590 11/18/2009

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	

DATE MAILED: 11/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	02/18/2010

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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

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

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

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

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

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

757 7590 11/18/2009

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

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.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	02/18/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
GILLIS, BRIAN J	2441	709-245000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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

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

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

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

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

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

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

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information 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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

757 7590 11/18/2009

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	

DATE MAILED: 11/18/2009

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

The Patent Term Adjustment to date is 402 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 402 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Notice of Allowability	Application No.	Applicant(s)	
	11/354,224	OVERTON ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2441	

-- 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 *the Amendment after Final filed October 27, 2009*.

2. ☒ The allowed claim(s) is/are *17-20,22-29 and 33-37*.

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

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

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

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

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Larry Donaghue/
Primary Examiner, Art Unit 2454

DETAILED ACTION

This action is responsive to the Amendment after Final filed October 27, 2009. Claims 17-20, 22-29, and 33-37 were pending. *Claims 17-20, 22-29, 33-37 are allowed.*

REASONS FOR ALLOWANCE

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

The prior art of record fails to teach neither singly nor in combination, the claimed limitations of "a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers includes location information associated with the identifier string, each one of the plurality of data location servers comprises a processor and a portion of the data location information, *the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string.*" (emphasis added) as stated in claims 17, and " programming logic stored on the location server, wherein the programming logic is configured to return, in response to a location query related to a desired entity, a location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity, wherein the programming logic is further configured to return the location message if the location server contains location information for the desired

entity, and *wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity*." (emphasis added) as stated in claim 20 and similarly in claim 35. These limitations, in conjunction with other limitations in the independent claim, are not specifically disclosed or remotely suggested in the prior art of record. A review of claims 1-18 indicated claims 1-18 are allowable over the prior art of record.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is (571)272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J Gillis
Examiner
Art Unit 2441

/B. J. G./
Examiner, Art Unit 2441
11/9/2009
/Larry Donaghue/
Primary Examiner, Art Unit 2454

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

ORIGINAL		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
709	217	G	0	6	F	15 / 16 (2006.01.01)	G	0	6	F	17 / 30 (2006.01.01)

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
709	219				
707	10				

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	1	17	4	33										
	2	2	18	5	34										
	3	3	19	15	35										
	4	6	20	16	36										
	5		21	17	37										
	6	7	22												
	7	8	23												
	8	9	24												
	9	10	25												
	10	11	26												
	11	12	27												
	12	13	28												
	13	14	29												
	14		30												
	15		31												
	16		32												

/Brian J Gillis/ Examiner.Art Unit 2441	11/9/2009	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	17	
/Larry Donaghue/ Primary Examiner.Art Unit 2454	11/16/2009	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	Art Unit
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009	11/09/2009						
	1	-	-	-						
	2	-	-	-						
	3	-	-	-						
	4	-	-	-						
	5	-	-	-						
	6	-	-	-						
	7	-	-	-						
	8	-	-	-						
	9	-	-	-						
	10	-	-	-						
	11	-	-	-						
	12	-	-	-						
	13	-	-	-						
	14	-	-	-						
	15	-	-	-						
	16	-	-	-						
1	17	✓	✓	=						
2	18	✓	✓	=						
3	19	✓	✓	=						
6	20	✓	✓	=						
	21	✓	-	-						
7	22	✓	✓	=						
8	23	✓	✓	=						
9	24	✓	✓	=						
10	25	✓	✓	=						
11	26	✓	✓	=						
12	27	✓	✓	=						
13	28	✓	✓	=						
14	29	✓	✓	=						
	30	✓	-	-						
	31	✓	-	-						
	32	✓	-	-						
4	33		✓	=						
5	34		✓	=						
15	35		✓	=						
16	36		✓	=						

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009	11/09/2009						
17	37		✓	=						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
709	217	11/9/2009	BJG
709	219	11/9/2009	BJG
709	223	11/9/2009	BJG
709	238	11/9/2009	BJG
707	10	11/9/2009	BJG

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
Ordered PLUS search	10/16/2008	BJG
Updated EAST search	8/27/2009	BJG
Spoke to Larry Donaghue regarding Double Patenting	8/27/2009	BJG
Updated EAST search	11/9/2009	BJG
Inventor name search using PALM	11/9/2009	BJG
NPL search see attached search history	11/9/2009	BJG
Interference search see attached search history	11/9/2009	BJG

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**
709	217	11/9/2009	BJG
709	219	11/9/2009	BJG
707	10	11/9/2009	BJG

OK TO ENTER: /BJG/
11/09/2009

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I hereby certify that this correspondence is being filed electronically with the U.S. Patent and Trademark Office on
Date: October 27, 2009 Name: Sara E. Vessely Signature: Sara E Vessely

PATENT
Our Case No. 11958/62

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No:	11958/62	

RESPONSE TO FINAL OFFICE ACTION OF SEPTEMBER 2, 2009

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

Dear Sir:

In response to the Final Office Action of September 2, 2009, the Applicants respectfully request consideration of the following remarks in the above-referenced patent application. Also enclosed for submission is a terminal disclaimer.

Listing of the claims begin on page 2 of this paper.

Remarks begin on page 6 of this paper.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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BIB DATA SHEET

CONFIRMATION NO. 7078

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/354,224	02/13/2006	709	2441	11958/62

APPLICANTS

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

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

This application is a CON of 09/661,222 09/13/2000 PAT 7,103,640
which claims benefit of 60/153,709 09/14/1999 *
and is a CIP of 09/111,896 07/08/1998 ABN
(*)Data provided by applicant is not consistent with PTO records.

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
03/16/2006

Foreign Priority claimed	☐ Yes ☑ No		STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No	☐ Met after Allowance				
Verified and Acknowledged	/BRIAN J GILLIS/ Examiner's Signature	BJG Initials	IL	12	16	3

ADDRESS

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
UNITED STATES

TITLE

Network distributed tracking wire transfer protocol

FILING FEE RECEIVED		
565	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

BIB (Rev. 05/07).

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Advanced Search:

Inspec - 1898 to date (INZZ)

limit

Search history:

No.	Database	Search term	Info added since	Results	
CP		[Clipboard]		0	-
1	Inspec - 1898 to date	hash NEAR location NEAR identifier NEAR string	unrestricted	0	-
2	Inspec - 1898 to date	hash NEAR location NEAR identifier	unrestricted	0	-
3	Inspec - 1898 to date	location NEAR identifier NEAR (query OR request)	unrestricted	0	-
4	Inspec - 1898 to date	hash NEAR function NEAR (address OR location) NEAR redirect ADJ route	unrestricted	0	-
5	Inspec - 1898 to date	hash ADJ function NEAR (address OR location) NEAR (redirect OR route)	unrestricted	0	-
6	Inspec - 1898 to date	hash ADJ function	unrestricted	1680	show titles
7	Inspec - 1898 to date	6 SAME identfier ADJ string	unrestricted	0	-
8	Inspec - 1898 to date	6 SAME (redirect OR reroute)	unrestricted	1	show titles
9	Inspec - 1898 to date	6 SAME location NEAR message	unrestricted	0	-
10	Inspec - 1898 to date	redirect NEAR message	unrestricted	7	show titles

hide | delete all search steps... | delete individual search steps...

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whole document search

☐ Images

Click to select terms from the following list(s):

Publication year 1950-

Publication year 1898-1949

Inspec thesaurus - enter a term

- Classification codes A: Physics, 0-1
- Classification codes A: Physics, 2-3
- Classification codes A: Physics, 4-5
- Classification codes A: Physics, 6
- Classification codes A: Physics, 7
- Classification codes A: Physics, 8
- Classification codes A: Physics, 9
- Classification codes B: Electrical & Electronics, 0-5
- Classification codes B: Electrical & Electronics, 6-9
- Classification codes C: Computer & Control
- Classification codes D: Information Technology
- Classification codes E: Mech., Manufac. & Production Engineering
- Treatment codes
- Inspec sub-file
- Language of publication
- Publication types

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	"09872736"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L2	90	("4553261" "4636858" "4728978" "4800488" "4825406" "4835372" "4914571" "5008700" "5124814" "5193185" "5208623" "5291399" "5319401" "5347600" "5384643" "5414841" "5454101" "5455648" "5475871" "5479654" "5491511" "5499113" "5522077" "5537547" "5550981" "5551027" "5557790" "5560005" "5576952" "5579067" "5610653" "5617570" "5625841" "5649247" "5664170" "5669029" "5724575" "5740428" "5764889" "5764906" "5774670" "5781725" "5784565" "5802518" "5809161" "5809331" "5809495" "5813006" "5832487" "5848246" "5864482" "5872973" "5875302" "5903889" "5907837" "5913210" "5915240" "5918214" "5920702" "5940844" "5950173" "5961610" "5966705" "5974124" "5974409" "5978773" "5987519" "5995965" "6032175" "6047332" "6055544" "6058193" "6092189" "6108787" "6131095" "6154738" "6188766" "6201931" "6202070" "6209095" "6212280" "6377896" "6418441" "6438652" "6463454" "6466980" "6578068" "6711408"	USPAT	OR	OFF	2009/11/09 11:15

		"7103640" "7233978").pn.				
L3	4	("20020112048" "20030065653" "20040205055" "20080005275").pn.	US-PGPUB	OR	OFF	2009/11/09 11:15
L4	94	L2 L3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L5	4	("7103640" "7233978" "2002032787" "20030065653" "2008005275" "20040205055").pn.	US-PGPUB; USPAT	OR	OFF	2009/11/09 11:15
L6	5	("7103640" "7233978" "2002032787" "20030065653" "20080005275" "20040205055").pn.	US-PGPUB; USPAT	OR	OFF	2009/11/09 11:15
L7	3	("5950173" "5978773" "5913210").pn.	USPAT	OR	OFF	2009/11/09 11:15
L8	2	"6466980".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L9	0	"7272625 6453404 7349902 20010013059 6594253".pn.	US-PGPUB; USPAT	OR	OFF	2009/11/09 11:15
L10	5	("7272625" "6453404" "7349902" "20010013059" "6594253").pn.	US-PGPUB; USPAT	OR	OFF	2009/11/09 11:15
L11	4	("5995965" "6374253" "5724575" "5345586").pn.	USPAT	OR	OFF	2009/11/09 11:15
L12	2	"20070011267"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L13	7	"7103640"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L14	1	hash near10 location near10 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15

L15	1	hash near20 location near20 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L16	1	hash near20 location near20 (identifier near5 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L17	291	hash near20 location near20 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L18	117	hash near5 location near5 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L19	17	L18 and (@ad<="20000913" @rlad<="20000913")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
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L21	5	("5764906" "6418441" "6377986" "5475817" "6131095").pn.	USPAT	OR	OFF	2009/11/09 11:15
L22	6	((location identifi$6) near5 string) near10 (query request) near10 (location address) same hash	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L23	126	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15

L24	16	L23 and (@ad<="19980708" @rlad<="19980708")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L25	0	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location) same (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L26	2	(hash adj3 function) near20 (address$3 location) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L27	13	(hash adj3 function) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L28	3	(US-6470389-$ or US-6370584-$ or US-6167427-$).did.	USPAT	OR	OFF	2009/11/09 11:15
L29	1	L28 and repository	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L30	2	L28 and table	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L31	7342	709/217.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L32	9410	709/223.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15

L33	4385	709/238.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 11:15
L46	6421	709/219.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 13:34
L47	10683	707/10.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/09 13:34

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L35	0	(data adj5 repository adj5 store adj5 data adj5 entity).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:15
L36	1	(location adj5 information adj5 associated adj5 identifier adj5 string).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:16
L38	1	(location adj5 servers adj5 portion adj5 location adj5 information).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:17
L39	0	(location adj5 servers adj5 based adj5 hash adj5 function).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:18
L40	0	(hash adj5 function adj5 organize adj5 data adj5 location adj5 information).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:19
L41	0	(hash adj5 function adj5 identifier adj5 string).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:19
L42	0	(location adj5 server adj5 receive adj5 addition adj5 request).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:20
L43	2	(addition adj5 request adj5 identifier).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:21
L44	0	(location adj5 message adj5 conformance adj5 transfer adj5 protocol).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:22
L45	0	(return adj5 redirect adj5 message adj5 location adj5 server).clm.	USPAT; UPAD	OR	OFF	2009/11/09 13:22

11/9/2009 1:49:31 PM
C:\Documents and Settings\bgillis1\My Documents\EAST\Workspaces\11354224.wsp

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CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: January 27, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.: 7078
Attorney Docket No.:	11958/062	

MAIL STOP RCE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CONTINUED EXAMINATION (37 CFR § 1.114)

Sir:Applicant(s) requests continued examination of the above-identified application under 37 CFR §1.114. ☒ Submission under 37 CFR 1.114 (*check at least one of the following*):

- ☐ Previously submitted:
  - ☐ Applicant(s) requests nonentry of any previously-filed unentered amendments.
  - ☐ Please enter and consider the Amendment After Final Under 37 CFR §1.116 previously filed on_____.
  - ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____.
  - ☐ Other: _____.
- ☒ Attached is/are:
  - ☒ An Information Disclosure Statement
  - ☐ An Amendment to the written description, claims, or drawings
  - ☐ New Arguments and/or New Evidence in support of Patentability
  - ☐ Other: _____

☐ Request for suspension of action:

Applicant(s) hereby requests suspension of action on the above-identified application under 37 CFR §1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; requires Processing Fee under 37 CFR §1.17(i)).

☒ Small Entity Status:

- ☒ Applicant(s) hereby asserts entitlement to claim small entity status under 37 CFR §§ 1.9 and 1.27.
- ☐ A small entity statement or assertion of entitlement to claim small entity status was filed in prior application no. _____/_____ and such status is still proper and desired.
- ☐ Is no longer desired.

☒ Applicant(s) calculate the following fees to be due in connection with this Request:

- ☒ A request fee of $405 under 37 CFR §1.17(e).
- ☐ A suspension processing fee of $_____ under 37 CFR §1.17(i).
- ☐ An additional filing fee of $_____ under 37 CFR §1.16 (_____ additional independent claims and/or _____ additional total claims).
- ☐ An extension fee of $_____ under 37 CFR §1.17(a) for a _____-month extension of time.

☒ Fee payment to cover the above-enumerated fee(s):

- ☒ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of $405.
- ☐ A payment by credit card in the amount of $_____ (Form PTO-2038 is attached).
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE).

Respectfully submitted,

01/27/2010	/Michael E. Hussey/
Date	Michael E. Hussey (Reg. No. 63,265)

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Date: January 27, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No:	11958/062	

REQUEST FOR CONTINUED EXAMINATION

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

Dear Sir:

In response to the Notice of Allowance dated November 18, 2009, please consider the following remarks and the enclosed Information Disclosure Statement. This response is being filed concurrently with a Request for Continued Examination under 37 CFR §1.114.

Listing of Claims begin on page 2 of this paper.

Remarks begin on page 6 of this paper.

Listing of the Claims

This listing of claims contains no amendments and is being provided for the convenience of the Examiner:

Listing of claims:

Claims 1-16 (Cancelled).

17. (Previously Presented) A system for managing data stored in a distributed network, the system comprising:

a data repository configured to store a data entity, wherein an identifier string identifies the data entity; and

a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers includes location information associated with the identifier string, each one of the plurality of data location servers comprises a processor and a portion of the data location information, the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string.

18. (Previously Presented) The system of claim 17, wherein the location information comprises any portion of a hash table generated with the hash function.

19. (Previously Presented) The system of claim 17, wherein the data repository comprises a plurality of data repository servers and wherein each of the plurality of data location servers is configured, in response to a request to store data in the data repository, to execute the hash function and store the data on one of the plurality of data repository servers based on a result of the hash function.

20. (Previously Presented) A system for managing data location information and providing the data location information in response to location queries, the system comprising:

a location server configured to receive a location addition request, the location addition request formatted in conformance with a transfer protocol, the location addition request comprising an identifier and at least one location to associate with the identifier, wherein the identifier identifies an entity and wherein each of the at least one location specifies a location of data in a network pertaining to the entity;

wherein the location server includes a processor; and

programming logic stored on the location server, wherein the programming logic is configured to return, in response to a location query related to a desired entity, a location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity, wherein the programming logic is further configured to return the location message if the location server contains location information for the desired entity, and wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity.

21. (Cancelled)

22. (Previously Presented) The system of claim 20, wherein the list of at least one other location server comprises a list of a plurality of location servers in the network and a corresponding list of a plurality of entities having location information on the respective one of the plurality of location servers.

23. (Previously Presented) The system of claim 20, wherein each of a plurality of location servers in the network stores only a portion of the data location information.

24. (Previously Presented) The system of claim 20, wherein the location information in the location server is maintained in an indexed location store.

25. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table.

26. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of clients.

27. (Previously Presented) The system of claim 24, wherein the indexed location store comprises a string store indexed by a hash table distributed across a plurality of servers.

28. (Previously Presented) The system of claim 24, wherein the location query identifying the desired entity comprises a unique identifier for the desired entity, and wherein the programming logic stored on the location server further comprises programming logic configured to apply an index function to the unique identifier to retrieve at least a portion of the locations associated with the unique identifier in the indexed location store.

29. (Previously Presented) The system of claim 28, wherein the indexed location store comprises a string store and the index function comprises a hash function.

Claims 30-32 (Cancelled).

33. (Previously Presented) The system of claim 17, wherein each one of the data location servers is configured to return all location information associated with a respective one of the data entities in response to a request for any location information associated with the respective one of the data entities.

34. (Previously Presented) The system of claim 17, wherein the location information includes a hash table and the hash table includes an association between a hash of the string identifier and at least one identifier of the at least one of the plurality of data location servers.

35. (Previously Presented) A method of handling location queries in a network, the network comprising a plurality of location servers including data location information, the method comprising:

correlating each one of a plurality of identifiers with at least one of a plurality of locations in the network, each one of the plurality of identifiers identifying a respective one of a plurality of data entities, wherein the data entities are stored in corresponding locations in the network;

receiving a location query from a client at one of the plurality of location servers, the location query requesting location information identifying a location of a data entity included in the data entities;

determining which of the plurality of location servers includes the location information;

sending a location response message to the client in response to determining the one of the plurality of location servers includes the location information, the location response message comprising the location information; and

sending a redirect message to the client in response to determining the one of the plurality of location servers fails to include the location information, the redirect message identifying which of the plurality of location servers includes the location information.

36. (Previously Presented) The method of claim 35, further comprising applying an identifier of the data entity to an indexing function to determine which of the location servers includes the location information.

37. (Previously Presented) The method of claim 36, wherein each one of the plurality of location servers comprises a portion of an indexed table of the identifiers and corresponding associated locations, and wherein determining which of the plurality of location servers includes the location information comprises applying one of the identifiers to a hash function to look up corresponding associated locations in the indexed table, the one of the identifiers identifying the data entity.

REMARKS

Claims 17-20, 22-29, and 33-37 are pending. Applicant respectfully requests reconsideration in view of the enclosed Information Disclosure Statement.

The present pending claims of this application are allowable and Applicant respectfully requests the Examiner to issue a Notice of Allowance for this application. Should the Examiner deem a telephone conference to be beneficial in expediting allowance/examination of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,

/Michael E. Hussey/

Michael E. Hussey
Attorney Reg. No. 63,265
Attorney for Applicant

MEH/sev

BRINKS HOFER GILSON & LIONE
CUSTOMER NO. 27879
Telephone: 317-636-0886
Facsimile: 317-634-6701

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: January 27, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.:	7078
Attorney Docket No:	11958/62		

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

MAIL STOP RCE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

In accordance with the duty of disclosure under 37 CFR §1.56 and §§1.97-1.98, and more particularly in accordance with 37 CFR §1.97(d), Applicant hereby cites the following reference(s):

U.S. PATENT DOCUMENTS		
DOCUMENT NO.	**DATE**	**NAME**
5,276,735	01/04/1994	Boebert et al.
5,345,586	09/06/1994	Hamala et al.
6,167,438	12/26/2000	Yates et al.
6,374,253	04/16/2002	Weider et al.
6,453,404 B1	09/17/2002	Bereznyi et al.
6,594,253 B1	07/15/2003	Sallberg et al.
7,272,625 B1	09/18/2007	Hannel et al.
7,349,902 B1	03/25/2008	Arlitt et al.
2001/0013059 A1	08/09/2001	Dawson et al.

Applicant is enclosing Form PTO-1449 (one sheet), along with a copy of each listed reference for which a copy is required under 37 CFR §1.98(a)(2). As each of the listed references is in English, no further commentary is believed to be necessary, 37 C.F.R §1.98(a)(3). Applicant respectfully requests the Examiner's consideration of the above reference(s) and entry thereof into the record of this application.

Commonly Owned Applications

Pursuant to 37 CFR §1.56, Applicant and Applicant's attorney hereby make of record in the above-identified patent application the existence of the below described activities in the below-identified commonly owned co-pending published patent applications, which are related to the above-identified patent application. **Applicant respectfully requests the Examiner to review the claims and the prosecution history, including any Office Actions issued by the U.S. Patent and Trademark Office, for the following patents and patent applications:**

U.S. Patent Publication No. US 2004/0205055 A1 – U.S. Patent Application Serial No. 10/646,350 (11958-60) – Response filed June 3, 2009, to Non-Final Office Action mailed February 3, 2009; Non-Final Office Action mailed September 29, 2009; and

U.S. Patent Publication No. US 2008/0005275 A1 – U.S. Patent Application Serial No. 11/803,332 (11958-63) – Non-Final Office Action mailed July 9, 2009; Response filed December 9, 2009.

By submitting this Statement, Applicant is attempting to fully comply with the duty of candor and good faith mandated by 37 CFR §1.56. As such, this Statement is not intended to constitute an admission that any of the enclosed references, or other information referred to therein, constitutes "prior art" or is otherwise "material to patentability," as that phrase is defined in 37 CFR §1.56(a).

Accordingly, Applicant has calculated no fee to be due in connection with the filing of this Information Disclosure Statement. However, the Director is authorized to charge any fee deficiency associated with the filing of this Information Disclosure

Statement to a deposit account, as authorized in the Transmittal accompanying this Information Disclosure Statement.

Respectfully submitted,

01/27/2010 /Michael E. Hussey/

Michael E. Hussey
(Reg. No. 63,265)

FORM PTO-1449		SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.		CONFIRMATION NO. 7078

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	B1	5,276,735	01/04/1994	Boebert et al.	380/21	04/17/1992
	B2	5,345,586	09/06/1994	Hamala et al.	395/650	08/25/1992
	B3	6,167,438	12/26/2000	Yates et al.	709/216	05/22/1997
	B4	6,374,253 B1	04/16/2002	Weider et al.	707/102	12/30/1998
	B5	6,453,404 B1	09/17/2002	Bereznyi et al.	711/171	05/27/1999
	B6	6,594,253 B1	07/15/2003	Sallberg et al.	370/349	09/29/1998
	B7	7,272,625 B1	09/18/2007	Hannel et al.	709/200	03/12/2001
	B8	7,349,902 B1	03/25/2008	Arlitt et al.	707/8	08/04/1999
	B9	2001/0013059 A1	08/09/2001	Dawson et al.	709/217	02/02/1999

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO

EXAMINER INITIAL		OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.

EXAMINER	DATE CONSIDERED

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

Electronic Patent Application Fee Transmittal	
Application Number:	11354224
Filing Date:	13-Feb-2006
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Filer:	Michael E. Hussey/Sara Vessely
Attorney Docket Number:	11958/62
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	2801	1	405	405
		Total in USD ($)		**405**

Electronic Acknowledgement Receipt	
EFS ID:	6892085
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	27-JAN-2010
Filing Date:	13-FEB-2006
Time Stamp:	15:48:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$405
RAM confirmation Number	2226
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	Trans_RCE_Supp_IDS_01_27_10.pdf	58254 43d4926e8eb0d9b334a7bbd002be7caa79c6534b	no	1
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	RCE_01_27_10.pdf	77759 dff25a973ed960e33ceb45a5e30ebfa50e59b815	no	3
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
3		11958_62_Response_with_RCE.pdf	83044 8a599aed032071e459e87bfd811971bb7f4767e3	yes	6

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	5
Applicant Arguments/Remarks Made in an Amendment	6	6

Warnings:					
Information:					
4	Transmittal Letter	Supp_IDS_01_27_10.pdf	78311 a7c135f25953938e35cc70f4e27e632545512dc2	no	3
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Filed (SB/08)	PTO_1449_Supp_IDS_01_27_10.pdf	66835 f8008b1e22c3573c7aeeeed045c9eaa602306376	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
6	NPL Documents	NonFinal_OA_07_09_09.pdf	374675 74d1626238515caf0009ac5cb26c46ce15a246bb	no	11
Warnings:					
Information:					

7	NPL Documents	NonFinal_OA_09_29_09.pdf	583462 bcff1ba0a0b9b42e143ecb9d0778503b69a34a89	no	17
Warnings:					
Information:					
8	Fee Worksheet (PTO-875)	fee-info.pdf	30645 012207273a3223dd9d770d366f3df3dd63c4c36e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1352985		

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.

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: January 27, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/062		

TRANSMITTAL

MAIL STOP RCE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:**Attached is/are**:

☒ Request for Continued Examination (6 pgs.); Request for Continued Examination (37 CFR § 1.114) (2 pgs.); Supplemental Information Disclosure Statement (3 pgs.); PTO-1449 (1 pg.); Transmittal (1 pg.)

Fee calculation:

☐ No additional fee is required.

☒ Small Entity.

☐ An extension fee in an amount of $_____ for a _____-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $405 under 37 CFR § 1.17(e).

☐ An additional filing fee has been calculated as shown below:

						Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra		Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus				x $26=			x $52=	
Indep.		Minus				x 110=			x $220=	
First Presentation of Multiple Dep. Claim						+$195=			+ $390=	
						Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $405 for Request for Continued Examination.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

01/27/2010
Date

/Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
11/354,224	02/13/2006	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			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 $250 ($125 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			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 01/27/2010	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 17	Minus	** 20	= 0	X $26 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $110 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/PATSY ZIMMERMAN/

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

757 7590 03/08/2010

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	

DATE MAILED: 03/08/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	06/08/2010

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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

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

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

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

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

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

757 7590 03/08/2010

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

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.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	06/08/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
GILLIS, BRIAN J	2441	709-245000

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

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

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

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

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

1 _____

2 _____

3 _____

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

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

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

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

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

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

❑ A check is enclosed.

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

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

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

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information 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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

757 7590 03/08/2010

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	

DATE MAILED: 03/08/2010

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

The Patent Term Adjustment to date is 402 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 402 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	11/354,224	OVERTON ET AL.	
	Examiner	Art Unit	
	Brian J. Gillis	2441	

-- 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 *the Request for Continued Examination filed January 27, 2010*.

2. ☒ The allowed claim(s) is/are *17-20,22-29 and 33-37*.

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

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

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

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

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 01272010
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Larry Donaghue/
Primary Examiner, Art Unit 2454

DETAILED ACTION

This action is responsive to the Request for Continued Examination filed January 27, 2010. Claims 17-20, 22-29, and 33-37 were pending. *Claims 17-20, 22-29, and 33-37 are allowed.*

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on January 27, 2010 has been entered.

REASONS FOR ALLOWANCE

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

The prior art of record fails to teach neither singly nor in combination, the claimed limitations of "a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers includes location information associated with the identifier string, each one of the plurality of data location servers comprises a processor and a portion of the data location information, *the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to*

organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string." (emphasis added) as stated in claims 17, and " programming logic stored on the location server, wherein the programming logic is configured to return, in response to a location query related to a desired entity, a location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity, wherein the programming logic is further configured to return the location message if the location server contains location information for the desired entity, and *wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity*." (emphasis added) as stated in claim 20 and similarly in claim 35. These limitations, in conjunction with other limitations in the independent claim, are not specifically disclosed or remotely suggested in the prior art of record. A review of claims 17-20, 22-29, and 33-37 indicated claims 17-20, 22-29, and 33-37 are allowable over the prior art of record.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Gillis whose telephone number is (571)272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J Gillis
Examiner
Art Unit 2441

/B. J. G./
Examiner, Art Unit 2441
2/22/2010

/Larry Donaghue/
Primary Examiner, Art Unit 2454

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BIB DATA SHEET

CONFIRMATION NO. 7078

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/354,224	02/13/2006	709	2441	11958/62

APPLICANTS

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

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

This application is a CON of 09/661,222 09/13/2000 PAT 7,103,640
which claims benefit of 60/153,709 09/14/1999 *
and is a CIP of 09/111,896 07/08/1998 ABN
(*)Data provided by applicant is not consistent with PTO records.

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
03/16/2006

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No					
Verified and Acknowledged	/BRIAN J GILLIS/ Examiner's Signature	BJG Initials	IL	12	16	3

ADDRESS

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
UNITED STATES

TITLE

NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

FILING FEE RECEIVED		
565	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

BIB (Rev. 05/07).

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	9	("20010013059" | "5276735" | "5345586" | "6167438" | "6374253" | "6453404" | "6594253" | "7272625" | "7349902").PN.	US-PGPUB; USPAT	OR	OFF	2010/02/22 09:36
L3	1	2 and hash	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 09:38
L4	3	2 and (redirect$3 re-direct$3 rerout$3 re-rout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 09:47
L7	2	2 and ((identif$3 id) same (hash function))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:33
L8	2	"09872736"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L9	90	("4553261" "4636858" "4728978" "4800488" "4825406" "4835372" "4914571" "5008700" "5124814" "5193185" "5208623" "5291399" "5319401" "5347600" "5384643" "5414841" "5454101" "5455648" "5475871" "5479654" "5491511" "5499113" "5522077" "5537547" "5550981" "5551027" "5557790" "5560005" "5576952" "5579067" "5610653" "5617570" "5625841" "5649247" "5664170" "5669029" "5724575" "5740428"	USPAT	OR	OFF	2010/02/22 10:48

		"5764889" "5764906" "5774670" "5781725" "5784565" "5802518" "5809161" "5809331" "5809495" "5813006" "5832487" "5848246" "5864482" "5872973" "5875302" "5903889" "5907837" "5913210" "5915240" "5918214" "5920702" "5940844" "5950173" "5961610" "5966705" "5974124" "5974409" "5978773" "5987519" "5995965" "6032175" "6047332" "6055544" "6058193" "6092189" "6108787" "6131095" "6154738" "6188766" "6201931" "6202070" "6209095" "6212280" "6377896" "6418441" "6438652" "6463454" "6466980" "6578068" "6711408" "7103640" "7233978").pn.				
L10	4	("20020112048" "20030065653" "20040205055" "20080005275").pn.	US-PGPUB	OR	OFF	2010/02/22 10:48
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L13	5	("7103640" "7233978" "2002032787" "20030065653" "20080005275" "20040205055").pn.	US-PGPUB; USPAT	OR	OFF	2010/02/22 10:48
L14	3	("5950173" "5978773" "5913210").pn.	USPAT	OR	OFF	2010/02/22 10:48
L15	2	"6466980".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L16	0	"7272625 6453404 7349902 20010013059 6594253".pn.	US-PGPUB; USPAT	OR	OFF	2010/02/22 10:48

L17	5	("7272625" "6453404" "7349902" "20010013059" "6594253").pn.	US-PGPUB; USPAT	OR	OFF	2010/02/22 10:48
L18	4	("5995965" "6374253" "5724575" "5345586").pn.	USPAT	OR	OFF	2010/02/22 10:48
L19	2	"20070011267"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L20	7	"7103640"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L21	1	hash near10 location near10 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L22	1	hash near20 location near20 (identifier adj3 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L23	1	hash near20 location near20 (identifier near5 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L24	299	hash near20 location near20 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L25	121	hash near5 location near5 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L26	17	L25 and (@ad<="20000913" @rlad<="20000913")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48

L27	15	L25 and (@ad<="19990914" @rlad<="19990914")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L28	5	("5764906" "6418441" "6377986" "5475817" "6131095").pn.	USPAT	OR	OFF	2010/02/22 10:48
L29	8	((location identifi$6) near5 string) near10 (query request) near10 (location address) same hash	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L30	133	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L31	16	L30 and (@ad<="19980708" @rlad<="19980708")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L32	0	(hash adj3 function) near20 (balanc$3 distribut$3 spread $3) near20 (address$3 location) same (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L33	2	(hash adj3 function) near20 (address$3 location) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L34	13	(hash adj3 function) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L35	3	(US-6470389-$ or US-6370584-$ or US-6167427-$).did.	USPAT	OR	OFF	2010/02/22 10:48
L36	1	L35 and repository	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48

L37	2	L35 and table	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L38	7650	709/217.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L39	9884	709/223.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L40	4565	709/238.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L41	6722	709/219.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48
L42	10980	707/10.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/02/22 10:48

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L43	0	(data adj5 repository adj5 store adj5 data adj5 entity).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L44	1	(location adj5 information adj5 associated adj5 identifier adj5 string).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L45	1	(location adj5 servers adj5 portion adj5 location adj5 information).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L46	0	(location adj5 servers adj5 based adj5 hash adj5 function).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48

L47	0	(hash adj5 function adj5 organize adj5 data adj5 location adj5 information).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L48	0	(hash adj5 function adj5 identifier adj5 string).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L49	0	(location adj5 server adj5 receive adj5 addition adj5 request).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L50	2	(addition adj5 request adj5 identifier).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L51	0	(location adj5 message adj5 conformance adj5 transfer adj5 protocol).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48
L52	0	(return adj5 redirect adj5 message adj5 location adj5 server).clm.	USPAT; UPAD	OR	OFF	2010/02/22 10:48

2/22/2010 10:57:56 AM
C:\Documents and Settings\bgillis1\My Documents\EAST\Workspaces\11354224.wsp

FORM PTO-1449		SERIAL NO. 11/354,224	CASE NO. 11958/62
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.		CONFIRMATION NO. 7078

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
/BJG/	B1	5,276,735	01/04/1994	Boebert et al.	380/21	04/17/1992
/BJG/	B2	5,345,586	09/06/1994	Hamala et al.	395/650	08/25/1992
/BJG/	B3	6,167,438	12/26/2000	Yates et al.	709/216	05/22/1997
/BJG/	B4	6,374,253 B1	04/16/2002	Weider et al.	707/102	12/30/1998
/BJG/	B5	6,453,404 B1	09/17/2002	Bereznyi et al.	711/171	05/27/1999
/BJG/	B6	6,594,253 B1	07/15/2003	Sallberg et al.	370/349	09/29/1998
/BJG/	B7	7,272,625 B1	09/18/2007	Hannel et al.	709/200	03/12/2001
/BJG/	B8	7,349,902 B1	03/25/2008	Arlitt et al.	707/8	08/04/1999
/BJG/	B9	2001/0013059 A1	08/09/2001	Dawson et al.	709/217	02/02/1999

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO

EXAMINER INITIAL		OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.

EXAMINER /Brian Gillis/	DATE CONSIDERED 02/22/2010

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

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Advanced Search:

Inspec - 1898 to date (INZZ)

limit

Search history:

No.	Database	Search term	Info added since	Results	
CP		[Clipboard]		0	-
1	Inspec - 1898 to date	hash NEAR location NEAR identifier NEAR string	unrestricted	0	-
2	Inspec - 1898 to date	hash NEAR location NEAR identifier	unrestricted	0	-
3	Inspec - 1898 to date	location NEAR identifier NEAR (query OR request)	unrestricted	1	show titles
4	Inspec - 1898 to date	hash NEAR function NEAR (address OR location) NEAR redirect ADJ route	unrestricted	0	-
5	Inspec - 1898 to date	hash NEAR function NEAR (address OR location) NEAR (redirect OR route)	unrestricted	0	-
6	Inspec - 1898 to date	hash ADJ function	unrestricted	1792	show titles
7	Inspec - 1898 to date	6 SAME identfier ADJ string	unrestricted	0	-
8	Inspec - 1898 to date	6 SAME (redirect OR reroute)	unrestricted	1	show titles
9	Inspec - 1898 to date	6 SAME location NEAR message	unrestricted	0	-
10	Inspec - 1898 to date	redirect NEAR message	unrestricted	7	show titles

hide | delete all search steps... | delete individual search steps...

Enter your search term(s): Search tips ☐ Thesaurus mapping

whole document search

☐ Images

Click to select terms from the following list(s):

Publication year 1950-

Publication year 1898-1949

Inspec thesaurus - enter a term

- Classification codes A: Physics, 0-1
- Classification codes A: Physics, 2-3
- Classification codes A: Physics, 4-5
- Classification codes A: Physics, 6
- Classification codes A: Physics, 7
- Classification codes A: Physics, 8
- Classification codes A: Physics, 9
- Classification codes B: Electrical & Electronics, 0-5
- Classification codes B: Electrical & Electronics, 6-9
- Classification codes C: Computer & Control
- Classification codes D: Information Technology
- Classification codes E: Mech., Manufac. & Production Engineering
- Treatment codes
- Inspec sub-file
- Language of publication
- Publication types

Top - News & FAQS - Dialog

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	Art Unit
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009	11/09/2009	02/22/2010					
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	32	✓	-	-	-					
4	33		✓	=	=					
5	34		✓	=	=					
15	35		✓	=	=					
16	36		✓	=	=					

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009	11/09/2009	02/22/2010					
17	37		✓	=	=					

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

ORIGINAL		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
709	217	G	0	6	F	15 / 16 (2006.01.01)	G	0	6	F	17 / 30 (2006.01.01)

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
709	219				
707	10				

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	1	17	4	33										
	2	2	18	5	34										
	3	3	19	15	35										
	4	6	20	16	36										
	5		21	17	37										
	6	7	22												
	7	8	23												
	8	9	24												
	9	10	25												
	10	11	26												
	11	12	27												
	12	13	28												
	13	14	29												
	14		30												
	15		31												
	16		32												

/Brian J Gillis/ Examiner.Art Unit 2441	2/22/2010	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	17	
/Larry Donaghue/ Primary Examiner.Art Unit 2454	02/23/2010	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
709	217	2/22/2010	BJG
709	219	2/22/2010	BJG
709	223	2/22/2010	BJG
709	238	2/22/2010	BJG
707	10	2/22/2010	BJG

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
Ordered PLUS search	10/16/2008	BJG
Updated EAST search	8/27/2009	BJG
Spoke to Larry Donaghue regarding Double Patenting	8/27/2009	BJG
Updated EAST search	11/9/2009	BJG
Inventor name search using PALM	11/9/2009	BJG
NPL search see attached search history	11/9/2009	BJG
Interference search see attached search history	11/9/2009	BJG
Updated EAST seach	2/22/2010	BJG
Inventor name search using PALM	2/22/2010	BJG
NPL search see attached search history	2/22/2010	BJG
Interference search see attached search history	2/22/2010	BJG

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**
709	217	2/22/2010	BJG
709	219	2/22/2010	BJG
707	10	2/22/2010	BJG

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: June 7, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/062		

MAIL STOP RCE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CONTINUED EXAMINATION (37 CFR § 1.114)

Sir:

Applicant(s) requests continued examination of the above-identified application under 37 CFR §1.114.

☒ Submission under 37 CFR 1.114 (*check at least one of the following*):

- ☐ Previously submitted:
  - ☐ Applicant(s) requests nonentry of any previously-filed unentered amendments.
  - ☐ Please enter and consider the Amendment After Final Under 37 CFR §1.116 previously filed on _____.
  - ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____.
  - ☐ Other: _____.
- ☒ Attached is/are:
  - ☒ An Information Disclosure Statement
  - ☐ An Amendment to the written description, claims, or drawings
  - ☐ New Arguments and/or New Evidence in support of Patentability
  - ☐ Other: _____

☐ Request for suspension of action:

Applicant(s) hereby requests suspension of action on the above-identified application under 37 CFR §1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; requires Processing Fee under 37 CFR §1.17(i)).

☐ Small Entity Status:

- ☐ Applicant(s) hereby asserts entitlement to claim small entity status under 37 CFR §§ 1.9 and 1.27.
- ☐ A small entity statement or assertion of entitlement to claim small entity status was filed in prior application no. _____/_____ and such status is still proper and desired.
- ☐ Is no longer desired.

☒ Applicant(s) calculate the following fees to be due in connection with this Request:

- ☒ A request fee of $405 under 37 CFR §1.17(e).
- ☐ A suspension processing fee of $_____ under 37 CFR §1.17(i).
- ☐ An additional filing fee of $_____ under 37 CFR §1.16 (_____ additional independent claims and/or _____ additional total claims).
- ☐ An extension fee of $_____ under 37 CFR §1.17(a) for a _____-month extension of time.

☒ Fee payment to cover the above-enumerated fee(s):

- ☒ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of $405.
- ☐ A payment by credit card in the amount of $_____ (Form PTO-2038 is attached).
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE).

Respectfully submitted,

06/07/2010
Date

/Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: June 7, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No:	11958/062	

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

MAIL STOP RCE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

In accordance with the duty of disclosure under 37 CFR §1.56 and §§1.97-1.98, and more particularly in accordance with 37 CFR §1.97(d), Applicant hereby cites the following reference(s):

U.S. PATENT DOCUMENTS		
DOCUMENT NO.	**DATE**	**NAME**
6,070,191	05/30/2000	Narendran et al.
7,634,453 B1	12/15/2009	Bakke et al.

OTHER ART – NON PATENT LITERATURE DOCUMENTS
Office Action, dated March 30, 2010, pp. 1-12, U.S. Patent Application Serial No. 11/803,332, U.S. Patent and Trademark Office, Virginia.
Notice of Allowance, dated May 19, 2010, pp. 1-8, U.S. Patent Application Serial No. 10/646,350, U.S. Patent and Trademark Office, Virginia.

Applicant is enclosing Form PTO-1449 (one sheet), along with a copy of each listed reference for which a copy is required under 37 CFR §1.98(a)(2). As each of the listed references is in English, no further commentary is believed to be necessary, 37 C.F.R §1.98(a)(3). Applicant respectfully requests the Examiner's consideration of the above reference(s) and entry thereof into the record of this application.

Commonly Owned Applications

Pursuant to 37 CFR §1.56, Applicant and Applicant's attorney hereby make of record in the above-identified patent application the existence of the below described activities in the below-identified commonly owned co-pending published patent applications, which are related to the above-identified patent application. **Applicant respectfully requests the Examiner to review the claims and the prosecution history, including any Office Actions issued by the U.S. Patent and Trademark Office, for the following patents and patent applications:**

U.S. Patent Publication No. US 2004/0205055 A1 – U.S. Patent Application Serial No. 10/646,350 (11958-60) – Response filed March 25, 2010; Notice of Allowance mailed May 19, 2010; and

U.S. Patent Publication No. 2008/0005275 A1 – U.S. Patent Application Serial No. 11/803,332 (11958/063) - Non-Final Office Action mailed March 30, 2010. The patent literature listed above was cited in this Non-Final Office Action.

By submitting this Statement, Applicant is attempting to fully comply with the duty of candor and good faith mandated by 37 CFR §1.56. As such, this Statement is not intended to constitute an admission that any of the enclosed references, or other information referred to therein, constitutes "prior art" or is otherwise "material to patentability," as that phrase is defined in 37 CFR §1.56(a).

The Applicant or Applicants have calculated no fee to be due in connection with the filing of this Information Disclosure Statement. However, the Director is authorized to charge any fee deficiency associated with the filing of this Information Disclosure Statement to a deposit account, as authorized in the Transmittal accompanying this Information Disclosure Statement.

Respectfully submitted,

06/07/2010	/Michael E. Hussey/
Date	Michael E. Hussey (Reg. No. 63,265)

FORM PTO-1449		SERIAL NO. 11/354,224	CASE NO. 11958/062
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.		CONFIRMATION NO. 7078

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	C1	6,070,191	05/30/2000	Narendran et al.	709/226	10/17/1997
	C2	7,634,453 B1	12/15/2009	Bakke et al.	707/1	08/13/1999

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO

EXAMINER INITIAL	OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.	
	C3	Office Action, dated March 30, 2010, pp. 1-12, U.S. Patent Application Serial No. 11/803,332, U.S. Patent and Trademark Office, Virginia.
	C4	Notice of Allowance, dated May 19, 2010, pp. 1-8, U.S. Patent Application Serial No. 10/646,350, U.S. Patent and Trademark Office, Virginia.

EXAMINER	DATE CONSIDERED

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

Electronic Patent Application Fee Transmittal	
Application Number:	11354224
Filing Date:	13-Feb-2006
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Filer:	Michael E. Hussey/Sara Vessely
Attorney Docket Number:	11958/62
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	2801	1	405	405
		Total in USD ($)		**405**

Electronic Acknowledgement Receipt	
EFS ID:	7761208
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	07-JUN-2010
Filing Date:	13-FEB-2006
Time Stamp:	16:46:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$405
RAM confirmation Number	3472
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	Trans_RCE_2nd_Supp_IDS_06_07_10.pdf	58351 fadad734bd6dea313585412075e00c2b9e3c9c67	no	1
Warnings:					
Information:					
2		11958_62_Reply_with_RCE_06_07_10.pdf	63138 130d640372109ecbac8745f16ff0da953ac3c728	yes	2

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Applicant Arguments/Remarks Made in an Amendment	2	2

Warnings:					
Information:					
3	Request for Continued Examination (RCE)	RCE_06_07_10.pdf	76897 8a03f457c21626cab9bd4bdda77ee70362630a83	no	2
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
4	Transmittal Letter	2nd_Supp_IDS_06_07_10.pdf	77934 8325457294c25c1f191c688dcf49315277fb8ff8	no	3
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Filed (SB/08)	PTO_1449_2nd_Supp_IDS_06_07_10.pdf	65886 94427f1d2d657efce585317e7b01e45f279115b4	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
6	NPL Documents	11958_62_OAof033010_12.pdf	400484 3e39bca60f116231bd8dd5d50f65695fa5d098aa	no	12
Warnings:					

Information:					
7	NPL Documents	Notice_Allowance_051910_8.pdf	328957 50144ffdfe6fd25ff1ebc864e696718ba2ae10bd	no	8
Warnings:					
Information:					
8	Fee Worksheet (PTO-875)	fee-info.pdf	30646 2cfb2ae95d5fad575e69a036a5d6640884e42a9f	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	1102293	

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.

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: June 7, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/062		

TRANSMITTAL

MAIL STOP RCE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Reply and Request for Continued Examination (2 pgs.); Request for Continued Examination (37 CFR § 1.114) (2 pgs.); Second Supplemental Information Disclosure Statement (3 pgs.); PTO-1449 (1 pg.); Copy of Non-Final Office Action dated March 30, 2010 (12 pgs.); Copy of Notice of Allowance dated May 19, 2010 (8 pgs.); Transmittal (1 pg.)

Fee calculation:

☐ No additional fee is required.

☒ Small Entity.

☐ An extension fee in an amount of $_____ for a _____-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $405 under 37 CFR § 1.17(e).

☐ An additional filing fee has been calculated as shown below:

						Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra		Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus				x $26=			x $52=	
Indep.		Minus				x 110=			x $220=	
First Presentation of Multiple Dep. Claim						+$195=			+ $390=	
						Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $405 for Request for Continued Examination.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

06/07/2010
Date

/Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: June 7, 2010 Name: /Michael E. Hussey/
Michael E. Hussey (Reg. No. 63,265)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.	
Appln. No.:	11/354,224	Examiner: Brian J. Gillis
Filed:	February 13, 2006	Art Unit: 2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Confirmation No.: 7078
Attorney Docket No:	11958/062	

REPLY AND REQUEST FOR CONTINUED EXAMINATION

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

Dear Sir:

In response to the Notice of Allowance dated March 8, 2010, please consider the following remarks and the enclosed Information Disclosure Statement. This response is being filed concurrently with a Request for Continued Examination under 37 CFR §1.114.

Remarks begin on page 2 of this paper.

REMARKS

Claims 17-20, 22-29, and 33-37 are pending. Applicant respectfully requests reconsideration in view of the enclosed Information Disclosure Statement. The present pending claims of this application are allowable and Applicant respectfully requests the Examiner to issue a Notice of Allowance for this application. Should the Examiner deem a telephone conference to be beneficial in expediting allowance/examination of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Respectfully submitted,

/Michael E. Hussey/

Michael E. Hussey
Attorney Reg. No. 63,265
Attorney for Applicant

MEH/sev

BRINKS HOFER GILSON & LIONE
CUSTOMER NO. 27879
Telephone: 317-636-0886
Facsimile: 317-634-6701

UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

757 7590 06/25/2010

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	

DATE MAILED: 06/25/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	09/27/2010

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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

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

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

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

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

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

757 7590 06/25/2010

BRINKS HOFER GILSON & LIONE
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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.

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(Signature)
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	09/27/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
GILLIS, BRIAN J	2441	709-217000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
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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 credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information 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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

757 7590 06/25/2010

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
GILLIS, BRIAN J	
ART UNIT	PAPER NUMBER
2441	

DATE MAILED: 06/25/2010

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

The Patent Term Adjustment to date is 402 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 402 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Notice of Allowability	Application No.	Applicant(s)	
	11/354,224	OVERTON ET AL.	
	Examiner	Art Unit	
	BRIAN J. GILLIS	2441	

-- 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 *the Request for Continued Examination filed June 7, 2010*.

2. ☒ The allowed claim(s) is/are *17-20,22-29 and 33-37*.

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

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

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

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

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 06072010
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Larry Donaghue/
Primary Examiner, Art Unit 2454

DETAILED ACTION

This action is responsive to the Request for Continued Examination filed June 7, 2010. Claims 17-20, 22-29, and 33-37 were pending. *Claims 17-20, 22-29, and 33-37 are allowed.*

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on June 7, 2010 has been entered.

REASONS FOR ALLOWANCE

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

The prior art of record fails to teach neither singly nor in combination, the claimed limitations of "a data location server network comprising a plurality of data location servers, wherein data location information for a plurality of data entities is stored in the data location server network, at least one of the plurality of data location servers includes location information associated with the identifier string, each one of the plurality of data location servers comprises a processor and a portion of the data location information, *the portion of the data location information included in a corresponding one of the data location servers is based on a hash function used to*

organize the data location information across the plurality of data location servers, and each one of the data location servers is configured to determine the at least one of the plurality of data location servers based on the hash function applied to the identifier string." (emphasis added) as stated in claims 17, and " programming logic stored on the location server, wherein the programming logic is configured to return, in response to a location query related to a desired entity, a location message, the location message in conformance with the transfer protocol and comprising at least one location associated with the desired entity, wherein the programming logic is further configured to return the location message if the location server contains location information for the desired entity, and *wherein the programming logic is further configured to return a redirect message if the location server lacks the location information for the desired entity, the redirect message comprising a list of at least one other location server known to have the location information for the desired entity*." (emphasis added) as stated in claim 20 and similarly in claim 35. These limitations, in conjunction with other limitations in the independent claim, are not specifically disclosed or remotely suggested in the prior art of record. A review of claims 17-20, 22-29, and 33-37 indicated claims 17-20, 22-29, and 33-37 are allowable over the prior art of record.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN J. GILLIS whose telephone number is (571)272-7952. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian J Gillis
Examiner
Art Unit 2441

/B. J. G./
Examiner, Art Unit 2441
6/16/2010

/Larry Donaghue/
Primary Examiner, Art Unit 2454

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
709	217	6/16/2010	BJG
709	219	6/16/2010	BJG
709	223	6/16/2010	BJG
709	238	6/16/2010	BJG
707	10	6/16/2010	BJG

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
Ordered PLUS search	10/16/2008	BJG
Updated EAST search	8/27/2009	BJG
Spoke to Larry Donaghue regarding Double Patenting	8/27/2009	BJG
Updated EAST search	11/9/2009	BJG
Inventor name search using PALM	11/9/2009	BJG
NPL search see attached search history	11/9/2009	BJG
Interference search see attached search history	11/9/2009	BJG
Updated EAST seach	2/22/2010	BJG
Inventor name search using PALM	2/22/2010	BJG
NPL search see attached search history	2/22/2010	BJG
Interference search see attached search history	2/22/2010	BJG
Updated EAST search	6/16/2010	BJG
Inventor name search	6/16/2010	BJG
NPL search see attached search history	6/16/2010	BJG
Inventor name search	6/16/2010	BJG

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**
709	217	6/16/2010	BJG
709	219	6/16/2010	BJG
707	10	6/16/2010	BJG

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Advanced Search:

Inspec - 1898 to date (INZZ)

limit

Search history:

No.	Database	Search term	Info added since	Results	
CP		[Clipboard]		0	-
1	Inspec - 1898 to date	hash NEAR location NEAR identifier NEAR string	unrestricted	0	-
2	Inspec - 1898 to date	hash NEAR location NEAR identifier	unrestricted	0	-
3	Inspec - 1898 to date	location NEAR identifier NEAR (query OR request)	unrestricted	1	show titles
4	Inspec - 1898 to date	hash NEAR function NEAR (address OR location) NEAR redirect ADJ route	unrestricted	0	-
5	Inspec - 1898 to date	hash NEAR function NEAR (address OR location) NEAR (redirect OR route)	unrestricted	0	-
6	Inspec - 1898 to date	hash ADJ function	unrestricted	1917	show titles
7	Inspec - 1898 to date	6 SAME identfier ADJ string	unrestricted	0	-
8	Inspec - 1898 to date	6 SAME (redirect OR route)	unrestricted	8	show titles
9	Inspec - 1898 to date	6 SAME location NEAR message	unrestricted	0	-
10	Inspec - 1898 to date	redirect NEAR message	unrestricted	6	show titles

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whole document search

☐ Images

Click to select terms from the following list(s):

Publication year 1950-

Publication year 1898-1949

Inspec thesaurus - enter a term

- Classification codes A: Physics, 0-1
- Classification codes A: Physics, 2-3
- Classification codes A: Physics, 4-5
- Classification codes A: Physics, 6
- Classification codes A: Physics, 7
- Classification codes A: Physics, 8
- Classification codes A: Physics, 9
- Classification codes B: Electrical & Electronics, 0-5
- Classification codes B: Electrical & Electronics, 6-9
- Classification codes C: Computer & Control
- Classification codes D: Information Technology
- Classification codes E: Mech., Manufac. & Production Engineering
- Treatment codes
- Inspec sub-file
- Language of publication
- Publication types

Top - News & FAQS - Dialog

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("6070191" "7634453").pn.	US-PGPUB; USPAT	OR	OFF	2010/06/16 09:55
L2	9	("20010013059" | "5276735" | "5345586" | "6167438" | "6374253" | "6453404" | "6594253" | "7272625" | "7349902").PN.	US-PGPUB; USPAT	OR	OFF	2010/06/16 10:42
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L4	3	L2 and (redirect$3 re-direct$3 rerout$3 re-rout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
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L21	1	hash near20 location near20 (identifier near5 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
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L23	126	hash near5 location near5 identifier	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
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L25	15	L23 and (@ad<="19990914" @rlad<="19990914")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
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L31	2	(hash adj3 function) near20 (address$3 location) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L32	13	(hash adj3 function) near20 (redirect$3 rerout$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L33	3	(US-6470389-$ or US-6370584-$ or US-6167427-$).did.	USPAT	OR	OFF	2010/06/16 10:42
L34	1	L33 and repository	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42

L35	2	L33 and table	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L36	8114	709/217.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L37	10526	709/223.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L38	4816	709/238.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L39	7202	709/219.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L40	0	707/10.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 10:42
L51	29	((JOHN) near2 (OVERTON)).INV.	US-PGPUB; USPAT	OR	OFF	2010/06/16 10:54
L52	61	((STEPHEN) near2 (BAILEY)).INV.	US-PGPUB; USPAT	OR	OFF	2010/06/16 10:54
L54	5	51 and 52	US-PGPUB; USPAT	OR	OFF	2010/06/16 11:01

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L41	0	(data adj5 repository adj5 store adj5 data adj5 entity).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L42	1	(location adj5 information adj5 associated adj5 identifier adj5 string).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42

L43	1	(location adj5 servers adj5 portion adj5 location adj5 information).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L44	0	(location adj5 servers adj5 based adj5 hash adj5 function).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L45	0	(hash adj5 function adj5 organize adj5 data adj5 location adj5 information).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L46	0	(hash adj5 function adj5 identifier adj5 string).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L47	0	(location adj5 server adj5 receive adj5 addition adj5 request).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L48	3	(addition adj5 request adj5 identifier).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L49	0	(location adj5 message adj5 conformance adj5 transfer adj5 protocol).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42
L50	0	(return adj5 redirect adj5 message adj5 location adj5 server).clm.	USPAT; UPAD	OR	OFF	2010/06/16 10:42

6/16/2010 1:12:00 PM
C:\Documents and Settings\bgillis1\My Documents\EAST\Workspaces\11354224.wsp

FORM PTO-1449		SERIAL NO. 11/354,224	CASE NO. 11958/062
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE February 13, 2006	GROUP ART UNIT 2441
(use several sheets if necessary)	APPLICANT(S): John K. Overton et al.		CONFIRMATION NO. 7078

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
/BJG/	C1	6,070,191	05/30/2000	Narendran et al.	709/226	10/17/1997
/BJG/	C2	7,634,453 B1	12/15/2009	Bakke et al.	707/1	08/13/1999

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO

EXAMINER INITIAL		OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.
/BJG/	C3	Office Action, dated March 30, 2010, pp. 1-12, U.S. Patent Application Serial No. 11/803,332, U.S. Patent and Trademark Office, Virginia.
/BJG/	C4	Notice of Allowance, dated May 19, 2010, pp. 1-8, U.S. Patent Application Serial No. 10/646,350, U.S. Patent and Trademark Office, Virginia.

EXAMINER /Brian Gillis/	DATE CONSIDERED 06/16/2010

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

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Alexandria, Virginia 22313-1450
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BIB DATA SHEET

CONFIRMATION NO. 7078

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/354,224	02/13/2006	709	2441	11958/62

APPLICANTS

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

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

This application is a CON of 09/661,222 09/13/2000 PAT 7,103,640
which claims benefit of 60/153,709 09/14/1999 *
and is a CIP of 09/111,896 07/08/1998 ABN
(*)Data provided by applicant is not consistent with PTO records.

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
03/16/2006

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No					
Verified and Acknowledged	/BRIAN J GILLIS/ Examiner's Signature	BJG Initials	IL	12	16	3

ADDRESS

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610
UNITED STATES

TITLE

NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

FILING FEE RECEIVED		
565	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

BIB (Rev. 05/07).

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	Art Unit
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009	11/09/2009	02/22/2010	06/16/2010				
	1	-	-	-	-	-				
	2	-	-	-	-	-				
	3	-	-	-	-	-				
	4	-	-	-	-	-				
	5	-	-	-	-	-				
	6	-	-	-	-	-				
	7	-	-	-	-	-				
	8	-	-	-	-	-				
	9	-	-	-	-	-				
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	14	-	-	-	-	-				
	15	-	-	-	-	-				
	16	-	-	-	-	-				
1	17	✓	✓	=	=	=				
2	18	✓	✓	=	=	=				
3	19	✓	✓	=	=	=				
6	20	✓	✓	=	=	=				
	21	✓	-	-	-	-				
7	22	✓	✓	=	=	=				
8	23	✓	✓	=	=	=				
9	24	✓	✓	=	=	=				
10	25	✓	✓	=	=	=				
11	26	✓	✓	=	=	=				
12	27	✓	✓	=	=	=				
13	28	✓	✓	=	=	=				
14	29	✓	✓	=	=	=				
	30	✓	-	-	-	-				
	31	✓	-	-	-	-				
	32	✓	-	-	-	-				
4	33		✓	=	=	=				
5	34		✓	=	=	=				
15	35		✓	=	=	=				
16	36		✓	=	=	=				

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

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

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

CLAIM		DATE								
Final	Original	10/16/2008	08/27/2009	11/09/2009	02/22/2010	06/16/2010				
17	37		✓	=	=	=				

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11354224	OVERTON ET AL.
	Examiner	**Art Unit**
	Brian J Gillis	2441

ORIGINAL		INTERNATIONAL CLASSIFICATION									
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED				
709	217	G	0	6	F	15 / 16 (2006.01.01)	G	0	6	F	17 / 30 (2006.01.01)

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
709	219				
707	10				

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	1	17	4	33										
	2	2	18	5	34										
	3	3	19	15	35										
	4	6	20	16	36										
	5		21	17	37										
	6	7	22												
	7	8	23												
	8	9	24												
	9	10	25												
	10	11	26												
	11	12	27												
	12	13	28												
	13	14	29												
	14		30												
	15		31												
	16		32												

/Brian J Gillis/ Examiner.Art Unit 2441	6/16/2010	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	17	
/Larry Donaghue/ Primary Examiner.Art Unit 2454	06/17/2010	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	10

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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Alexandria, Virginia 22313-1450
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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)

757 7590 06/25/2010

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CHICAGO, IL 60610

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 ELECTRONIC FILING
I hereby certify that this correspondence is being filed electronically with the U.S. Patent and Trademark Office

Michael E. Hussey	(Depositor's name)
	(Signature)
August 20, 2010	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	02/13/2006	John K. Overton	11958/62	7078

TITLE OF INVENTION: NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	09/27/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
GILLIS, BRIAN J	2441	709-217000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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

1 Brinks Hofer Gilson
2 & Lione
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: Econnectix Corporation

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Chicago, IL

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 credit any overpayment, to Deposit Account Number 23-1925 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date August 20, 2010

Typed or printed name Michael E. Hussey Registration No. 63,265

This collection of information 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.

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Electronic Patent Application Fee Transmittal	
Application Number:	11354224
Filing Date:	13-Feb-2006
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Filer:	Michael E. Hussey/Sara Vessely
Attorney Docket Number:	11958/62
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1055**

Electronic Acknowledgement Receipt	
EFS ID:	8258052
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	00757
Filer:	Michael E. Hussey
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	20-AUG-2010
Filing Date:	13-FEB-2006
Time Stamp:	15:08:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1055
RAM confirmation Number	1265
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		11958_62_IssueFee_082010_2.pdf	123678 1f1501801fbddf6c41e5298cb8e8941fbd7bb06e	yes	2

Multipart Description/PDF files in .zip description

Document Description	Start	End
Miscellaneous Incoming Letter	1	1
Issue Fee Payment (PTO-85B)	2	2

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	32019 565668671558b6b8ed132dc14e588471f620e6c0	no	2

Warnings:

Information:

Total Files Size (in bytes):	155697

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New Applications Under 35 U.S.C. 111

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

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

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New International Application Filed with the USPTO as a Receiving Office

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

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: August 20, 2010 Name: Michael E. Hussey (Reg. No. 63,265)

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	John K. Overton et al.		
Appln. No.:	11/354,224	Examiner:	Brian J. Gillis
Filed:	February 13, 2006	Art Unit:	2441
For:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL	Conf. No.:	7078
Attorney Docket No.:	11958/062		

TRANSMITTAL

MAIL STOP ISSUE FEE
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Part B – Fee(S) Transmittal (1 pg.); Transmittal (1 pg.)

Fee calculation:

☐ No additional fee is required.

☒ Small Entity.

☐ An extension fee in an amount of $_____ for a _____-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $755 under 37 CFR § 1.18(a) and $300 under 37 CFR § 1.18(d).

☐ An additional filing fee has been calculated as shown below:

					Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus			x $26=			x $52=	
Indep.		Minus			x 110=			x $220=	
First Presentation of Multiple Dep. Claim					+$195=			+ $390=	
					Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $1055 for Issue and Publication Fees.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

08/20/2010
Date

Michael E. Hussey (Reg. No. 63,265)

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
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/354,224	10/12/2010	7814170	11958/62	7078

757 7590 09/22/2010

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60610

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 749 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):

John K. Overton, Chicago, IL;
Stephen W. Bailey, Chicago, IL;

PTO/AIA/81B (07-13)
Approved for use through 03/31/2021. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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REEXAMINATION OR SUPPLEMENTAL EXAMINATION – PATENT OWNER POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS FOR REEXAMINATION OR SUPPLEMENTAL EXAMINATION AND PATENT

Control Number(s)	90019035
Filing Date(s)	November 19, 2021
First Named Inventor	John K. Overton
Title	
Patent Number	7814170
Examiner Name	Luke S. Wassum
Attorney Docket No(s)	KOVE-170EPR035

I. Power of Attorney. This form may be used to change the Power of Attorney in a reexamination or supplemental examination proceeding (or multiple proceedings where merged). This form may also be used to change the Power of Attorney in the patent file; in such a case, a copy of this form will be placed in both the patent file and the reexamination or supplemental examination proceeding.

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☐ in the file of the above-identified patent.

(check BOTH boxes if change in BOTH the patent file and the reexamination or supplemental examination proceeding is requested).

B. Designation of Power of Attorney.

☐ A Power of Attorney is submitted herewith.

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

184647

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

Practitioner(s) Name	Registration Number

Authorization for the Power of Attorney is provided by the signature on page 2 of this form.

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 15 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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NOTE: THE CORRESPONDENCE ADDRESS FOR THE REEXAMINATION OR SUPPLEMENTAL EXAMINATION PROCEEDING CONTROL NUMBER(S) MUST BE THE SAME AS THAT FOR THE PATENT. SEE 37 CFR 1.33.

III. Authorization for Power of Attorney and (if selected) Change of Correspondence Address

I am the:
☐ Inventor, having ownership of the patent being reexamined.
OR
☒ Patent owner.
Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____.

Signature of Inventor or Patent Owner		Date	2021-12-17
Name	John K. Overton	Telephone	312-850-3147
Title and Company	CEO, Kove IO, Inc.		

NOTE: Signatures of all the inventors 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 _____ forms are submitted. *If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

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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 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.

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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Kove IO, Inc.

Application No./Patent No.: 7814170 Filed/Issue Date: October 12, 2010

Titled: Network Distributed Tracking Wire Transfer Protocol

Kove IO, Inc., a Delaware corporation

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

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

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

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

1. From: the inventors To: ECONNECTIX CORPORATION

   The document was recorded in the United States Patent and Trademark Office at

   Reel 022638, Frame 0961, or for which a copy thereof is attached.

2. From: ECONNECTIX CORPORATION To: KOVE CORPORATION

   The document was recorded in the United States Patent and Trademark Office at

   Reel 036886, Frame 0111, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: KOVE CORPORATION To: KOVE IO, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 036888, Frame 0700, or for which a copy thereof is attached.

4. From: KOVE IO, INC. To: ARCTIDE, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 036831, Frame 0804, or for which a copy thereof is attached.

5. From: ARCTIDE, LLC To: KOVE IO, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 046131, Frame 0507, or for which a copy thereof is attached.

6. From: _____ To: _____

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

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

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

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

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

Signature	2021-12-17 Date
John K. Overton Printed or Typed Name	CEO Title or Registration Number

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Electronic Acknowledgement Receipt	
EFS ID:	44553742
Application Number:	90019035
International Application Number:	
Confirmation Number:	7078
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	7814170
Customer Number:	757
Filer:	Philip Joseph Eklem
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	17-DEC-2021
Filing Date:	19-NOV-2021
Time Stamp:	18:50:29
Application Type:	Reexam (Patent Owner)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	90019035_7814170_poa.pdf	2360717 c18c30b0d122d012035d2771f777132f09f7fb00	no	3

Warnings:

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Information:					
2	Assignee showing of ownership per 37 CFR 3.73	90019035_7814170_37CFR373c.pdf	2392912 4b4729fc6f84097e1f118a2ad4f9c3862ee509fa	no	3
Warnings:					
Information:					
			Total Files Size (in bytes):	4753629	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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CHANGE OF CORRESPONDENCE ADDRESS
Patent

Address to:
Mail Stop Post Issue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Patent Number	7814170
Issue Date	October 12, 2010
Application Number	11354224
Filing Date	February 13, 2006
First Named Inventor	John K. Overton
Attorney Docket Number	KOVE-170EPR035

Please change the Correspondence Address for the above-identified patent to:

☑ The address associated with Customer Number: 184647

OR

☐ **Firm *or* Individual Name**

Address

City	**State**	**ZIP**

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Telephone	**Email**

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

This form will not affect any "fee address" provided for the above-identified patent. To change a "fee address" use the "Fee Address Indication Form" (PTO/SB/47).

I am the:

☑ Patentee.

☑ If the Patentee was not the applicant for patent (37 CFR 1.42), then a Statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is enclosed or was filed on _____. See 37 CFR 3.71.

☐ Attorney or agent of record. Registration Number _____.

☐ Patent practitioner acting in a representative capacity whose correspondence address is the correspondence address of record. Notice has been given to the patentee or owner. Registration Number _____

Signature

Typed or Printed Name John Overton

Date 2022-01-11 Telephone 312-850-3147

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

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.33. 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: Mail Stop Post Issue, 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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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Kove IO, Inc.

Application No./Patent No.: 7814170 Filed/Issue Date: October 12, 2010

Titled: Network Distributed Tracking Wire Transfer Protocol

Kove IO, Inc., a Delaware corporation

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

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

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

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

1. From: the inventors To: ECONNECTIX CORPORATION

   The document was recorded in the United States Patent and Trademark Office at

   Reel 022638, Frame 0961, or for which a copy thereof is attached.

2. From: ECONNECTIX CORPORATION To: KOVE CORPORATION

   The document was recorded in the United States Patent and Trademark Office at

   Reel 036886, Frame 0111, or for which a copy thereof is attached.

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: KOVE CORPORATION To: KOVE IO, INC.

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4. From: KOVE IO, INC. To: ARCTIDE, LLC

The document was recorded in the United States Patent and Trademark Office at
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5. From: ARCTIDE, LLC To: KOVE IO, INC.

The document was recorded in the United States Patent and Trademark Office at
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6. From: _____ To: _____

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

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

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

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

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

Signature	2021-12-17 Date
John K. Overton Printed or Typed Name	CEO Title or Registration Number

[Page 2 of 2]

Privacy Act Statement

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	44719157
Application Number:	11354224
International Application Number:	
Confirmation Number:	7078
Title of Invention:	NETWORK DISTRIBUTED TRACKING WIRE TRANSFER PROTOCOL
First Named Inventor/Applicant Name:	John K. Overton
Customer Number:	184647
Filer:	Philip Joseph Eklem
Filer Authorized By:	
Attorney Docket Number:	11958/62
Receipt Date:	11-JAN-2022
Filing Date:	13-FEB-2006
Time Stamp:	15:41:17
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Change of Address	2022-01-11--SIGNED--CoA--170.pdf	1761181 01751c608e815cf06a3f07153adeb76a68bb57bb	no	2

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	90019035_7814170_37CFR373c.pdf	2392912 4b4729fc6f84097e1f118a2ad4f9c3862ee509fa	no	3
Warnings:					
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			Total Files Size (in bytes):	4154093	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/354,224	02/13/2006	John K. Overton	KOVE-170EPR035

CONFIRMATION NO. 7078

184647
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POA ACCEPTANCE LETTER

OC000000131120031

Date Mailed: 01/14/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 12/17/2021.

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**.

/ltaba/