PTO/AIA/15 (03-13)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	1004294.013US
First Named Inventor	Scott McNulty
Title	Apparatus, Method and System for a Tunneling Client Access Point
Express Mail Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [✔] **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. [✔] **Applicant asserts small entity status.** See 37 CFR 1.27
3. [ ] **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. [✔] **Specification** [*Total Pages* 77] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. [✔] **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 10]
6. **Inventor's Oath or Declaration** [*Total Pages* 9] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   a. [ ] Newly executed (original or copy)
   b. [✔] A copy from a prior application (37 CFR 1.63(d))
7. [✔] **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program (*Appendix*)
   [ ] Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, items a. – c. are required*)
   a. [ ] Computer Readable Form (CRF)
   b. [ ] Specification Sequence Listing on:
      i. [ ] CD-ROM or CD-R (2 copies); or
      ii. [ ] Paper
   c. [ ] Statements verifying identity of above copies

ADDRESS TO:

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

ACCOMPANYING APPLICATION PAPERS

10. [ ] **Assignment Papers** (cover sheet & document(s))
    Name of Assignee _____
11. [ ] **37 CFR 3.73(c) Statement** (*when there is an assignee*) [ ] **Power of Attorney**
12. [ ] **English Translation Document** (*if applicable*)
13. [ ] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    [ ] Copies of citations attached
14. [ ] **Preliminary Amendment**
15. [ ] **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. [ ] **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. [ ] **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. [ ] **Other:** _____

Note*: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

[✔] The address associated with Customer Number: 85775 **OR** [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/Robert K. Goethals/	Date	08-06-2013
Name (Print/Type)	Robert K. Goethals	Registration No. (Attorney/Agent)	36813

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.

Docket No. 4602-4001

COMBINED DECLARATION AND POWER OF ATTORNEY FOR ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART 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:

Apparatus, Method and System For A Tunneling Client Access Point

the specification of which

a. ☐ is attached hereto

b. ☒ was filed on March 23, 2004 as application Serial No. 10/807,731 and was amended on . (if applicable).

PCT FILED APPLICATION ENTERING NATIONAL STAGE

c. ☐ was described and claimed in International Application No. filed on and as amended on . (if any).

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby specify the following as the correspondence address to which all communications about this application are to be directed:

SEND CORRESPONDENCE TO:

☒ Bar Code label attached (see right)

☐ Address Shown (see below)

MORGAN & FINNEGAN, L.L.P.
345 Park Avenue
New York, N.Y. 10154

27123
↑CUSTOMER NUMBER↑

DIRECT TELEPHONE CALLS TO:

820558 v1

☐ I hereby claim foreign priority benefits under Title 35, United States Code § 119 (a)-(d) or under § 365(b) of any foreign application(s) for patent or inventor's certificate or under § 365(a) of any PCT international application(s) designating at least one country other than the U.S. listed below and also have identified below such foreign application(s) for patent or inventor's certificate or such PCT international application(s) filed by me on the same subject matter having a filing date within twelve (12) months before that of the application on which priority is claimed:

☐ The attached 35 U.S.C. § 119 claim for priority for the application(s) listed below forms a part of this declaration.

Country/PCT	Application Number	Date of filing (day, month, yr)	Date of issue (day, month, yr)	Priority Claimed
				☐ Y ☐ N
				☐ Y ☐ N
				☐ Y ☐ N

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

Provisional Application No.	Date of filing (day, month, yr)

ADDITIONAL STATEMENTS FOR DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART OR PCT APPLICATION(S) DESIGNATING THE U.S.

I hereby claim the benefit under Title 35, United States Code § 120 of any United States application(s) or under § 365(c) of any PCT international application(s) designating the U.S. listed below.

US/PCT Application Serial No.	Filing Date	Status (patented, pending, abandoned)/ U.S. application no. assigned (For PCT)

US/PCT Application Serial No.	Filing Date	Status (patented, pending, abandoned)/ U.S. application no. assigned (For PCT)

☐ In this continuation-in-part application, insofar as the subject matter of any of the claims of this application is not disclosed in the above listed prior United States or PCT international application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

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.

I hereby appoint the following attorneys and/or agents with full power of substitution and revocation, to prosecute this application, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith: David H. Pfeffer (Reg. No. 19,825), Harry C. Marcus (Reg. No. 22,390), Stephen R. Smith (Reg. No. 22,615), Kurt E. Richter (Reg. No. 24,052), Eugene Moroz (Reg. No. 25,237), John F. Sweeney (Reg. No. 27,471), Arnold I. Rady (Reg. No. 26,601), Christopher A. Hughes (Reg. No. 26,914), William S. Feiler (Reg. No. 26,728), Joseph A. Calvaruso (Reg. No. 28,287), James W. Gould (Reg. No. 28,859), Richard C. Komson (Reg. No. 27,913), Israel Blum (Reg. No. 26,710), Bartholomew Verdirame (Reg. No. 28,483), Maria C.H. Lin (Reg. No. 29,323), Joseph A. DeGirolamo (Reg. No. 28,595), Michael P. Dougherty (Reg. No. 32,730), Seth J. Atlas (Reg. No. 32,454), Andrew M. Riddles (Reg. No. 31,657), Bruce D. DeRenzi (Reg. No. 33,676), Mark J. Abate (Reg. No. 32,527), John T. Gallagher (Reg. No. 35,516), Steven F. Meyer (Reg. No. 35,613), Kenneth H. Sonnenfeld (Reg. No. 33,285), Tony V. Pezzano (Reg. No. 38,271), Andrea L. Wayda (Reg. 43,979), Walter G. Hanchuk (Reg. No. 35,179), John W. Osborne (Reg. No. 36,231), Robert K. Goethals (Reg. No. 36,813), Peter N. Fill (Reg. No. 38,876), Kenneth S. Weitzman (Reg. No. 36,306), Richard Straussman (Reg. No. 39,847), Stephen J. Manetta (Reg. No. 40,426), Dorothy R. Auth (Reg. No. 36,434) and Michael O. Cummings, (Reg. No. 40,575) of Morgan & Finnegan, L.L.P. whose address is: 345 Park Avenue, New York, New York, 10154; and Michael S. Marcus (Reg. No. 31,727), and John E. Hoel (Reg. No. 26,279), of Morgan & Finnegan, L.L.P., whose address is 1775 Eye Street, Suite 400, Washington, D.C. 20006.

☐ I hereby authorize the U.S. attorneys and/or agents named hereinabove to accept and follow instructions from as to any action to be taken in the U.S. Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and/or agents and me. In the event of a change in the person(s) from whom instructions may be taken I will so notify the U.S. attorneys and/or agents named hereinabove.

Full name of sole or first inventor:	Scott McNulty
Inventor's signature*	Scott McNulty 7-16-04 Date
Residence:	22 Ensign Road, Rowayton, CT 06853
Citizenship:	USA
Post Office Address:	Same as above

Full name of second inventor:	____
Inventor's signature*	_____ _____ Date
Residence:	____
Citizenship:	____
Post Office Address:	

☐ ATTACHED IS ADDED PAGE TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR SIGNATURE BY THIRD AND SUBSEQUENT INVENTORS FORM.

*Before signing this declaration, each person signing must:

1. Review the declaration and verify the correctness of all information therein; and
2. Review the specification and the claims, including any amendments made to the claims.

After the declaration is signed, the specification and claims are not to be altered.

To the inventor(s):

The following are cited in or pertinent to the declaration attached to the accompanying application:

Title 37, Code of Federal Regulation, §1.56

Duty to disclose information material to patentability

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability. A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

(e) In any continuation-in-part application, the duty under this section includes the duty to disclose to the Office all information known to the person to be material to patentability, as defined in paragraph (b) of this section, 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.

Title 35, U.S. Code § 101

Inventions patentable

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.

Title 35 U.S. Code § 102

Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent,

(b) the invention was patented or described in a printed publication in this or foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(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, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; 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 a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a); or

(f) he did not himself invent the subject matter sought to be patented, or

(g) (1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Title 35, U.S. Code § 103

103. Conditions for patentability; non-obvious subject matter

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

(b) (1) Notwithstanding subsection (a), and upon timely election by the applicant for patent to proceed under this subsection, a biotechnological process using or resulting in a composition of matter that is novel under section 102 and nonobvious under subsection (a) of this section shall be considered nonobvious if—

(A) claims to the process and the composition of matter are contained in either the same application for patent or in separate applications having the same effective filing date; and

(B) the composition of matter, and the process at the time it was invented, were owned by the same person or subject to an obligation of assignment to the same person.

(2) A patent issued on a process under paragraph (1)—

(A) shall also contain the claims to the composition of matter used in or made by that process, or

(B) shall, if such composition of matter is claimed in another patent, be set to expire on the same date as such other patent, notwithstanding section 154.

(3) For purposes of paragraph (1), the term "biotechnological process" means--

(A) a process of genetically altering or otherwise inducing a single- ormulti-celled organism to--

(i) express an exogenous nucleotide sequence,

(ii) inhibit, eliminate, augment, or alter expression of an endogenous nucleotide sequence, or

(iii) express a specific physiological characteristic not naturally associated with said organism;

(B) cell fusion procedures yielding a cell line that expresses a specific protein, such as a monoclonal antibody; and

(C) a method of using a product produced by a process defined by subparagraph (A) or (B), or a combination of subparagraphs (A) and (B).

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Title 35, U.S. Code § 112 (in part)

Specification

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

Title 35, U.S. Code, § 119

Benefit of earlier filing date in foreign country; right of priority

(a) An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, or in a WTO member country, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

(b) (1) No application for patent shall be entitled to this right of priority unless a claim is filed in the Patent and Trademark Office, identifying the foreign application by specifying the application number on that foreign application, the intellectual property authority or country in or for which the application was filed, and the date of filing the application, at such time during the pendency of the application as required by the Director.

(2) The Director may consider the failure of the applicant to file a timely claim for priority as a waiver of any such claim. The Director may establish procedures, including the payment of a surcharge, to accept an unintentionally delayed claim under this section.

(3) The Director may require a certified copy of the original foreign application, specification, and drawings upon which it is based, a translation if not in the English language, and such other information as the Director considers necessary. Any such certification shall be made by the foreign intellectual property authority in which the foreign application was filed and show the date of the application and of the filing of the specification and other papers.

(c) In like manner and subject to the same conditions and requirements, the right provided in this section may be based upon a subsequent regularly filed application in the same foreign country instead of the first filed foreign application, provided that any foreign application filed prior to such subsequent application has been withdrawn, abandoned, or otherwise disposed of, without having been laid open to public inspection and without leaving any rights outstanding, and has not served, nor thereafter shall serve, as a basis for claiming a right of priority.

(d) Applications for inventors' certificates filed in a foreign country in which applicants have a right to apply, at their discretion, either for a patent or for an inventor's certificate shall be treated in this country in the same manner and have the same effect for purpose of the right of priority under this section as applications for patents, subject to the same conditions and requirements of this section as apply to applications for patents, provided such applicants are entitled to the benefits of the Stockholm Revision of the Paris Convention at the time of such filing.

(e) (1) An application for patent filed under section 111(a) or section 363 of this title for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application filed under section 111(b) of this title, by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed under section 111(b) of this title, if the application for patent filed under section 111(a) or section 363 of this title is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application. No application shall be entitled to the benefit of an earlier filed provisional application under this subsection unless an amendment containing the specific reference to the earlier filed provisional application is submitted at such time during the pendency of the application as required by the Director. The Director may consider the failure to submit such an amendment within that time period as a waiver of any benefit under this subsection. The Director may establish procedures, including the payment of a surcharge, to accept an unintentionally delayed submission of an amendment under this subsection during the pendency of the application.

(2) A provisional application filed under section 111(b) of this title may not be relied upon in any proceeding in the Patent and Trademark Office unless the fee set forth in subparagraph (A) or (C) of section 41(a)(1) of this title has been paid.

(3) If the day that is 12 months after the filing date of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, the period of pendency of the provisional application shall be extended to the next succeeding secular or business day.

(f) Applications for plant breeder's rights filed in a WTO member country (or in a foreign UPOV Contracting Party) shall have the same effect for the purpose of the right of priority under subsections (a) through (c) of this section as applications for patents, subject to the same conditions and requirements of this section as apply to applications for patents.

(g) As used in this section--

(1) the term "WTO member country" has the same meaning as the term is defined in section 104(b)(2) of this title; and

(2) the term "UPOV Contracting Party" means a member of the International Convention for the Protection of New Varieties of Plants.

Title 35, U.S. Code, § 120

Benefit or earlier filing date in the United States

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application. ***No application shall be entitled to the benefit of an earlier filed application under this section unless an amendment containing the specific reference to the earlier filed application is submitted at such time during the pendency of the application as required by the Director. The Director may consider the failure to submit such an amendment within that time period as a waiver of any benefit under this section. The Director may establish procedures, including the payment of a surcharge, to accept an unintentionally delayed submission of an amendment under this section.***

Please read carefully before signing the Declaration attached to the accompanying Application. If you have any questions, please contact Morgan & Finnegan, L.L.P.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

United States Patent Application

FOR:

APPARATUS, METHOD AND SYSTEM FOR A
TUNNELING CLIENT ACCESS POINT

INVENTOR:

SCOTT MCNULTY

APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT

This application is a continuation application of U.S. application ser. no. 12/950,321, filed November 19, 2010, which is a continuation application of U.S. application Ser. No. 10/807,731, filed on Mar. 23, 2003, now U.S. Pat. No. 7,861,006.

FIELD

The present invention is directed generally to an apparatus, method, and system of accessing data, and more particularly, to an apparatus, method and system to execute and process data by tunneling access through a terminal.

BACKGROUND

Portable Computing and Storage

Computing devices have been becoming smaller over time. Currently, some of the smallest computing devices are in the form of personal digital assistants (PDAs). Such devices usually come with a touch screen, an input stylus and/or mini keyboard, and battery source. These devices, typically, have storage capacities around 64MB. Examples of these devices include Palm's Palm Pilot.

Information Technology Systems

Typically, users, which may be people and/or other systems, engage information technology systems (e.g., commonly computers) to facilitate information processing. In turn, computers employ processors to process information; such processors are often referred to as

central processing units (CPU). A common form of processor is referred to as a microprocessor. A computer operating system, which, typically, is software executed by CPU on a computer, enables and facilitates users to access and operate computer information technology and resources. Common resources employed in information technology systems include: input and output mechanisms through which data may pass into and out of a computer; memory storage into which data may be saved; and processors by which information may be processed. Often information technology systems are used to collect data for later retrieval, analysis, and manipulation, commonly, which is facilitated through database software. Information technology systems provide interfaces that allow users to access and operate various system components.

User Interface

The function of computer interfaces in some respects is similar to automobile operation interfaces. Automobile operation interface elements such as steering wheels, gearshifts, and speedometers facilitate the access, operation, and display of automobile resources, functionality, and status. Computer interaction interface elements such as check boxes, cursors, menus, scrollers, and windows (collectively and commonly referred to as widgets) similarly facilitate the access, operation, and display of data and computer hardware and operating system resources, functionality, and status. Operation interfaces are commonly called user interfaces. Graphical user interfaces (GUIs) such as the Apple Macintosh Operating System's Aqua, Microsoft's Windows XP, or Unix's X-Windows provide a baseline and means of accessing and displaying information, graphically, to users.

Networks

Networks are commonly thought to comprise of the interconnection and interoperation of clients, servers, and intermediary nodes in a graph topology. It should be noted that the term "server" as used herein refers generally to a computer, other device, software, or combination thereof that processes and responds to the requests of remote users across a communications network. Servers serve their information to requesting "clients." The term "client" as used herein refers generally to a computer, other device, software, or combination thereof that is capable of processing and making requests and obtaining and processing any responses from servers across a communications network. A computer, other device, software, or combination thereof that facilitates, processes information and requests, and/or furthers the passage of information from a source user to a destination user is commonly referred to as a "node." Networks are generally thought to facilitate the transfer of information from source points to destinations. A node specifically tasked with furthering the passage of information from a source to a destination is commonly called a "router." There are many forms of networks such as Local Area Networks (LANs), Pico networks, Wide Area Networks (WANs), Wireless Networks (WLANs), etc. For example, the Internet is generally accepted as being an interconnection of a multitude of networks whereby remote clients and servers may access and interoperate with one another.

SUMMARY

Although all of the aforementioned portable computing systems exist, no effective solution to securely access, execute, and process data is available in an extremely compact

form. Currently, PDAs, which are considered among the smallest portable computing solution, are bulky, provide uncomfortably small user interfaces, and require too much power to maintain their data. Current PDA designs are complicated and cost a lot because they require great processing resources to provide custom user interfaces and operating systems. Further, current PDAs are generally limited in the amount of data they can store or access. No solution exists that allows users to employ traditional large user interfaces they are already comfortable with, provides greater portability, provides greater memory footprints, draws less power, and provides security for data on the device. As such, the disclosed tunneling client access point (TCAP) is very easy to use; at most it requires the user to simply plug the device into any existing and available desktop or laptop computer, through which, the TCAP can make use of a traditional user interface and input/output (I/O) peripherals, while the TCAP itself, otherwise, provides storage, execution, and/or processing resources. Thus, the TCAP requires no power source to maintain its data and allows for a highly portable "thumb" footprint. Also, by providing the equivalent of a plug-n-play virtual private network (VPN), the TCAP provides certain kinds of accessing of remote data in an easy and secure manner that was unavailable in the prior art.

In accordance with certain aspects of the disclosure, the above-identified problems of limited computing devices are overcome and a technical advance is achieved in the art of portable computing and data access. An exemplary tunneling client access point (TCAP) includes a method to dispose a portable storage device in communication with a terminal. The method includes providing the memory for access on the terminal, executing processing

instructions from the memory on the terminal to access the terminal, communicating through a conduit, and processing the processing instructions.

In accordance with another embodiment, a portable tunneling storage processor is disclosed. The apparatus has a memory and a processor disposed in communication with the memory, and configured to issue a plurality of processing instructions stored in the memory. Also, the apparatus has a conduit for external communications disposed in communication with the processor, configured to issue a plurality of communication instructions as provided by the processor, configured to issue the communication instructions as signals to engage in communications with other devices having compatible conduits, and configured to receive signals issued from the compatible conduits.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings illustrate various non-limiting, example, inventive aspects in accordance with the present disclosure:

FIGURE 1 is of a flow diagram illustrating embodiments of a tunneling client access point (TCAP);

FIGURE 2 is of a flow diagram illustrating embodiments of a system of tunneling client access point and access terminal interaction;

FIGURE 3 is of a flow diagram illustrating embodiments of engaging the tunneling client access point to an access terminal interaction;

FIGURE 4 is of a flow diagram illustrating embodiments of accessing the tunneling client access point and server through an access terminal;

FIGURES 5-8 is of a flow diagram illustrating embodiments of facilities, programs, and/or services that the tunneling client access point and server may provide to the user as accessed through an access terminal;

FIGURE 9 is of a block diagram illustrating embodiments of a tunneling client access point server controller;

FIGURE 10 is of a block diagram illustrating embodiments of a tunneling client access point controller;

The leading number of each reference number within the drawings indicates the first figure in which that reference number is introduced. As such, reference number 101 is first introduced in Figure 1. Reference number 201 is first introduced in Figure 2, etc.

DETAILED DESCRIPTION

Topology

Figure 1 illustrates embodiments for a topology between a tunneling client access point (TCAP) (see Figure 10 for more details on the TCAP) and TCAP server (TCAPS) (see Figure 9 for more details on the TCAPS). In this embodiment, a user 133a may plug-in a TCAP into any number of access terminals 127 located anywhere. Access terminals (ATs) may be any number of computing devices such as servers, workstations, desktop computers, laptops, portable digital assistants (PDAs), and/or the like. The type of AT used is not important other than the device should provide a compatible mechanism of engagement to the TCAP 130 and provide an operating environment for the user to engage the TCAP through the AT. In one embodiment, the TCAP provides a universal serial bus (USB) connector through which it may plug into an AT. In other embodiment, the TCAP may employ Bluetooth, WiFi and/or other wireless connectivity protocols to connect with ATs that are also so equipped. In one embodiment, the AT provides Java and/or Windows runtime environments, which allows the TCAP to interact with the input/output mechanisms of the AT. See Figure 9 for more details and embodiments on the types of connections that may be employed by the TCAP. Once the TCAP has engaged with an AT, it can provide the user with access to its storage and processing facilities.

If the AT is connected to a communication network 113, the TCAP may then communicate beyond the AT. In one embodiment, the TCAP can provide extended storage and/or processing resources by engaging servers 110, 115, 120, which have access to and can

provide extended storage 105 to the TCAP through the AT. In one embodiment, a single server and storage device may provide such TCAP server support. In another embodiment, server support is provided over a communications network, e.g., the Internet, by an array of front-end load-balancing servers 120. These servers can provide access to storage facilities within the servers or to remote storage 105 across a communications network 113b, c (e.g., a local area network (LAN)). In such an embodiment, a backend server 110 may offload the front-end server with regard to data access to provide greater throughput. For purposes of load balancing and/or redundancy, a backup server 115 may be similarly situated to provide for access and backup in an efficient manner. In such an embodiment, the back-end servers may be connected to the front-end servers through a communications network 113b (e.g., wide area network (WAN)). The backend servers 110, 115 may be connected to the remote storage 105 through a communications network 113c as well (e.g., a high speed LAN, fiber-channel, and/or the like).

Thus, to the user 133a, the contents of the TCAP 130 appear on the AT as being contained on the TCAP 125 even though much of the contents may actually reside on the servers 115, 120 and/or the servers' storage facilities 105. In these ways, the TCAP "tunnels" data through an AT. The data may be provided through the AT's I/O for the user to observe without it actually residing on the AT. Also, the TCAP may tunnel data through an AT across a communications network to access remote servers without requiring its own more complicated set of peripherals and I/O.

TCAP and AT Interaction

Figure 2 illustrates embodiments for a system of tunneling client access point (TCAP) (see Figure 10 for more details on the TCAP) and access terminal interaction. Figure 2 provides an overview for TCAP and AT interaction and subsequent figures will provide greater detail on elements of the interaction. In this embodiment, a user engages the TCAP 201. For example, the user may plug the TCAP into an AT via the AT's USB port. Thereafter the user is presented with a login prompt 205 on the AT's display mechanism, e.g., on a video monitor. After a user successfully logs in (for example by providing a user name and password) 204, the TCAP can then accept user inputs from the AT and its peripherals (the TCAP can then also provide output to the user via the AT's peripherals).

The user may employ the AT's input peripherals as user input devices that control actions on the TCAP. Depending on the user's actions 215, the TCAP can be used by the AT as a storage device from which it can access and store data and programs 225. For example, if the user takes the action of opening a file from the TCAP's memory, e.g., by double clicking on an icon when the TCAP is mounted as a USB drive on the AT, then the AT may treat the TCAP as a memory device and retrieve information from the TCAP 225. If the user's action 215 is one that is directed at executing on the TCAP 215, then the AT will not be involved in any execution. For example, if the user drops an icon representing a graphics file onto a drag-and-drop location visually representing the TCAP, then the file may be copied to the TCAP where it will process and spool the file for sending the graphics file to be printed at a remote location. In such a case, all of the requirements to process and spool the

file are handled by the TCAP's processor and the AT would only be used as a mechanism for user input and output and as a conduit through which the TCAP may send files.

Regardless of if there is an action 215 to execute on the TCAP 220 or to access or store data on the TCAP 225, the AT is used to display the status of any actions 230. At any time the user may select to terminate TCAP related facilities executing either on the AT, a backend server, on the TCAP itself, and/or the like 235. In one embodiment, the user may select a quit option that is displayed on the AT's screen. In another embodiment, the user may simply disengage the TCAP from the AT by severing the connection (e.g., turning power off, physically pulling the device off the AT, turning off wireless transmissions, and/or the like). It should be noted that such abrupt severing may result in the loss of data, file corruption, etc. if the TCAP has not saved data that is on the AT or on some remote server, however, if the TCAP is employing flash like memory, its contents should remain intact.

If there is no instruction signal to terminate the TCAP 235, execution will continue and the TCAP will continue to take and look for input from the user. Of course if the TCAP has been set to perform certain actions, those actions will continue to execute, and the TCAP may respond to remote servers when it is communicating with them through the AT. When the user issues a terminate signal 235, then the TCAP will shut down by saving any data to the TCAP that is in the AT's memory and then terminating any programs executing on both the AT and TCAP that were executed by and/or from the TCAP 240. If no activities are taking place on the TCAP and all the data is written back to the TCAP 240, then the TCAP may optionally unmount itself from the AT's file-system 245. At this point, if there is a

TCAP I/O driver executing on the AT, that driver may be terminated as triggered by the absence of the TCAP at a mount point 250. After the TCAP is unmounted and/or the TCAP I/O driver is terminated, it is safe to disengage the TCAP from the AT.

TCAP and AT Interaction

Figure 3 illustrates embodiments engaging the tunneling client access point to an access terminal interaction. Examples of engaging the TCAP 301 with an AT were discussed above in Figure 1 127, 130, 133a and Figure 2 201. In one embodiment, the TCAP 130 is engaged with an access terminal 327, 305. As mentioned in Figure 1, the TCAP is capable of engaging with ATs using a number of mechanisms. In one embodiment, the TCAP has a USB connector for plugging into an AT, which acts as a conduit for power and data transfer. In another embodiment, the TCAP may use Bluetooth to establish a wireless connection with a number of ATs. In another embodiment, the TCAP may employ WiFi. In yet another embodiment, the TCAP may employ multiple communications mechanisms. It should be noted, with some wireless mechanisms like Bluetooth and WiFi, simply coming into proximity with an AT that is configured for such wireless communication may result in the TCAP engaging with and establish a communications link with the AT. In one embodiment, the TCAP has a "connect" button that will allow such otherwise automatically engaging interactions take place only if the "connect" button is engaged by a user. Such an implementation may provide greater security for users (see Figure 10 for more details on the TCAP).

After being engaged 305, the TCAP will then power on. In an embodiment requiring a direct connection, e.g., USB, simply plugging the TCAP into the AT provides power. In a wireless embodiment, the TCAP may be on in a lower powered state or otherwise turned on by engaging the connect button as discussed above. In such an embodiment, the TCAP can employ various on-board power sources (see Figure 10 for more details on the TCAP). The TCAP then may load its own operating system 315. The operating system can provide for interaction with the AT. In one embodiment, a Java runtime is executed on the TCAP, and Java applets communicate with the AT through Java APIs. In another embodiment, a driver is loaded onto the AT, and the on-TCAP Java operating system applets communicate to and through the AT via the driver running on the AT, wherein the driver provides an API through and to which messages may be sent.

After engaging with the AT, the TCAP can provide its memory space to the AT 320. In one embodiment, the TCAP's memory is mapped and mounted as a virtual disk drive 125 storage 325. In this manner, the TCAP may be accessed and manipulated as a standard storage device through the AT's operating system. Further, the TCAP and in some cases the AT can determine if the AT is capable of accessing program instructions stored in the TCAP's memory 330. In one embodiment, the AT's operating system looks to auto-run a specified file from any drive as it mounts. In such an embodiment, the TCAP's primary interface may be specified in such a boot sequence. For example, under windows, an autorun.inf file can specify the opening of a program from the TCAP by the AT; e.g., OPEN=TCAP.EXE.

Many operating systems are capable of at least accessing the TCAP as a USB memory drive 330 and mounting its contents as a drive, which usually becomes accessible in file browsing window 125. If the TCAP does not mount, the AT's operating system will usually generate an error informing the user of a mounting problem. If the AT is not capable of executing instruction from the TCAP, a determination is made if an appropriate driver is loaded on the AT to access the TCAP 335. In one embodiment, the TCAP can check to see if an API is running on the AT. For example, the TCAP provide an executable to be launched, e.g., as specified through autorun.inf, and can establish communications through its connection to the AT, e.g., employing TCP/IP communications over the USB port. In such an embodiment, the TCAP can ping the AT for the program, and if an acknowledgement is received, the TCAP has determined that proper drivers and APIs exist. If no such API exists, the TCAP may launch a driver installation program for the AT as through an autorun.inf. In an alternative embodiment, if nothing happens, a user may double click onto an installer program that is stored on the mounted TCAP 342, 340. It should be noted, that although the TCAP's memory space may be mounted, certain areas of the TCAP may be inaccessible until there is an authorization. For example, certain areas and content on the TCAP may be encrypted. It should be noted that any such access terminal modules that drive AT and TCAP interaction may be saved onto the TCAP by copying the module to a mounted TCAP. Nevertheless, if the AT is capable of accessing program instructions in TCAP memory 330, a TCAP driver is loaded on the AT 335, and/or the user engages a program in the TCAP memory 340, then the AT can execute program instructions from the TCAP's memory,

which allows the TCAP to use the AT's I/O and allowing the user to interface with TCAP facilities 345. It should be noted that some ATs may not be able to mount the TCAP at all. In such an instance, the user may have to install the TCAP drivers by downloading them from a server on the Internet, loading them from a diskette or CD, and/or the like. Once the TCAP is engaged to the AT 301, execution may continue 398.

TCAP and AT Interaction

Figure 4 illustrates embodiments accessing the tunneling client access point and server through an access terminal. Upon engaging the TCAP to the AT as described in Figure 3 301, 398, the user may then go on to access the TCAP and its services 498. It should be noted that users may access certain unprotected areas of the TCAP once it has been mounted, as described in Figure 3. However, to more fully access the TCAP's facilities, the user may be prompted to either login and/or registration window 205a to access the TCAP and its services, which may be displayed on the AT 405. It is important to note that in one embodiment, the execution of the login and/or registration routines are handled by the TCAP's processor. In such an embodiment, the TCAP may run a small Web server providing login facilities, and connect to other Web based services through the AT's connection to the Internet. Further, the TCAP may employ a basic Web browsing core engine by which it may connect to Web services through the AT's connection to a communications network like the Internet. For purposes of security, in one embodiment, the TCAP may connect to a remote server by employing a secure connection, e.g., HTTPS, VPN, and/or the like.

Upon displaying a login window 405, e.g., 205a, the user may select to register to access the TCAP and its services, or they may simply log in by providing security verification. In one example, security authorization may be granted by simply providing a user and password as provided through a registration process. In another embodiment, authorization may be granted through biometric data. For example, the TCAP may integrate a fingerprint and/or heat sensor IC into its housing. Employing such a device, and simply by providing one's finger print by laying your finger to the TCAP's surface, would provide the login facility with authorization if the user's finger print matches one that was stored during the registration process.

If the user does not attempt to login 415, i.e., if the user wishes to register to use the TCAP and its services, then the TCAP can determine if the AT is online 420. This may be accomplished in a number of ways. In one embodiment, the TCAP itself may simply ping a given server and if acknowledgement of receipt is received, the TCAP is online. In another embodiment, the TCAP can query for online status by engaging the AT through the installed APIs. If the AT is not online, then the user may be presented with an error message 425. Thus, if a user does not have a login, and does not have the ability to register, then restricted areas of the TCAP will remain unavailable. Thereafter, flow can continue 498 and the user may have another opportunity to login and/or register. In one embodiment as a login integrity check, the TCAP keeps track of the number of failed attempts to login and/or register and may lock-out all further access if a specified number of failed attempts occurs. In one

embodiment, the lockdown may be permanent by erasing all data on the TCAP. In another embodiment, the TCAP will disallow further attempts for a specified period of time.

If the user is attempting to register 415, and the AT is online 420, then the user map provide registration information 440 into a screen form 440a. Registration information fields may require a user's name, address, email address, credit card information, biometric information (e.g., requiring the user to touch a biometric fingerprint IC on the TCAP), and/or the like. The TCAP may determine if all the information was provided as required for registration and may query backend servers to determine if the user information is unique 445. If the user did not properly fill out the registration information or if another user is already registered, the TCAP can provided an error message to such effect. Also, both the TCAP and its back-end servers may make log entries tracking such failed attempts for purposes of defending against fraud and/or security breaches. The user may then modify the registration information 440 and again attempt to register. Similarly to the login integrity checks, the TCAP can lockout registration attempts if the user fails to register more than some specified number of times.

Upon providing proper registration information 445 or proper login authentication 415, the TCAP can query backend servers to see if the user is registered. In one embodiment, such verification may be achieved by sending a query to the servers to check its database for the authorization information and/or for duplicate registrations. The servers would then respond providing an acknowledgment of proper registration and authorization to access data on the backend servers. If the users are not registered on the backend servers 430, then the

TCAP can provide an error message to the user for display on the AT to such effect 435. In an alternative embodiment, the registration information may be stored on the TCAP itself. In one embodiment, the registration would be maintained in encrypted form. Thus, the user's login information may be checked relative to the information the TCAP itself, and if there is a match, access may be granted, otherwise an error message will be displayed 435. The TCAP may then continue 498 to operate as if it were just engaged to the AT.

If the user is confirmed to be registered 430, then the TCAP may provide options for display 453, 453a. Depending on the context and purpose of a particular TCAP, the options may vary. For example, the a screen 453a may provide the user with the options to access data either online or offline. The user might simply click on a button and gain secure access to such data that may be decrypted by the TCAP. In one embodiment, the TCAP will determine if the AT is online 455. If this was already determined 420, this check 455 may be skipped.

If the AT is online 455, optionally, the TCAP determines if the user wishes to synchronize the contents of the TCAP with storage facilities at the backend server 470. In one embodiment, the user may designate that such synchronization is to always take place. If synchronization is specified 470, then the TCAP will provide and receive updated data to and from the backend servers, overwriting older data with updated versions of the data 475. If the AT is online 455 and/or after any synchronization 475, the TCAP may provide the user with all of its service options as authorized by the account and programs available on the TCAP and at the backend server 480. Once again, these facilities, programs, and/or services may

vary greatly depending on the context and deployment requirements of the user. The options to be presented to the user from the TCAP or the TCAP services from the backend server, as displayed through the TCAP onto the AT's display 480, are myriad and some example embodiments are provided in Figures 5-8. Upon presenting the user with the options, the user is then able to access, execute, store data and programs on the TCAP and on the remote server 485. All areas of the TCAP and services are then open, including any encrypted data areas.

If the AT is not online 455, the TCAP may provide options for the user not including online services 460. In one embodiment, the online options that may be presented on the AT display will be dimmed and/or omitted to reflect the lack of accessibility. However, the user will be able to access, execute, store data and programs on the TCAP, including any encrypted data areas 465.

TCAP Facilities and Services

Figures 5-8 illustrate embodiments of facilities, programs, and/or services that the tunneling client access point and server may provide to the user as accessed through an AT. Any particular set of facilities may have a myriad of options. The options and the general nature of the facilities provided on any particular TCAP are dependant upon the requirements of a given set of users. For example, certain groups and/or agencies may require TCAPS to be targeted towards consumer photographs, and may employ TCAPs to further that end. Other groups may require high security facilities, and tailor the TCAPs accordingly. In various environments, an organization may wish to provide a secure infrastructure to all of its

agents for securely accessing the organization's data from anywhere and such an organization could tailor the TCAPs contents to reflect and respond to its needs. By providing a generalized infrastructure on the TCAP backend servers and within the TCAP by using a generalized processor, the TCAPs may be deployed in numerous environments.

In one particular embodiment as in Figure 5, the TCAP provides facilities to access, process, and store email, files, music, photos and videos through the TCAP. Upon engaging 101 of Figure 1 the TCAP 130 to an AT 307, the TCAP will mount and display through the AT's file browser window 125 of Figure 1. As has already described, in the case where the AT has no TCAP driver software, the user may double click on the installer software stored on the TCAP 507. Doing so will launch the installer software from the TCAP's memory to execute on the AT, and the user may be presented with a window to confirm the desire to install the TCAP software onto the AT 507. Upon confirming the install 507, the software will install on the AT and the user will be asked to wait as they are apprised of the install progress 509.

Upon installation, the TCAP front-end software may execute and present the user with various options in various and fanciful interface formats 511, 460, 480 of Figure 4. In one embodiment, these user interfaces and programs are Java applications that may execute on the AT and a present Java runtime. In an alternative embodiment, a small applet may run on the AT, but all other activities may execute on the TCAP's processor, which would use the AT display only as a display terminal. In the embodiment where the TCAP executes program instructions, the TCAP may be engaged to receive commands and execute by

receiving a signal from the access terminal driver instructing it to execute certain program files or, alternatively, looking to default location and executing program instructions. In yet another embodiment, the TCAP may obtain updated interfaces and programs from a backend server for execution either on the TCAP itself and/or the AT; this may be done by synchronization with the backend server and checking for updates of specified files at the backend server. By engaging the user interface, perhaps by clicking on a button to open the TCAP facilities and services 511, the interface may further unfurl to present options to access said facilities and services 513. Here, the interface may reflect ownership of the TCAP by providing a welcome screen and showing some resources available to the user; for example, a button entitled "My Stuff" may serve as a mechanism to advance the user to a screen where they may access their personal data store. At this point the user may attempt to login to access their data by engaging an appropriate button, which will take them to a screen that will accept login information 519. Alternatively, the user may also register if it is their first time using the TCAP by selecting an appropriate button, which will advance the user to a registration screen 515 wherein the user may enter their name, address, credit card information, etc. Upon successfully providing registration information, the user may be prompted for response to further solicitations on a follow-up screen 517. For example, depending on the services offered for a particular TCAP, the user may be provided certain perks like 5 MB of free online storage on a backend server, free photographic prints, free email access, and/or the like 517.

After the user is prompted to login 518 and successfully provides proper login information 519, or after successfully registering 515 and having responded to any solicitations 517, the user may be provided with general options 521 to access data stored on the TCAP itself 522 or in their online account 520 maintained on a backend server. For example, if the user selects the option to access their online storage 520, they may be presented with more options to interact with email, files, music, photos and videos that are available online 523. Perhaps if the user wished to check their email, the user might select to interact with their email, and a screen allowing them to navigate through their email account(s) would be presented 525. Such online access to data may be facilitated through http protocols whereby the TCAP applications send and receive data through http commands across a communications network interacting with the backend servers and/or other servers. Any received results may be parsed and imbedded in a GUI representation of a Java application. For example, the email facility may run as a Java applet 525 and may employ a POP mail protocol to pull data from a specified mail server to present to the user.

Similarly, many other facilities may be engaged by the user through the TCAP. In one embodiment, the user may drag 508 a file 506 onto a drag-and-drop zone 505 that is presented on the TCAP interface. Upon so doing, various drag-and-drop options may unfurl and present themselves to the user 550. It should be noted that the file may come from anywhere, i.e., from the AT, the TCAP, and/or otherwise. For example, upon dragging and dropping a graphics file, a user may be prompted with options to order prints, upload the file to an online storage space, save the file to the TCAP's memory space, cancel the action,

and/or the like 550. If the user sends the file for storage, or otherwise wishes to see and manage their data, an interface allowing for such management may be presented 555. The interface may organize and allow access to general data, picture, and music formats 554, provide usage statistics (e.g., free space, capacity, used space, etc.) 553, provide actions to manipulate and organize the data 552, provide status on storage usage on the TCAP 551 and online 549, and/or the like.

Should the user engage a user interface element indicating the wish to manipulate their picture data 548, the TCAP interface will update to allow more specific interaction with the user's photos 557. In such a screen, the user may select various stored pictures and then indicate a desire to order photo prints by engaging the appropriate user interface element 558. Should the user indicate their desire for prints 558, they will be presented with an updated interface allowing the specification of what graphics files they wish to have printed 559. In one embodiment, the users may drag-and-drop files into a drop zone, or otherwise engage file browsing mechanisms 560 that allow for the selection of desired files. Upon having identified the files for prints 559, a user may be presented with an interface allowing for the selection of print sizes and quantities 561. After making such specifications, the user may be required to provide shipping information 563 and information for payments 565. After providing the billing information to a backend server for processing and approval, the user may be presented with a confirmation interface allowing for editing of the order, providing confirmation of costs, and allowing for submission of a final order for the selected prints 567. Upon submitting the order, the TCAP will process the files for spooling to a backend server

that will accept the order and files, which will be developed as prints and the user's account will be charged accordingly. In one embodiment, all of the above order and image processing operations occur and execute on the TCAP CPU. For example, the TCAP may employ various rendering technologies, e.g., ghostscript, to allow it to read and save PDFs and other media formats.

Figure 6 goes on to illustrate embodiments and facets of the facilities of Figure 5. The TCAP interface allows the user to perform various actions at any given moment. As has already been discussed in Figure 5, the user may drag 508 a file 506 onto a drag and drop zone 505 so as to provide the file to the TCAP for further manipulation. As in 550 of Figure 5, the user may be presented with various options subsequent to a drag-and-drop operation. Also, the TCAP interface may provide visual feedback that files have been dropped in the drop zone by highlighting the drop zone 505b. Should the user wish, they may close the TCAP interface by engaging a close option 633. Also, the ability to change and/or update their personal information may be accessed through the TCAP interface 616, which would provide a form allowing the user to update their registration information 630. In one embodiment, should the user forget their login information, they may request login help 635 and the TCAP will send their authorization information to the last known email address and inform the user of same 640. Also, the TCAP interface may provide help facilities that may be accessed at any time by simply engaging a help facility user interface element 617. So doing will provide the user with help screen information as to how to interact with the TCAP's facilities 625.

Upon providing proper login information 619 and logging-in 619, the user may be presented with a welcome screen with various options to access their data 621 as has already been discussed in Figure 5, 521. By engaging a user interface element to access online storage 620, the user may be presented with various options to interact with online storage 623, 523 of Figure 5. Should the user wish to interact with data on the TCAP itself, the user may indicate so by engaging the appropriate user interface option 622. So doing will provide the user with further options related to data stored on the TCAP 655. The user may engage an option to view the storage contents 658 and the TCAP interface will provide a listing of the contents 662, which may be manipulated through selection and drag-and-drop operations with the files.

In one embodiment, the user may order prints of photos 657 from files that are on the TCAP itself. As discussed in Figure 5, the user may select files for which they desire prints 660. Here, the selected files will first be processed by the TCAP in preparation for sending to backend servers and file manipulations 670. The user may specify various attributes regarding the prints they desire, e.g., the size, number, cropping, red-eye correction, visual effects, and/or the like 661. In one embodiment, such processing occurs on the TCAP processor, while in other embodiments such processing can take place on the AT or backend server. Once again, the user may provide a shipping address 663, and make a final review to place the order 667. Upon committing to the order 667, the processed files are uploaded to the backend servers that will use the files to generate prints 690. A confirmation screen may then be provided to the user with an order number and other relevant information 695.

Figure 7 goes on to illustrate embodiments and facets of the facilities of Figures 5-6 as may apply in different environments. As is demonstrated, the look and feel of the TCAP interface is highly malleable and can serve in many environments. Figure 7 illustrates that even within a single organization, various environments might benefit from TCAPs and services tailored to serve such environments 733b-d. In this case TCAPs can serve in consumer 733b, industry trade 733c, corporate 733d, and/or the like environments.

As has already been discussed, initially in any of the environments, after engaging the TCAP to an AT, the user may be prompted to install the TCAP interface 705 and informed of the installation procedure 710. The user may then be presented with the installed TCAP interface 715, which may be activated by engaging an interface element to unfurl the interface, e.g., in this case by opening the top to a can of soda 717. Opening the interface will present the user with various options as 720, as has already been discussed in Figures 5-6. Similarly the user may login 725 or make a selection to register for various TCAP services and provide the requisite information in the provided form 730. Upon registering and/or logging-in 725, various options may be presented based upon the configuration of the TCAP. For example, if the TCAP was configured and tailored for consumers, then upon logging in 725 the consumer user might be presented 733a-b with various consumer related options 740. Similarly, if the TCAP were tailored for 733a, c the trade industry or 733a, d the corporate environment, options specific to the trade industry 770 and corporate environment 760 may be presented.

In one embodiment, an organization wishing to provide TCAPs to consumers might provide options 740 for free music downloads 743, free Internet radio streaming 748, free news (e.g., provided through an RSS feed from a server) 766, free photo printing 750, free email 740, free coupons 742, free online storage 741, and/or the like. Users could further engage such services (e.g., clicking free music file links for downloading to the TCAP, by ordering prints 750, etc. For example, the user may select files on the TCAP 750, select the types of photos they would like to receive 752, specify a delivery address 754, confirm the order 756 all of which will result in the TCAP processing the files and uploading them to the backend servers for generation of prints (as has already been discussed in Figures 5-6).

In another embodiment, an organization wishing to provide TCAPs to a trade industry might provide options 770 for advertising 780, events 775, promotions 772, and/or the like. It is important to note that information regarding such options may be stored either on the TCAP or at a backend server. In one embodiment, such information may be constantly synchronized from the backend servers to the TCAPs. This would allow an organization to provide updates to the trade industry to all authorized TCAP "key holders." In such an embodiment, the user may be presented with various advertising related materials for the organization, e.g., print, television, outdoor, radio, web, and/or the like 780. With regard to events, the user may be presented with various related materials for the organization, e.g., trade shows, music regional, sponsorship, Web, and/or the like 775. With regard to promotions, the user may be presented with various related materials for the organization, e.g., rebates, coupons, premiums, and/or the like 772.

In another embodiment, an organization wishing to provide TCAPs to those in the corporate environment and might provide options relating to various corporate entities 760. Selecting any of the corporate entities 760 may provide the user with options to view various reports, presentations, and/or the like, e.g., annual reports, 10K reports, and/or the like 765. Similarly, the reports may reside on the TCAP and/or the corporate TCAP can act as a security key allowing the user to see the latest corporate related materials from a remote backend server.

Figure 8 goes on to illustrate embodiments and facets of the facilities of Figures 5-7 as may apply in different environments. Figure 8 illustrates that TCAPs may serve to provide heightened security to any environment. As has been discussed in previous figures, users may engage the TCAP interface 805 to access various options 810. The TCAP interface is highly adaptable and various services may be presented within it. For example, a stock ticker may be provided as part of the interface in a financial setting 810. Any number of live data feeds may dynamically update on the face of the interface. Upon logging-in 815 or registering a new account 820, the user may be informed that communications that are taking place are secured 825. In one embodiment, various encryption formats may be used by the TCAP to send information securely to the backend servers. It is important to note that in such an embodiment, even if data moving out of the TCAP and across the AT were captured at the AT, such data would not be readable because the data was encrypted by the TCAP's processor. As such, the TCAP acts as a "key" and provides a plug-and-play VPN to users. Such functionality, heretofore, has been very difficult to set up and/or maintain. In this way,

all communications, options presented and views of user data are made available only to the TCAP with the proper decryption key. In heightened security environments, display of TCAP data is provided on the screen only in bitmapped format straight to the video memory of the AT and, therefore, is not stored anywhere else on the AT. This decreases the likelihood of capturing sensitive data. As such, the user may access their data on the TCAP and/or online 830 in a secure form whereby the user may navigate and interact with his/her data and various services 835 in a secure manner.

Tunneling Client Access Point Server Controller

Figure 9 illustrates one embodiment incorporated into a tunneling client access point server (TCAPS) controller 901. In this embodiment, the TCAP controller 901 may serve to process, store, search, serve, identify, instruct, generate, match, and/or update data in conjunction with a TCAP (see Figure 10 for more details on the TCAP). TCAPS act as backend servers to TCAPs, wherein TCAPS provide storage and/or processing resources to great and/or complex for the TCAP to service itself. In effect, the TCAPS transparently extend the capacity of a TCAP.

In one embodiment, the TCAPS controller 901 may be connected to and/or communicate with entities such as, but not limited to: one or more users from user input devices 911; peripheral devices 912; and/or a communications network 913. The TCAPS controller may even be connected to and/or communicate with a cryptographic processor device 928.

A TCAPS controller 901 may be based on common computer systems that may comprise, but are not limited to, components such as: a computer systemization 902 connected to memory 929.

Computer Systemization

A computer systemization 902 may comprise a clock 930, central processing unit (CPU) 903, a read only memory (ROM) 906, a random access memory (RAM) 905, and/or an interface bus 907, and most frequently, although not necessarily, are all interconnected and/or communicating through a system bus 904. Optionally, a cryptographic processor 926 may be connected to the system bus. The system clock typically has a crystal oscillator and provides a base signal. The clock is typically coupled to the system bus and various clock multipliers that will increase or decrease the base operating frequency for other components interconnected in the computer systemization. The clock and various components in a computer systemization drive signals embodying information throughout the system. Such transmission and reception of signals embodying information throughout a computer systemization may be commonly referred to as communications. These communicative signals may further be transmitted, received, and the cause of return and/or reply signal communications beyond the instant computer systemization to: communications networks, input devices, other computer systemizations, peripheral devices, and/or the like. Of course, any of the above components may be connected directly to one another, connected to the CPU, and/or organized in numerous variations employed as exemplified by various computer systems.

The CPU comprises at least one high-speed data processor adequate to execute program modules for executing user and/or system-generated requests. The CPU may be a microprocessor such as AMD's Athlon, Duron and/or Opteron; IBM and/or Motorola's PowerPC; Intel's Celeron, Itanium, Pentium and/or Xeon; and/or the like processor(s). The CPU interacts with memory through signal passing through conductive conduits to execute stored program code according to conventional data processing techniques. Such signal passing facilitates communication within the TCAPS controller and beyond through various interfaces. Should processing requirements dictate a greater amount speed, mainframe and super computer architectures may similarly be employed.

Interface Adapters

Interface bus(ses) 907 may accept, connect, and/or communicate to a number of interface adapters, conventionally although not necessarily in the form of adapter cards, such as but not limited to: input output interfaces (I/O) 908, storage interfaces 909, network interfaces 910, and/or the like. Optionally, cryptographic processor interfaces 927 similarly may be connected to the interface bus. The interface bus provides for the communications of interface adapters with one another as well as with other components of the computer systemization. Interface adapters are adapted for a compatible interface bus. Interface adapters conventionally connect to the interface bus via a slot architecture. Conventional slot architectures may be employed, such as, but not limited to: Accelerated Graphics Port (AGP), Card Bus, (Extended) Industry Standard Architecture ((E)ISA), Micro Channel

Architecture (MCA), NuBus, Peripheral Component Interconnect (Extended) (PCI(X)), Personal Computer Memory Card International Association (PCMCIA), and/or the like.

Storage interfaces 909 may accept, communicate, and/or connect to a number of storage devices such as, but not limited to: storage devices 914, removable disc devices, and/or the like. Storage interfaces may employ connection protocols such as, but not limited to: (Ultra) (Serial) Advanced Technology Attachment (Packet Interface) ((Ultra) (Serial) ATA(PI)), (Enhanced) Integrated Drive Electronics ((E)IDE), Institute of Electrical and Electronics Engineers (IEEE) 1394, fiber channel, Small Computer Systems Interface (SCSI), Universal Serial Bus (USB), and/or the like.

Network interfaces 910 may accept, communicate, and/or connect to a communications network 913. Network interfaces may employ connection protocols such as, but not limited to: direct connect, Ethernet (thick, thin, twisted pair 10/100/1000 Base T, and/or the like), Token Ring, wireless connection such as IEEE 802.11a-x, and/or the like. A communications network may be any one and/or the combination of the following: a direct interconnection; the Internet; a Local Area Network (LAN); a Metropolitan Area Network (MAN); an Operating Missions as Nodes on the Internet (OMNI); a secured custom connection; a Wide Area Network (WAN); a wireless network (e.g., employing protocols such as, but not limited to a Wireless Application Protocol (WAP), I-mode, and/or the like); and/or the like. A network interface may be regarded as a specialized form of an input output interface. Further, multiple network interfaces 910 may be used to engage with various

communications network types 913. For example, multiple network interfaces may be employed to allow for the communication over broadcast, multicast, and/or unicast networks.

Input Output interfaces (I/O) 908 may accept, communicate, and/or connect to user input devices 911, peripheral devices 912, cryptographic processor devices 928, and/or the like. I/O may employ connection protocols such as, but not limited to: Apple Desktop Bus (ADB); Apple Desktop Connector (ADC); audio: analog, digital, monaural, RCA, stereo, and/or the like; IEEE 1394a-b; infrared; joystick; keyboard; midi; optical; PC AT; PS/2; parallel; radio; serial; USB; video interface: BNC, composite, digital, Digital Visual Interface (DVI), RCA, S-Video, VGA, and/or the like; wireless; and/or the like. A common output device is a video display, which typically comprises a Cathode Ray Tube (CRT) or Liquid Crystal Display (LCD) based monitor with an interface (e.g., DVI circuitry and cable) that accepts signals from a video interface. The video interface composites information generated by a computer systemization and generates video signals based on the composited information in a video memory frame. Typically, the video interface provides the composited video information through a video connection interface that accepts a video display interface (e.g., a DVI connector accepting a DVI display cable).

User input devices 911 may be card readers, dongles, finger print readers, gloves, graphics tablets, joysticks, keyboards, mouse (mice), trackballs, trackpads, retina readers, and/or the like.

Peripheral devices 912 may be connected and/or communicate to I/O and/or other facilities of the like such as network interfaces, storage interfaces, and/or the like. Peripheral

devices may be audio devices, cameras, dongles (e.g., for copy protection, ensuring secure transactions with a digital signature, and/or the like), external processors (for added functionality), goggles, microphones, monitors, network interfaces, printers, scanners, storage devices, video devices, visors, and/or the like.

It should be noted that although user input devices and peripheral devices may be employed, the TCAPS controller may be embodied as an embedded, dedicated, and/or headless device, wherein access would be provided over a network interface connection.

Cryptographic units such as, but not limited to, microcontrollers, processors 926, interfaces 927, and/or devices 928 may be attached, and/or communicate with the TCAPS controller. A MC68HC16 microcontroller, commonly manufactured by Motorola Inc., may be used for and/or within cryptographic units. Equivalent microcontrollers and/or processors may also be used. The MC68HC16 microcontroller utilizes a 16-bit multiply-and-accumulate instruction in the 16 MHz configuration and requires less than one second to perform a 512-bit RSA private key operation. Cryptographic units support the authentication of communications from interacting agents, as well as allowing for anonymous transactions. Cryptographic units may also be configured as part of CPU. Other commercially available specialized cryptographic processors include VLSI Technology's 33 MHz 6868 or Semaphore Communications' 40 MHz Roadrunner 184.

Memory

Generally, any mechanization and/or embodiment allowing a processor to affect the storage and/or retrieval of information is regarded as memory 929. However, memory is a

fungible technology and resource, thus, any number of memory embodiments may be employed in lieu of or in concert with one another. It is to be understood that a TCAPS controller and/or a computer systemization may employ various forms of memory 929. For example, a computer systemization may be configured wherein the functionality of on-chip CPU memory (e.g., registers), RAM, ROM, and any other storage devices are provided by a paper punch tape or paper punch card mechanism; of course such an embodiment would result in an extremely slow rate of operation. In a typical configuration, memory 929 will include ROM 906, RAM 905, and a storage device 914. A storage device 914 may be any conventional computer system storage. Storage devices may include a drum; a (fixed and/or removable) magnetic disk drive; a magneto-optical drive; an optical drive (i.e., CD ROM/RAM/Recordable (R), ReWritable (RW), DVD R/RW, etc.); and/or other devices of the like. Thus, a computer systemization generally requires and makes use of memory.

Module Collection

The memory 929 may contain a collection of program and/or database modules and/or data such as, but not limited to: operating system module(s) 915 (operating system); information server module(s) 916 (information server); user interface module(s) 917 (user interface); Web browser module(s) 918 (Web browser); database(s) 919; cryptographic server module(s) 920 (cryptographic server); TCAPS module(s) 935; and/or the like (i.e., collectively a module collection). These modules may be stored and accessed from the storage devices and/or from storage devices accessible through an interface bus. Although non-conventional software modules such as those in the module collection, typically, are

stored in a local storage device 914, they may also be loaded and/or stored in memory such as: peripheral devices, RAM, remote storage facilities through a communications network, ROM, various forms of memory, and/or the like.

Operating System

The operating system module 915 is executable program code facilitating the operation of a TCAPS controller. Typically, the operating system facilitates access of I/O, network interfaces, peripheral devices, storage devices, and/or the like. The operating system may be a highly fault tolerant, scalable, and secure system such as Apple Macintosh OS X (Server), AT&T Plan 9, Be OS, Linux, Unix, and/or the like operating systems. However, more limited and/or less secure operating systems also may be employed such as Apple Macintosh OS, Microsoft DOS, Palm OS, Windows 2000/2003/3.1/95/98/CE/Millenium/NT/XP (Server), and/or the like. An operating system may communicate to and/or with other modules in a module collection, including itself, and/or the like. Most frequently, the operating system communicates with other program modules, user interfaces, and/or the like. For example, the operating system may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses. The operating system, once executed by the CPU, may enable the interaction with communications networks, data, I/O, peripheral devices, program modules, memory, user input devices, and/or the like. The operating system may provide communications protocols that allow the TCAPS controller to communicate with other entities through a communications network 913. Various communication

protocols may be used by the TCAPS controller as a subcarrier transport mechanism for interaction, such as, but not limited to: multicast, TCP/IP, UDP, unicast, and/or the like.

Information Server

An information server module 916 is stored program code that is executed by the CPU. The information server may be a conventional Internet information server such as, but not limited to Apache Software Foundation's Apache, Microsoft's Internet Information Server, and/or the. The information server may allow for the execution of program modules through facilities such as Active Server Page (ASP), ActiveX, (ANSI) (Objective-) C (++), Common Gateway Interface (CGI) scripts, Java, JavaScript, Practical Extraction Report Language (PERL), Python, WebObjects, and/or the like. The information server may support secure communications protocols such as, but not limited to, File Transfer Protocol (FTP); HyperText Transfer Protocol (HTTP); Secure Hypertext Transfer Protocol (HTTPS), Secure Socket Layer (SSL), and/or the like. The information server provides results in the form of Web pages to Web browsers, and allows for the manipulated generation of the Web pages through interaction with other program modules. After a Domain Name System (DNS) resolution portion of an HTTP request is resolved to a particular information server, the information server resolves requests for information at specified locations on a TCAPS controller based on the remainder of the HTTP request. For example, a request such as http://123.124.125.126/myInformation.html might have the IP portion of the request "123.124.125.126" resolved by a DNS server to an information server at that IP address; that information server might in turn further parse the http request for the "/myInformation.html"

portion of the request and resolve it to a location in memory containing the information "myInformation.html." Additionally, other information serving protocols may be employed across various ports, e.g., FTP communications across port 21, and/or the like. An information server may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the information server communicates with the TCAPS database 919, operating systems, other program modules, user interfaces, Web browsers, and/or the like.

Access to TCAPS database may be achieved through a number of database bridge mechanisms such as through scripting languages as enumerated below (e.g., CGI) and through inter-application communication channels as enumerated below (e.g., CORBA, WebObjects, etc.). Any data requests through a Web browser are parsed through the bridge mechanism into appropriate grammars as required by the TCAP. In one embodiment, the information server would provide a Web form accessible by a Web browser. Entries made into supplied fields in the Web form are tagged as having been entered into the particular fields, and parsed as such. The entered terms are then passed along with the field tags, which act to instruct the parser to generate queries directed to appropriate tables and/or fields. In one embodiment, the parser may generate queries in standard SQL by instantiating a search string with the proper join/select commands based on the tagged text entries, wherein the resulting command is provided over the bridge mechanism to the TCAPS as a query. Upon generating query results from the query, the results are passed over the bridge mechanism, and may be parsed for formatting and generation of a new results Web page by the bridge

mechanism. Such a new results Web page is then provided to the information server, which may supply it to the requesting Web browser.

Also, an information server may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

User Interface

A user interface module 917 is stored program code that is executed by the CPU. The user interface may be a conventional graphic user interface as provided by, with, and/or atop operating systems and/or operating environments such as Apple Macintosh OS, e.g., Aqua, Microsoft Windows (NT/XP), Unix X Windows (KDE, Gnome, and/or the like), and/or the like. The user interface may allow for the display, execution, interaction, manipulation, and/or operation of program modules and/or system facilities through textual and/or graphical facilities. The user interface provides a facility through which users may affect, interact, and/or operate a computer system. A user interface may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the user interface communicates with operating systems, other program modules, and/or the like. The user interface may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

Web Browser

A Web browser module 918 is stored program code that is executed by the CPU. The Web browser may be a conventional hypertext viewing application such as Microsoft Internet Explorer or Netscape Navigator. Secure Web browsing may be supplied with 128bit (or greater) encryption by way of HTTPS, SSL, and/or the like. Some Web browsers allow for the execution of program modules through facilities such as Java, JavaScript, ActiveX, and/or the like. Web browsers and like information access tools may be integrated into PDAs, cellular telephones, and/or other mobile devices. A Web browser may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the Web browser communicates with information servers, operating systems, integrated program modules (e.g., plug-ins), and/or the like; e.g., it may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses. Of course, in place of a Web browser and information server, a combined application may be developed to perform similar functions of both. The combined application would similarly affect the obtaining and the provision of information to users, user agents, and/or the like from TCAPS enabled nodes. The combined application may be nugatory on systems employing standard Web browsers.

TCAPS Database

A TCAPS database module 919 may be embodied in a database and its stored data. The database is stored program code, which is executed by the CPU; the stored program code portion configuring the CPU to process the stored data. The database may be a conventional,

fault tolerant, relational, scalable, secure database such as Oracle or Sybase. Relational databases are an extension of a flat file. Relational databases consist of a series of related tables. The tables are interconnected via a key field. Use of the key field allows the combination of the tables by indexing against the key field; i.e., the key fields act as dimensional pivot points for combining information from various tables. Relationships generally identify links maintained between tables by matching primary keys. Primary keys represent fields that uniquely identify the rows of a table in a relational database. More precisely, they uniquely identify rows of a table on the "one" side of a one-to-many relationship.

Alternatively, the TCAPS database may be implemented using various standard data-structures, such as an array, hash, (linked) list, struct, structured text file (e.g., XML), table, and/or the like. Such data-structures may be stored in memory and/or in (structured) files. In another alternative, an object-oriented database may be used, such as Frontier, ObjectStore, Poet, Zope, and/or the like. Object databases can include a number of object collections that are grouped and/or linked together by common attributes; they may be related to other object collections by some common attributes. Object-oriented databases perform similarly to relational databases with the exception that objects are not just pieces of data but may have other types of functionality encapsulated within a given object. If the TCAPS database is implemented as a data-structure, the use of the TCAPS database may be integrated into another module such as the TCAPS module. Also, the database may be implemented as a mix of data structures, objects, and relational structures. Databases may be consolidated

and/or distributed in countless variations through standard data processing techniques. Portions of databases, e.g., tables, may be exported and/or imported and thus decentralized and/or integrated. In one embodiment, the database module 919 includes three tables 919a-c. A user accounts table 919a includes fields such as, but not limited to: a user name, user address, user authorization information (e.g., user name, password, biometric data, etc.), user credit card, organization, organization account, TCAP unique identifier, account creation data, account expiration date; and/or the like. In one embodiment, user accounts may be activated only for set amounts of time and will then expire once a specified date has been reached. An user data table 919b includes fields such as, but not limited to: a TCAP unique identifier, backup image, data store, organization account, and/or the like. A user programs table 919c includes fields such as, but not limited to: system programs, organization programs, programs to be synchronized, and/or the like. In one embodiment, user programs may contain various user interface primitives, which may serve to update TCAPs. Also, various accounts may require custom database tables depending upon the environments and the types of TCAPs a TCAPS may need to serve. It should be noted that any unique fields may be designated as a key field throughout. In an alternative embodiment, these tables have been decentralized into their own databases and their respective database controllers (i.e., individual database controllers for each of the above tables). Employing standard data processing techniques, one may further distribute the databases over several computer systemizations and/or storage devices. Similarly, configurations of the decentralized database controllers may be varied by consolidating and/or distributing the various database modules

919a-c. The TCAPS may be configured to keep track of various settings, inputs, and parameters via database controllers.

A TCAPS database may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the TCAPS database communicates with a TCAPS module, other program modules, and/or the like. The database may contain, retain, and provide information regarding other nodes and data.

Cryptographic Server

A cryptographic server module 920 is stored program code that is executed by the CPU 903, cryptographic processor 926, cryptographic processor interface 927, cryptographic processor device 928, and/or the like. Cryptographic processor interfaces will allow for expedition of encryption and/or decryption requests by the cryptographic module; however, the cryptographic module, alternatively, may run on a conventional CPU. The cryptographic module allows for the encryption and/or decryption of provided data. The cryptographic module allows for both symmetric and asymmetric (e.g., Pretty Good Protection (PGP)) encryption and/or decryption. The cryptographic module may employ cryptographic techniques such as, but not limited to: digital certificates (e.g., X.509 authentication framework), digital signatures, dual signatures, enveloping, password access protection, public key management, and/or the like. The cryptographic module will facilitate numerous (encryption and/or decryption) security protocols such as, but not limited to: checksum, Data Encryption Standard (DES), Elliptical Curve Encryption (ECC), International Data Encryption Algorithm (IDEA), Message Digest 5 (MD5, which is a one way hash function),

passwords, Rivest Cipher (RC5), Rijndael, RSA (which is an Internet encryption and authentication system that uses an algorithm developed in 1977 by Ron Rivest, Adi Shamir, and Leonard Adleman), Secure Hash Algorithm (SHA), Secure Socket Layer (SSL), Secure Hypertext Transfer Protocol (HTTPS), and/or the like. Employing such encryption security protocols, the TCAPS may encrypt all incoming and/or outgoing communications and may serve as node within a virtual private network (VPN) with a wider communications network. The cryptographic module facilitates the process of "security authorization" whereby access to a resource is inhibited by a security protocol wherein the cryptographic module effects authorized access to the secured resource. In addition, the cryptographic module may provide unique identifiers of content, e.g., employing and MD5 hash to obtain a unique signature for an digital audio file. A cryptographic module may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. The cryptographic module supports encryption schemes allowing for the secure transmission of information across a communications network to enable a TCAPS module to engage in secure transactions if so desired. The cryptographic module facilitates the secure accessing of resources on TCAPS and facilitates the access of secured resources on remote systems; i.e., it may act as a client and/or server of secured resources. Most frequently, the cryptographic module communicates with information servers, operating systems, other program modules, and/or the like. The cryptographic module may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

TCAPS

A TCAPS module 935 is stored program code that is executed by the CPU. The TCAPS affects accessing, obtaining and the provision of information, services, transactions, and/or the like across various communications networks. The TCAPS enables TCAP users to simply access data and/or services across a communications network in a secure manner. The TCAPS extends the storage and processing capacities and capabilities of TCAPs. The TCAPS coordinates with the TCAPS database to identify interassociated items in the generation of entries regarding any related information. A TCAPS module enabling access of information between nodes may be developed by employing standard development tools such as, but not limited to: (ANSI) (Objective-) C (++), Apache modules, binary executables, Java, Javascript, mapping tools, procedural and object oriented development tools, PERL, Python, shell scripts, SQL commands, web application server extensions, WebObjects, and/or the like. In one embodiment, the TCAPS server employs a cryptographic server to encrypt and decrypt communications. A TCAPS module may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the TCAPS module communicates with a TCAPS database, operating systems, other program modules, and/or the like. The TCAPS may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

Distributed TCAP

The structure and/or operation of any of the TCAPS node controller components may be combined, consolidated, and/or distributed in any number of ways to facilitate development and/or deployment. Similarly, the module collection may be combined in any number of ways to facilitate deployment and/or development. To accomplish this, one may integrate the components into a common code base or in a facility that can dynamically load the components on demand in an integrated fashion.

The module collection may be consolidated and/or distributed in countless variations through standard data processing and/or development techniques. Multiple instances of any one of the program modules in the program module collection may be instantiated on a single node, and/or across numerous nodes to improve performance through load-balancing and/or data-processing techniques. Furthermore, single instances may also be distributed across multiple controllers and/or storage devices; e.g., databases. All program module instances and controllers working in concert may do so through standard data processing communication techniques.

The configuration of the TCAPS controller will depend on the context of system deployment. Factors such as, but not limited to, the budget, capacity, location, and/or use of the underlying hardware resources may affect deployment requirements and configuration. Regardless of if the configuration results in more consolidated and/or integrated program modules, results in a more distributed series of program modules, and/or results in some combination between a consolidated and distributed configuration, data may be

communicated, obtained, and/or provided. Instances of modules consolidated into a common code base from the program module collection may communicate, obtain, and/or provide data. This may be accomplished through intra-application data processing communication techniques such as, but not limited to: data referencing (e.g., pointers), internal messaging, object instance variable communication, shared memory space, variable passing, and/or the like.

If module collection components are discrete, separate, and/or external to one another, then communicating, obtaining, and/or providing data with and/or to other module components may be accomplished through inter-application data processing communication techniques such as, but not limited to: Application Program Interfaces (API) information passage; (distributed) Component Object Model ((D)COM), (Distributed) Object Linking and Embedding ((D)OLE), and/or the like), Common Object Request Broker Architecture (CORBA), process pipes, shared files, and/or the like. Messages sent between discrete module components for inter-application communication or within memory spaces of a singular module for intra-application communication may be facilitated through the creation and parsing of a grammar. A grammar may be developed by using standard development tools such as lex, yacc, and/or the like, which allow for grammar generation and parsing functionality, which in turn may form the basis of communication messages within and between modules. Again, the configuration will depend upon the context of system deployment.

Tunneling Client Access Point Controller

Figure 10 illustrates one embodiment incorporated into a tunneling client access point (TCAP) controller 1001. Much of the description of the TCAPS of Figure 9 applies to the TCAP, and as such, the disclosure focuses more upon the variances exhibited in the TCAP. In this embodiment, the TCAP controller 1001 may serve to process, store, search, identify, instruct, generate, match, and/or update data within itself, at a TCAPS, and/or through an AT.

The first and foremost difference between the TCAP and the TCAPS is that the TCAP is very small as was shown 130 of Figure 1. The TCAP may be packaged in plugin sticks, often, smaller than the size of a human thumb. In one embodiment, a TCAP may be hardened for military use. In such an embodiment, the shell 1001 may be composed of metal, and/or other durable composites. Also, components within may be shielded from radiation.

In one embodiment, the TCAP controller 1001 may be connected to and/or communicate with entities such as, but not limited to: one or more users from an access terminal 1011b. The access terminal itself may be connected to peripherals such as user input devices (e.g., keyboard 1012a, mouse 1012b, etc.); and/or a communications network 1013 in manner similar to that described in Figure 9.

A TCAP controller 1001 may be based on common computer systems components that may comprise, but are not limited to, components such as: a computer systemization 1002 connected to memory 1029. Optionally, the TCAP controller 1001 may convey information 1058, produce output through an output device 1048, and obtain input from control device 1018.

Control Device

The control device 1018 may be optionally provided to accept user input to control access to the TCAP controller. In one embodiment, the control device may provide a keypad 1028. Such a keypad would allow the user to enter passwords, personal identification numbers (PIN), and/or the like.

In an alternative embodiment, the control device may include a security device 1038. In one embodiment, the security device is a fingerprint integrated circuit (fingerprint IC) that provides biometric fingerprint information such as, but not limited to AuthenTec Inc.'s FingerLoc™ AF-S2™. Either a fingerprint IC and/or other biometric device will provide biometric validation information that may be used to confirm the identity of a TCAP user and ensure that transactions are legitimate. In alternative embodiments, a simple button, heat sensor, and/or other type of user input functionality may be provided solely and/or in concert with other types of control device types. The control device may be connected to the I/O interface, the system bus, or the CPU directly.

The output device 1048 is used to provide status information to the user. In one alternative embodiment, the output device is an LCD panel capable of providing alpha numeric and/or graphic displays. In an alternative embodiment, the output device may be a speaker providing audible signals indicating errors and/or actually streaming information that is audible to the user, such as voice alerts. The output device may be connected to the I/O interface, the system bus, or the CPU directly.

The conveyance information 1058 component of the TCAP controller may include any number of indicia representing the TCAP's source on the cover 1001. Source conveying indicia may include, but is not limited to: an owner name 1059 for readily verifying a TCAP user; a photo of the owner 1060 for readily verifying a TCAP controller owner; mark designating the source that issued the TCAP 1061, 1001 such as a corporate logo, and/or the like; fanciful design information 1062 for enhancing the visual appearance of the TCAP; and/or the like. It should be noted that the conveyance information 11421 may be positioned anywhere on the cover 1189.

Computer Systemization

A computer systemization 1002 may comprise a clock 1030, central processing unit (CPU) 1003, a read only memory (ROM) 1006, a random access memory (RAM) 1005, and/or an interface bus 1007, and most frequently, although not necessarily, are all interconnected and/or communicating through a system bus 1004. Optionally the computer systemization may be connected to an internal power source 1086. Optionally, a cryptographic processor 1026 may be connected to the system bus. The system clock typically has a crystal oscillator and provides a base signal. Of course, any of the above components may be connected directly to one another, connected to the CPU, and/or organized in numerous variations employed as exemplified by various computer systems.

The CPU comprises at least one low-power data processor adequate to execute program modules for executing user and/or system-generated requests. The CPU may be a

microprocessor such as ARM's Application Cores, Embedded Cores, Secure Cores; Motorola's DragonBall; and/or the like processor(s).

Power Source

The power source 1086 may be of any standard form for powering small electronic circuit board devices such as but not limited to: alkaline, lithium hydride, lithium ion, nickel cadmium, solar cells, and/or the like. In the case of solar cells, the case provides an aperture through which the solar cell protrudes are to receive photonic energy. The power cell 1086 is connected to at least one of the interconnected subsequent components of the TCAP thereby providing an electric current to all subsequent components. In one example, the power cell 1086 is connected to the system bus component 1004. In an alternative embodiment, an outside power source 1086 is provided through a connection across the I/O 1008 interface. For example, a USB and/or IEEE 1394 connection carries both data and power across the connection and is therefore a suitable source of power.

Interface Adapters

Interface bus(ses) 1007 may accept, connect, and/or communicate to a number of interface adapters, conventionally although not necessarily in the form of adapter cards, such as but not limited to: input output interfaces (I/O) 1008, storage interfaces 1009, network interfaces 1010, and/or the like. Optionally, cryptographic processor interfaces 1027 similarly may be connected to the interface bus. The interface bus provides for the communications of interface adapters with one another as well as with other components of the computer systemization. Interface adapters are adapted for a compatible interface bus. In

one embodiment, the interface bus provides I/O 1008 via a USB port. In an alternative embodiment, the interface bus provides I/O via an IEEE 1394 port. In an alternative embodiment, wireless transmitters are employed by interfacing wireless protocol integrated circuits (ICs) for I/O via the interface bus 1007.

Storage interfaces 1009 may accept, communicate, and/or connect to a number of storage devices such as, but not limited to: storage devices 1014, removable disc devices, and/or the like. Storage interfaces may employ connection protocols such as, but not limited to a flash memory connector, and/or the like. In one embodiment, an optional network interface may be provide 1010.

Input Output interfaces (I/O) 1008 may accept, communicate, and/or connect to an access terminal 1011b. I/O may employ connection protocols such as, but not limited to: Apple Desktop Bus (ADB); Apple Desktop Connector (ADC); IEEE 1394a-b; infrared; PC AT; PS/2; parallel; radio; serial; USB, and/or the like; wireless component; and/or the like.

Wireless Component

In one embodiment a wireless component may comprise a Bluetooth chip disposed in communication with a transceiver 1043 and a memory 1029 through the interface bus 1007 and/or system bus 1004. The transceiver may be either external to the Bluetooth chip, or integrated within the Bluetooth chip itself. The transceiver is a radio frequency (RF) transceiver operating in the range as required for Bluetooth transmissions. Further, the Bluetooth chip 1044 may integrate an input/output interface (I/O) 1066. The Bluetooth chip and its I/O may be configured to interface with the TCAP controller through the interface

bus, the system buss, and/or directly with the CPU. The I/O may be used to interface with other components such as an access terminal 1011b equipped with similar wireless capabilities. In one embodiment, the TCAP may optionally interconnect wirelessly with a peripheral device 912 and/or a control device 911 of Figure 9. In one example embodiment, the I/O may be based on serial line technologies, a universal serial bus (USB) protocol, and/or the like. In an alternative embodiment, the I/O may be based on the ISO 7816-3 standard. It should be noted that the Bluetooth chip in an alternative embodiment may be replaced with an IEEE 802.11b wireless chip. In another embodiment, both a Bluetooth chip and an IEEE 802.11b wireless chip may be used to communicate and or bridge communications with respectively enabled devices. It should further be noted that the transceiver 1043 may be used to wirelessly communicate with other devices powered by Bluetooth chips and/or IEEE 802.11b chips and/or the like. The ROM can provide a basic instruction set enabling the Bluetooth chip to use its I/O to communicate with other components. A number of Bluetooth chips are commercially available, and may be used as a Bluetooth chip in the wireless component, such as, but not limited to, CSR's BlueCore line of chips. If IEEE 802.11b functionality is required, a number of chips are commercially available for the wireless component as well.

Cryptographic units such as, but not limited to, microcontrollers, processors 1026, and/or interfaces 1027 may be attached, and/or communicate with the TCAP controller. A Secure Core component commonly manufactured by ARM, Inc. and may be used for and/or within cryptographic units.

Memory

Generally, any mechanization and/or embodiment allowing a processor to affect the storage and/or retrieval of information is regarded as memory 1029. However, memory is a fungible technology and resource, thus, any number of memory embodiments may be employed in lieu of or in concert with one another. It is to be understood that a TCAP controller and/or a computer systemization may employ various forms of memory 1029. In a typical configuration, memory 1029 will include ROM 1006, RAM 1005, and a storage device 1014. A storage device 1014 may be any conventional computer system storage. Storage devices may include flash memory, micro hard drives, and/or the like.

Module Collection

The memory 1029 may contain a collection of program and/or database modules and/or data such as, but not limited to: operating system module(s) 1015 (operating system); information server module(s) 1016 (information server); user interface module(s) 1017 (user interface); Web browser module(s) 1018 (Web browser); database(s) 1019; cryptographic server module(s) 1020 (cryptographic server); access terminal module 1021; TCAP module(s) 1035; and/or the like (i.e., collectively a module collection). These modules may be stored and accessed from the storage devices and/or from storage devices accessible through an interface bus. Although non-conventional software modules such as those in the module collection, typically, are stored in a local storage device 1014, they may also be loaded and/or stored in memory such as: peripheral devices, RAM, remote storage facilities through an access terminal, communications network, ROM, various forms of memory,

and/or the like. In one embodiment, all data stored in memory is encrypted by employing the cryptographic server 1020 as described in further detail below. In one embodiment, the ROM contains a unique TCAP identifier. For example, the TCAP may contain a unique digital certificate, number, and/or the like, which may be used for purposes of verification and encryption across a network and/or in conjunction with a TCAPS.

Operating System

The operating system module 1015 is executable program code facilitating the operation of a TCAP controller. Typically, the operating system facilitates access of I/O, network interfaces, peripheral devices, storage devices, and/or the like. The operating system may be a highly fault tolerant, scalable, and secure system such as Linux, and/or the like operating systems. However, more limited and/or less secure operating systems also may be employed such as Java runtime OS, and/or the like. An operating system may communicate to and/or with other modules in a module collection, including itself, and/or the like. Most frequently, the operating system communicates with other program modules, user interfaces, and/or the like. For example, the operating system may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses. The operating system, once executed by the CPU, may enable the interaction with an access terminal, communications networks, data, I/O, peripheral devices, program modules, memory, user input devices, and/or the like. The operating system may provide communications protocols that allow the TCAP controller to communicate with other entities through an access terminal. Various communication protocols may be used by

the TCAP controller as a subcarrier transport mechanism for interaction, such as, but not limited to: TCP/IP, USB, and/or the like.

Information Server

An information server module 1016 is stored program code that is executed by the CPU. The information server may be a conventional Internet information server such as, but not limited to Apache Software Foundation's Apache, and/or the like. The information server may allow for the execution of program modules through facilities such as Active Server Page (ASP), ActiveX, (ANSI) (Objective-) C (++), Common Gateway Interface (CGI) scripts, Java, JavaScript, Practical Extraction Report Language (PERL), Python, WebObjects, and/or the like. The information server may support secure communications protocols such as, but not limited to, File Transfer Protocol (FTP); HyperText Transfer Protocol (HTTP); Secure Hypertext Transfer Protocol (HTTPS), Secure Socket Layer (SSL), and/or the like. The information server provides results in the form of Web pages to Web browsers, and allows for the manipulated generation of the Web pages through interaction with other program modules. An information server may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the information server communicates with the TCAP database 1019, operating systems, other program modules, user interfaces, Web browsers, and/or the like.

Access to TCAP database may be achieved through a number of database bridge mechanisms such as through scripting languages as enumerated below (e.g., CGI) and through inter-application communication channels as enumerated below (e.g., CORBA,

WebObjects, etc.). Any data requests through a Web browser are parsed through the bridge mechanism into appropriate grammars as required by the TCAP. In one embodiment, the information server would provide a Web form accessible by a Web browser. Entries made into supplied fields in the Web form are tagged as having been entered into the particular fields, and parsed as such. The entered terms are then passed along with the field tags, which act to instruct the parser to generate queries directed to appropriate tables and/or fields. In one embodiment, the parser may generate queries in standard SQL by instantiating a search string with the proper join/select commands based on the tagged text entries, wherein the resulting command is provided over the bridge mechanism to the TCAP as a query. Upon generating query results from the query, the results are passed over the bridge mechanism, and may be parsed for formatting and generation of a new results Web page by the bridge mechanism. Such a new results Web page is then provided to the information server, which may supply it to the requesting Web browser.

Also, an information server may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

User Interface

A user interface module 1017 is stored program code that is executed by the CPU. The user interface may be a conventional graphic user interface as provided by, with, and/or atop operating systems and/or operating environments such as Apple Macintosh OS, e.g., Aqua, Microsoft Windows (NT/XP), Unix X Windows (KDE, Gnome, and/or the like),

and/or the like. The TCAP may employ code natively compiled for various operating systems, or code compiled using Java. The user interface may allow for the display, execution, interaction, manipulation, and/or operation of program modules and/or system facilities through textual and/or graphical facilities. The user interface provides a facility through which users may affect, interact, and/or operate a computer system. A user interface may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the user interface communicates with operating systems, other program modules, and/or the like. The user interface may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

Web Browser

A Web browser module 1018 is stored program code that is executed by the CPU. A small-scale embedded Web browser may allow the TCAP to access and communicate with an attached access terminal, and beyond across a communications network. An example browser is Blazer, Opera, FireFox, etc. A browsing module may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses. Of course, in place of a Web browser and information server, a combined application may be developed to perform similar functions of both. The combined application would similarly affect the obtaining and the provision of information to users, user agents, and/or the like from TCAP enabled nodes. The combined application may be nugatory on systems employing standard Web browsers.

TCAP Database

A TCAP database module 1019 may be embodied in a database and its stored data. The database is stored program code, which is executed by the CPU; the stored program code portion configuring the CPU to process the stored data. In one embodiment, the TCAP database may be implemented using various standard data-structures, such as an array, hash, (linked) list, struct, structured text file (e.g., XML), table, and/or the like. Such data-structures may be stored in memory and/or in (structured) files. If the TCAP database is implemented as a data-structure, the use of the TCAP database may be integrated into another module such as the TCAP module. Databases may be consolidated and/or distributed in countless variations through standard data processing techniques. Portions of databases, e.g., tables, may be exported and/or imported and thus decentralized and/or integrated. In one embodiment, the database module 1019 includes three tables 1019a-c. A user accounts table 1019a includes fields such as, but not limited to: a user name, user address, user authorization information (e.g., user name, password, biometric data, etc.), user credit card, organization, organization account, TCAP unique identifier, account creation data, account expiration date; and/or the like. In one embodiment, user accounts may be activated only for set amounts of time and will then expire once a specified date has been reached. An user data table 1019b includes fields such as, but not limited to: a TCAP unique identifier, backup image, data store, organization account, and/or the like. In one embodiment, the entire TCAP memory 1029 is processes into an image and spooled to a TCAPS for backup storage. A user programs table 1019c includes fields such as, but not limited to: system programs,

organization programs, programs to be synchronized, and/or the like. It should be noted that any unique fields may be designated as a key field throughout. In an alternative embodiment, these tables have been decentralized into their own databases and their respective database controllers (i.e., individual database controllers for each of the above tables). Employing standard data processing techniques, one may further distribute the databases over several computer systemizations and/or storage devices. Similarly, configurations of the decentralized database controllers may be varied by consolidating and/or distributing the various database modules 1019a-c. The TCAP may be configured to keep track of various settings, inputs, and parameters via database controllers.

A TCAP database may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the TCAP database communicates with a TCAP module, other program modules, and/or the like. The database may contain, retain, and provide information regarding other nodes and data.

Cryptographic Server

A cryptographic server module 1020 is stored program code that is executed by the CPU 1003, cryptographic processor 1026, cryptographic processor interface 1027, and/or the like. Cryptographic processor interfaces will allow for expedition of encryption and/or decryption requests by the cryptographic module; however, the cryptographic module, alternatively, may run on a conventional CPU. The cryptographic module allows for the encryption and/or decryption of provided data. The cryptographic module allows for both symmetric and asymmetric (e.g., Pretty Good Protection (PGP)) encryption and/or

decryption. The cryptographic module may employ cryptographic techniques such as, but not limited to: digital certificates (e.g., X.509 authentication framework), digital signatures, dual signatures, enveloping, password access protection, public key management, and/or the like. The cryptographic module will facilitate numerous (encryption and/or decryption) security protocols such as, but not limited to: checksum, Data Encryption Standard (DES), Elliptical Curve Encryption (ECC), International Data Encryption Algorithm (IDEA), Message Digest 5 (MD5, which is a one way hash function), passwords, Rivest Cipher (RC5), Rijndael, RSA (which is an Internet encryption and authentication system that uses an algorithm developed in 1977 by Ron Rivest, Adi Shamir, and Leonard Adleman), Secure Hash Algorithm (SHA), Secure Socket Layer (SSL), Secure Hypertext Transfer Protocol (HTTPS), and/or the like. The cryptographic module facilitates the process of "security authorization" whereby access to a resource is inhibited by a security protocol wherein the cryptographic module effects authorized access to the secured resource. In addition, the cryptographic module may provide unique identifiers of content, e.g., employing and MD5 hash to obtain a unique signature for an digital audio file. A cryptographic module may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. The cryptographic module supports encryption schemes allowing for the secure transmission of information across a communications network to enable a TCAP module to engage in secure transactions if so desired. The cryptographic module facilitates the secure accessing of resources on TCAP and facilitates the access of secured resources on remote systems; i.e., it may act as a client and/or server of secured resources. Most frequently, the cryptographic module

communicates with information servers, operating systems, other program modules, and/or the like. The cryptographic module may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses. In one embodiment, the TCAP employs the cryptographic server to encrypt all data stored in memory 1029 based on the TCAP's unique ID and user's authorization information. In another embodiment, the TCAP employs the cryptographic server to encrypt all data sent through the access terminal based in the TCAP's unique ID and user's authorization information.

TCAP

A TCAP module 1035 is stored program code that is executed by the CPU. The TCAP affects accessing, obtaining and the provision of information, services, storage, transactions, and/or the like within its memory and/or across various communications networks. The TCAP enables users to simply access data and/or services from any location where an access terminal is available. It provides secure, extremely low powerful and ultra portable access to data and services that were heretofore impossible. The TCAP coordinates with the TCAP database to identify interassociated items in the generation of entries regarding any related information. A TCAP module enabling access of information between nodes may be developed by employing standard development tools such as, but not limited to: (ANSI) (Objective-) C (++), Apache modules, binary executables, Java, Javascript, mapping tools, procedural and object oriented development tools, PERL, Python, shell scripts, SQL commands, web application server extensions, WebObjects, and/or the like. In

one embodiment, the TCAP server employs a cryptographic server to encrypt and decrypt communications. A TCAP module may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the TCAP module communicates with a TCAP database, a TCAP access terminal module 1021 running on an access terminal 1011b, operating systems, other program modules, and/or the like. The TCAP may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

Access Terminal Module

An access terminal module 1021 is stored program code that is executed by a CPU. In one embodiment, the TCAP allows the access terminal 1011b to access its memory 1029 across its I/O 1008 and the access terminal executes the module. The access terminal module affects accessing, obtaining and the provision of information, services, storage, transactions, and/or the like within the TCAP's and access terminal's memory and/or across various communications networks. The access terminal module 1021 acts as a bridge through which the TCAP can communicate with communications network, and through which users may interact with the TCAP by using the I/O of the access terminal. The access terminal module coordinates with the TCAP module 1035 to send data and communications back and forth. A access terminal module enabling access of information between the TCAP and access terminal may be developed by employing standard development tools such as, but not limited to: (ANSI) (Objective-) C (++), Apache modules, binary executables, Java, Javascript, mapping tools, procedural and object oriented development tools, PERL, Python, shell

scripts, SQL commands, web application server extensions, WebObjects, and/or the like. In one embodiment, the access terminal module is compiled for target access terminal platform, e.g., for Windows. In an alternative embodiment, a processor independent approach is taken, e.g., Java is used, so that the access terminal module will run on multiple platforms. In another embodiment, the TCAP server employs a cryptographic server to encrypt and decrypt communications as between it, the TCAP, and outside servers. A access terminal module may communicate to and/or with other modules in a module collection, including itself, and/or facilities of the like. Most frequently, the access terminal module communicates with a TCAP, , other program modules, and/or the like. The access terminal module may contain, communicate, generate, obtain, and/or provide program module, system, user, and/or data communications, requests, and/or responses.

Distributed TCAP

The structure and/or operation of any of the TCAP node controller components may be combined, consolidated, and/or distributed in any number of ways to facilitate development and/or deployment. Similarly, the module collection may be combined in any number of ways to facilitate deployment and/or development. To accomplish this, one may integrate the components into a common code base or in a facility that can dynamically load the components on demand in an integrated fashion.

The module collection may be consolidated and/or distributed in countless variations through standard data processing and/or development techniques. Multiple instances of any one of the program modules in the program module collection may be instantiated on a single

node, and/or across numerous nodes to improve performance through load-balancing and/or data-processing techniques. Furthermore, single instances may also be distributed across multiple controllers and/or storage devices; e.g., databases. All program module instances and controllers working in concert may do so through standard data processing communication techniques.

The configuration of the TCAP controller will depend on the context of system deployment. Factors such as, but not limited to, the budget, capacity, location, and/or use of the underlying hardware resources may affect deployment requirements and configuration. Regardless of if the configuration results in more consolidated and/or integrated program modules, results in a more distributed series of program modules, and/or results in some combination between a consolidated and distributed configuration, data may be communicated, obtained, and/or provided. Instances of modules consolidated into a common code base from the program module collection may communicate, obtain, and/or provide data. This may be accomplished through intra-application data processing communication techniques such as, but not limited to: data referencing (e.g., pointers), internal messaging, object instance variable communication, shared memory space, variable passing, and/or the like.

If module collection components are discrete, separate, and/or external to one another, then communicating, obtaining, and/or providing data with and/or to other module components may be accomplished through inter-application data processing communication techniques such as, but not limited to: Application Program Interfaces (API) information

passage; (distributed) Component Object Model ((D)COM), (Distributed) Object Linking and Embedding ((D)OLE), and/or the like), Common Object Request Broker Architecture (CORBA), process pipes, shared files, and/or the like. Messages sent between discrete module components for inter-application communication or within memory spaces of a singular module for intra-application communication may be facilitated through the creation and parsing of a grammar. A grammar may be developed by using standard development tools such as lex, yacc, and/or the like, which allow for grammar generation and parsing functionality, which in turn may form the basis of communication messages within and between modules. Again, the configuration will depend upon the context of system deployment.

The entirety of this disclosure (including the Cover Page, Title, Headings, Field, Background, Summary, Brief Description of the Drawings, Detailed Description, Claims, Abstract, Figures, and otherwise) shows by way of illustration various embodiments in which the claimed inventions may be practiced. The advantages and features of the disclosure are of a representative sample of embodiments only, and are not exhaustive and/or exclusive. They are presented only to assist in understanding and teach the claimed principles. It should be understood that they are not representative of all claimed inventions. As such, certain aspects of the disclosure have not been discussed herein. That alternate embodiments may not have been presented for a specific portion of the invention or that further undescribed alternate embodiments may be available for a portion is not to be considered a disclaimer of those alternate embodiments. It will be appreciated that many of those undescribed embodiments

incorporate the same principles of the invention and others are equivalent. Thus, it is to be understood that other embodiments may be utilized and functional, logical, organizational, structural and/or topological modifications may be made without departing from the scope and/or spirit of the disclosure. As such, all examples and/or embodiments are deemed to be non-limiting throughout this disclosure. Also, no inference should be drawn regarding those embodiments discussed herein relative to those not discussed herein other than for purposes of space and reducing repetition. For instance, it is to be understood that the logical and/or topological structure of any combination of any program modules (a module collection), other components and/or any present feature sets as described in the figures and/or throughout are not limited to a fixed operating order and/or arrangement, but rather, any disclosed order is exemplary and all equivalents, regardless of order, are contemplated by the disclosure. Furthermore, it is to be understood that such features are not limited to serial execution, but rather, any number of threads, processes, services, servers, and/or the like that may execute asynchronously, simultaneously, synchronously, and/or the like are contemplated by the disclosure. As such, some of these features may be mutually contradictory, in that they cannot be simultaneously present in a single embodiment. Similarly, some features are applicable to one aspect of the invention, and inapplicable to others. In addition, the disclosure includes other inventions not presently claimed. Applicant reserves all rights in those presently unclaimed inventions including the right to claim such inventions, file additional applications, continuations, continuations in part, divisions, and/or the like thereof. As such, it should be understood that advantages, embodiments, examples,

functional, features, logical, organizational, structural, topological, and/or other aspects of the disclosure are not to be considered limitations on the disclosure as defined by the claims or limitations on equivalents to the claims.

CLAIMS

What is claimed is:

Claim 1. A portable device configured to communicate with a terminal comprising a processor, an input component, an output component, a network communication interface, and a memory configured to store executable program code, including first program code which, when executed by the terminal processor, is configured to present an interactive user interface on the terminal output component, and second program code which, when executed by the terminal processor, is configured to provide a communications node on the terminal to facilitate communications to the portable device and to a communications network node through the terminal network communication interface, the portable device comprising:

(a) an external communication interface configured to enable the transmission of communications between the portable device and the terminal;

(b) a processor; and

(c) a memory having executable program code stored thereon, including:

(1) third program code which, when executed by the portable device processor, is configured to provide a communications node on the portable device to coordinate with the communications node on the terminal and establish a communications link between the portable device and the terminal, and facilitate communications to the terminal and to a communications network node through the terminal network communication interface; and

(2) fourth program code which is configured to be executed by the portable device processor in response to a communication received by the portable device resulting from user interaction with the interactive user interface;

wherein the portable device is configured to facilitate communications through the communication node on the terminal and the terminal network interface to a communications network node.

Claim 2. The portable device according to claim 1, wherein the fourth program code which, when executed by the portable device processor, is configured to cause a communication to be transmitted to the communication network node.

Claim 3. The portable device according to claim 2, wherein the communication caused to be transmitted to the communication network node facilitates verification of the portable device.

Claim 4. The portable device according to claim 2, wherein the communication caused to be transmitted to the communication network node facilitates the transmission of encrypted communications from the communication network node to the terminal.

Claim 5. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates access to the communication network node database.

Claim 6. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the download of content on the communication network node database to the terminal.

Claim 7. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the download of program code on the communication network node to the terminal.

Claim 8. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the

communication network node facilitates the upload of content on to the communication network node database.

Claim 9. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the upload of program code on to the communication network node database.

Claim 10. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates synchronizing content on the portable device with content on the communication network node database.

Claim 11. The portable device according to claim 2, wherein the communication network node comprises a database and the communication caused to be transmitted to the communication network node facilitates the download of a live data feed to the terminal.

Claim 12. The portable device according to claim 11, wherein the live data feed is presented on the terminal output component.

Claim 13. The portable device according to claim 1, wherein the portable device is further configured to affect the presentation of the interactive user interface on the terminal output device.

Claim 14. The portable device according to claim 13, wherein the portable device memory has fifth program code stored thereon, which, when executed, is configured to affect the presentation of the interactive user interface on the terminal output device.

Claim 15. The portable device according to claim 13, wherein the portable device is configured to provide the terminal with access to content stored on the portable device memory which affects the presentation of the interactive user interface on the terminal output device.

Claim 16. The portable device according to claim 15, wherein the content comprises a user name and/or a portable device identifier, and the interactive user interface is affected to present the user name and/or portable device identifier.

Claim 17. The portable device according to claim 1, wherein the second program code is stored on the portable device memory and the portable device is configured to provide the terminal with access to the second program code.

Claim 18. The portable device according to claim 17, wherein the portable device is configured to load the second program code on to the terminal.

Claim 19. The portable device according to claim 1, wherein the portable device is configured to cause the terminal to execute the second program code and present an interactive user interface on the terminal output component.

Claim 20. The portable device according to claim 19, wherein the portable device memory has fifth program code stored thereon, which, when executed by the portable device processor, is configured to cause the terminal to execute the second program code and present an interactive user interface on the terminal output component.

Claim 21. The portable device according to claim 1, wherein the interactive user interface comprises a graphic user interface.

Claim 22. The portable device according to claim 1, wherein the first program code is stored on the portable device memory and the portable device is configured to provide the terminal with access to the first program code.

Claim 23. The portable device according to claim 22, wherein the portable device is configured to load the first program code on to the terminal.

Claim 24. The portable device according to claim 1, wherein the portable device memory comprises one or more of the group consisting of flash memory, read only memory, random access memory, micro hard drives and the like.

Claim 25. The portable device according to claim 1, wherein the communications network node comprises a server.

Claim 26. The portable device according to claim 1, wherein the external communication interface comprises a universal serial bus interface.

Claim 27. The portable device according to claim 1, wherein the external communication interface comprises a wireless communication interface.

Claim 28. A method implemented on a portable device comprising a processor, a memory having executable program code stored thereon, and an external communication interface for enabling the transmission of a plurality of communications between the portable device and a terminal comprising a processor, an input component, an output component, a network communication interface, and a memory configured to store executable program code, including first program code which, when executed by the terminal processor, is configured to present an interactive user interface on the terminal output component, and second program code which, when executed by the terminal processor, is configured to provide a communications node on the terminal to facilitate communications to the portable device and to a communications network node through the terminal network communication interface, the method comprising:

(a) causing the terminal to execute the first program code to present an interactive user interface on the terminal output component;

(b) executing third program code stored on the portable device memory to provide a communications node on the portable device configured to coordinate with the communications node on the terminal and establish a communications link between the portable device and the terminal, and to facilitate communications to the terminal and to a communications network node through the terminal communication interface;

(c) executing fourth program code stored on the portable device memory in response to a communication received by the portable device resulting from user interaction with the interactive user interface; and

(d) facilitating a communication to be transmitted through the terminal network interface to a communications network node.

Claim 29. A system implementing a terminal having a processor, an input component, an output component, a network communication interface, and a memory configured to store executable program code, including first program code which, when executed by the terminal processor, is configured to present an interactive user interface on the terminal output component, and second program code which, when executed by the terminal processor, is configured to provide a communications node on the terminal to facilitate communications to and from the terminal, the system comprising:

(a) a communications network node; and

(b) a portable device comprising an external communication interface for enabling the transmission of a plurality of communications between the portable device and the terminal, a processor, and a memory, wherein the memory has executable program code stored thereon, the portable device configured to:

(1) cause the terminal to execute the first program code to present an interactive user interface on the terminal output component;

(2) execute third program code stored on the portable device memory to provide a communications node on the portable device configured to coordinate with the communications node on the terminal and establish a communications link between the portable device and the terminal, and to facilitate communications to the terminal and to a communications network node through the terminal communication interface;

(3) execute fourth program code stored on the portable device memory in response to a communication received by the portable device resulting from user interaction with the interactive user interface; and

(4) facilitate a communication to be transmitted through the terminal network interface to a communications network node.

ABSTRACT

The disclosure details the implementation of an apparatus, method, and system for a tunneling client access point (TCAP). The disclosure teaches a highly secure, portable, power efficient storage and data processing mechanism. The TCAP "tunnels" data through an access terminal (AT). The data may be tunneled through the AT's input/output facilities. In one example embodiment, the TCAP has no user input or output peripherals. The TCAP connects to an access terminal and a user employs the AT's user input peripherals for input, and views the TCAPs activities on the AT's display. This enables the user to observe data stored on the TCAP without it being resident on the AT, which can be useful to maintain higher levels of data security. Also, the TCAP may tunnel data through an AT across a communications network to access remote servers without requiring its own more complicated set of peripherals and I/O. One aspect of the disclosure teaches an elegant user interface for allowing a user to execute and access data from almost any access terminal. The disclosure teaches how to allow users to employ traditional large user interfaces that users are already comfortable with on a device that offers greater portability, greater memory footprints, lower power consumption, and greater data security. As such, the disclosed tunneling client access point is very easy to use; at most it requires the user to simply plug the device into any existing and available desktop or laptop computer, through which, the TCAP can make use of a traditional user interface and peripherals. The disclosure also teaches a TCAP server (TCAPS). The TCAPS extends the storage and processing capacities and capabilities of TCAPs. Also, by providing the equivalent of a plug-n-play virtual private

network (VPN), the disclosure teaches how the TCAP provides for certain kinds of accessing of remote data in an easy and secure manner. The result and manner in which this is achieved, yields the generation of a never before accessible, novel, non-obvious, yet extremely useful portable computing and storage device.

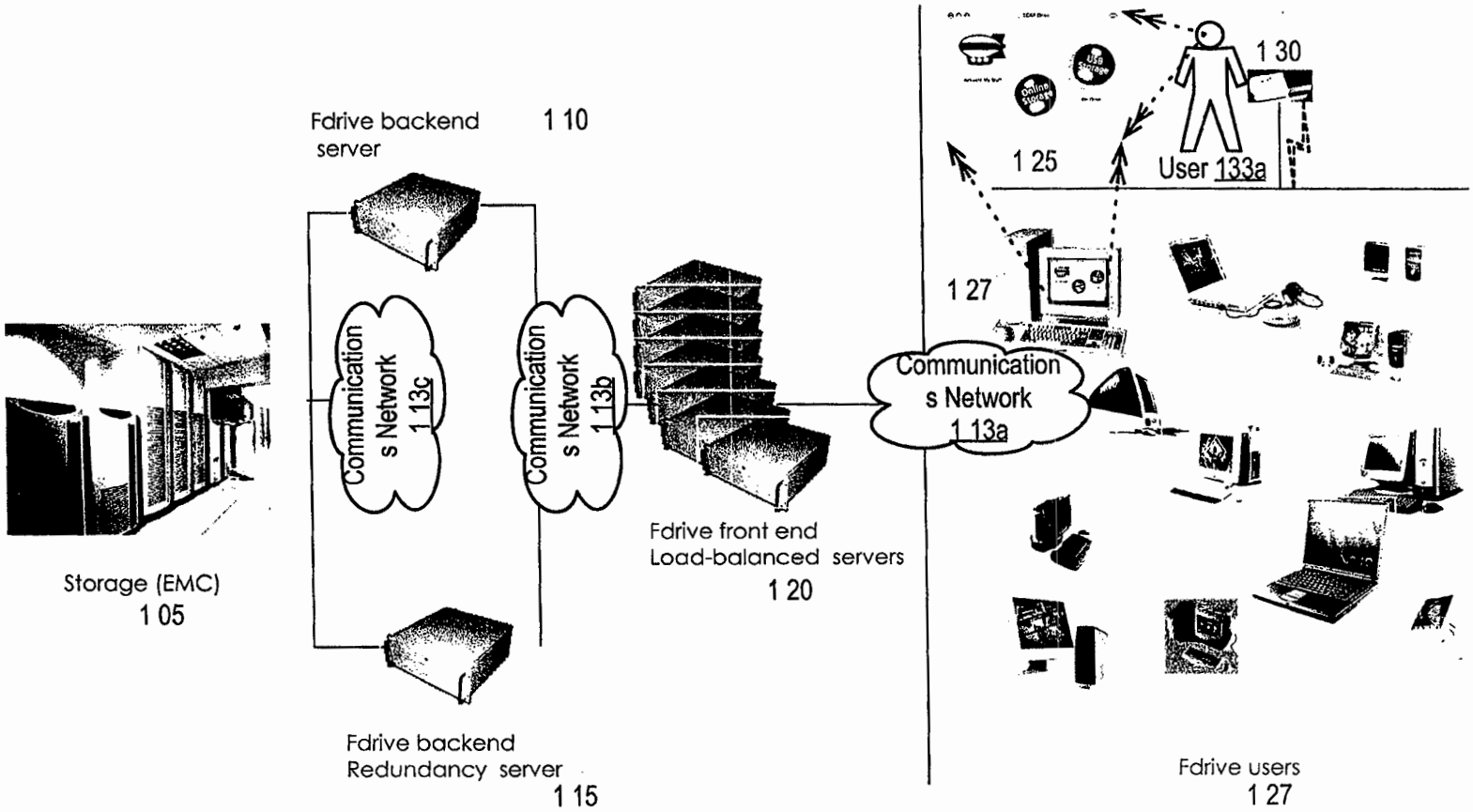

Fdrive backend
server
1 10
1 30
1 25
User 133a
1 27
Communication
s Network
1 13c
Communication
s Network
1 13b
Communication
s Network
1 13a
Storage (EMC)
1 05
Fdrive front end
Load-balanced servers
1 20
Fdrive backend
Redundancy server
1 15
Fdrive users
1 27

Figure 1

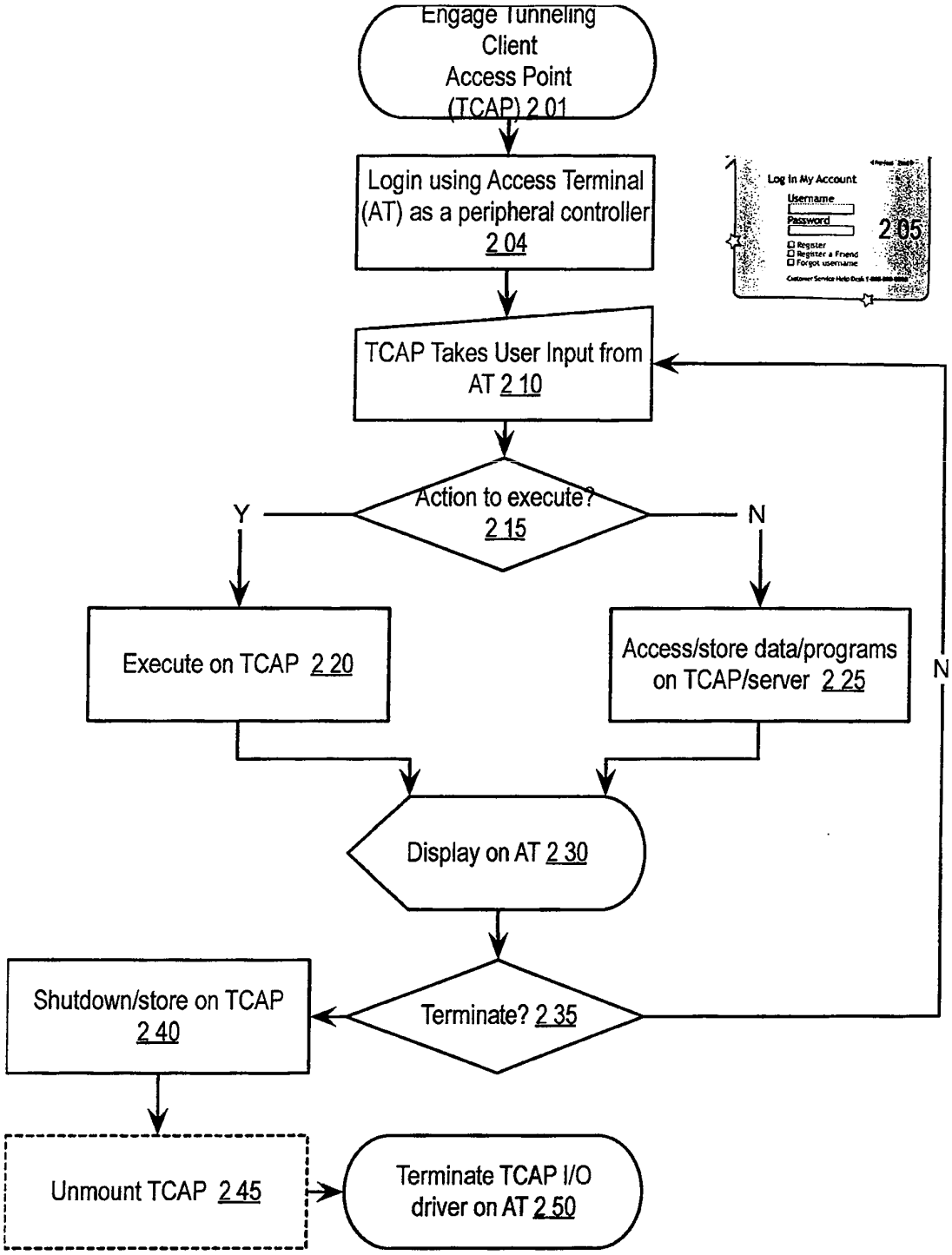

Engage Tunneling Client Access Point (TCAP) 2 01
Login using Access Terminal (AT) as a peripheral controller 2 04
Log In My Account
Username
Password
2 05
TCAP Takes User Input from AT 2 10
Action to execute? 2 15
Y
N
Execute on TCAP 2 20
Access/store data/programs on TCAP/server 2 25
N
Display on AT 2 30
Terminate? 2 35
Shutdown/store on TCAP 2 40
Unmount TCAP 2 45
Terminate TCAP I/O driver on AT 2 50

Figure 2

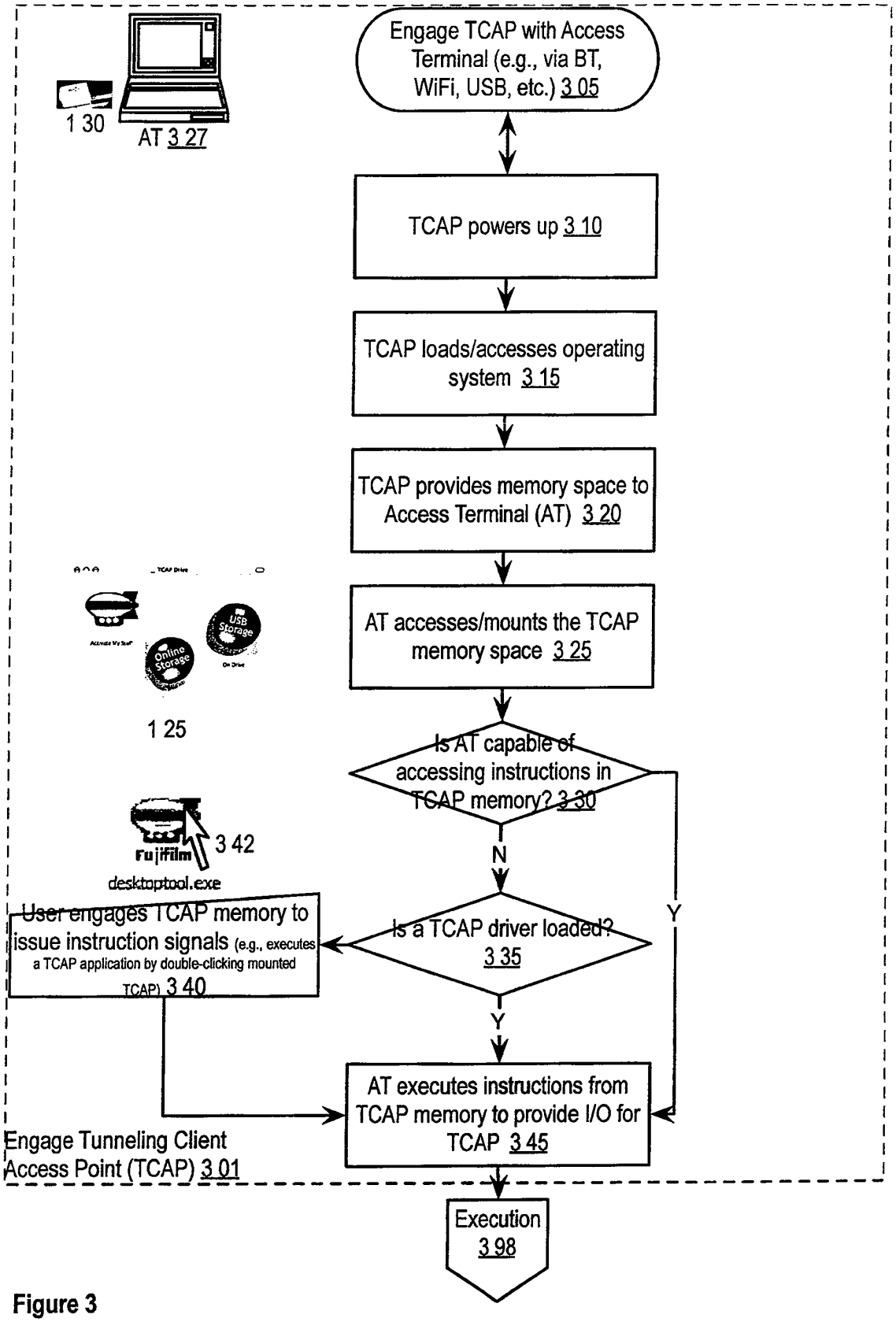

Engage TCAP with Access Terminal (e.g., via BT, WiFi, USB, etc.) 3 05
1 30
AT 3 27
TCAP powers up 3 10
TCAP loads/accesses operating system 3 15
TCAP provides memory space to Access Terminal (AT) 3 20
AT accesses/mounts the TCAP memory space 3 25
1 25
Is AT capable of accessing instructions in TCAP memory? 3 30
N
Y
3 42
desktoptool.exe
User engages TCAP memory to issue instruction signals (e.g., executes a TCAP application by double-clicking mounted TCAP) 3 40
Is a TCAP driver loaded? 3 35
Y
AT executes instructions from TCAP memory to provide I/O for TCAP 3 45
Engage Tunneling Client Access Point (TCAP) 3 01
Execution 3 98

Figure 3

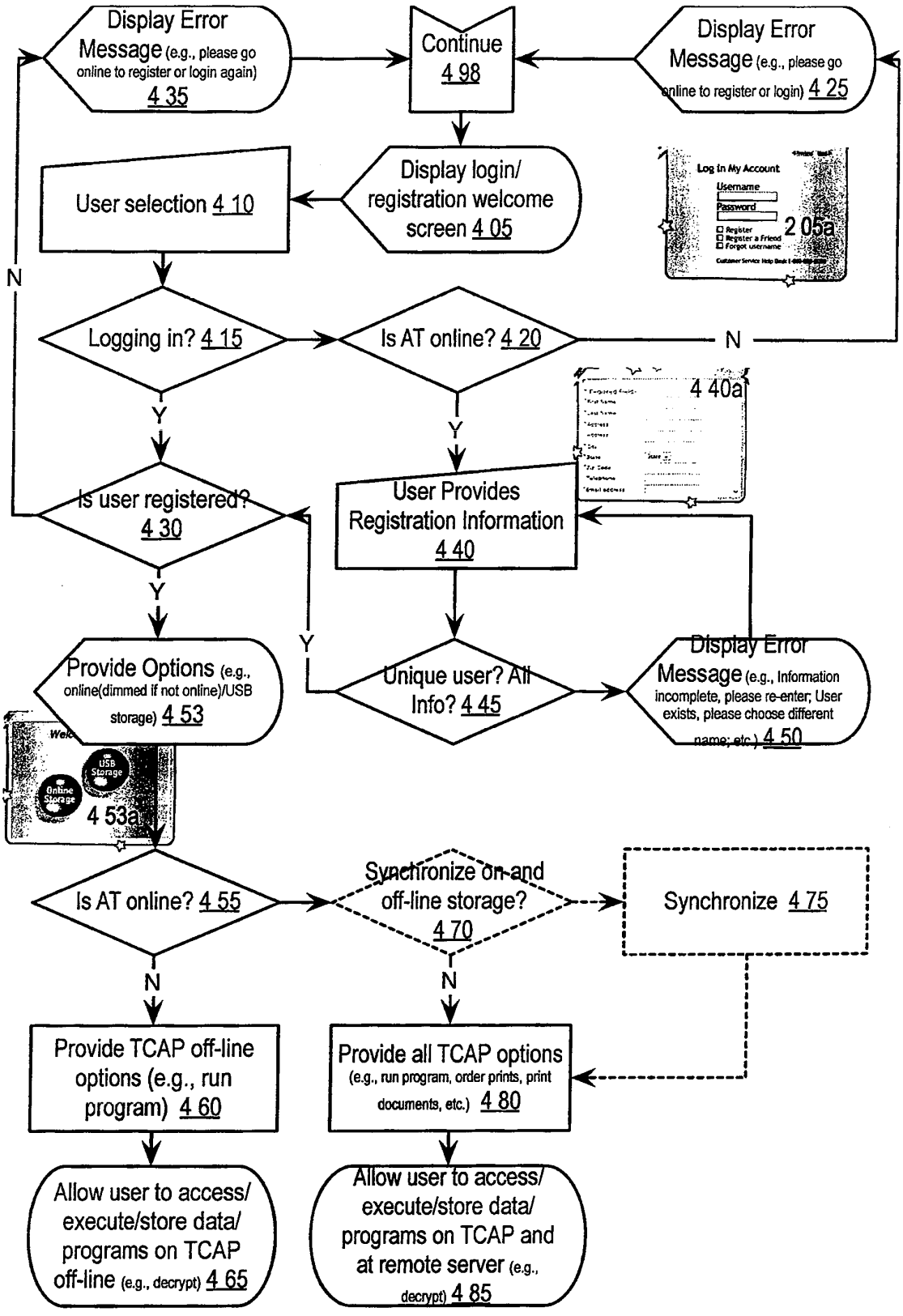
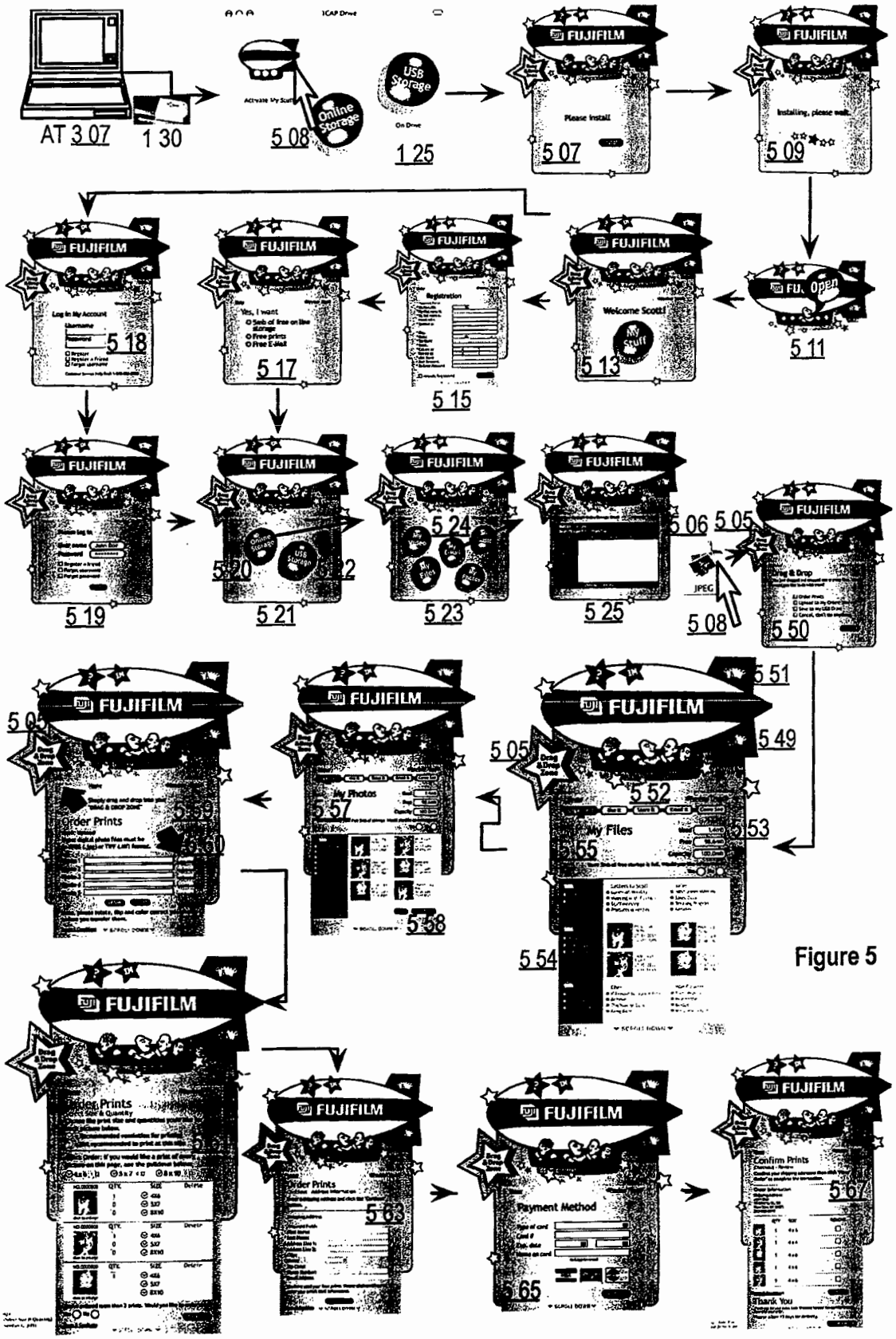

Display Error Message (e.g., please go online to register or login again) 4 35
Continue 4 98
Display Error Message (e.g., please go online to register or login) 4 25
User selection 4 10
Display login/ registration welcome screen 4 05
Log In My Account
Username
Password
205a
N
Logging in? 4 15
Is AT online? 4 20
N
Y
Y
4 40a
Is user registered? 4 30
User Provides Registration Information 4 40
Y
Y
Provide Options (e.g., online(dimmed if not online)/USB storage) 4 53
Unique user? All Info? 4 45
Display Error Message (e.g., Information incomplete, please re-enter; User exists, please choose different name; etc.) 4 50
USB Storage
Online Storage
4 53a
Is AT online? 4 55
Synchronize on-and off-line storage? 4 70
Synchronize 4 75
N
N
Provide TCAP off-line options (e.g., run program) 4 60
Provide all TCAP options (e.g., run program, order prints, print documents, etc.) 4 80
Allow user to access/ execute/store data/ programs on TCAP off-line (e.g., decrypt) 4 65
Allow user to access/ execute/store data/ programs on TCAP and at remote server (e.g., decrypt) 4 85

Figure 4


AT 3 07
1 30
5 08
1 25
5 07
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5 11
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5 19
5 20
5 21
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5 24
5 25
5 06
5 05
5 08
5 50
5 51
5 49
5 52
5 53
5 54
5 55
5 57
5 58
5 59
5 60
5 63
5 65
5 67
FUJIFILM
USB Storage
Online Storage
JPEG
My Photos
My Files
Order Prints
Payment Method
Confirm Prints
Thank You

Figure 5

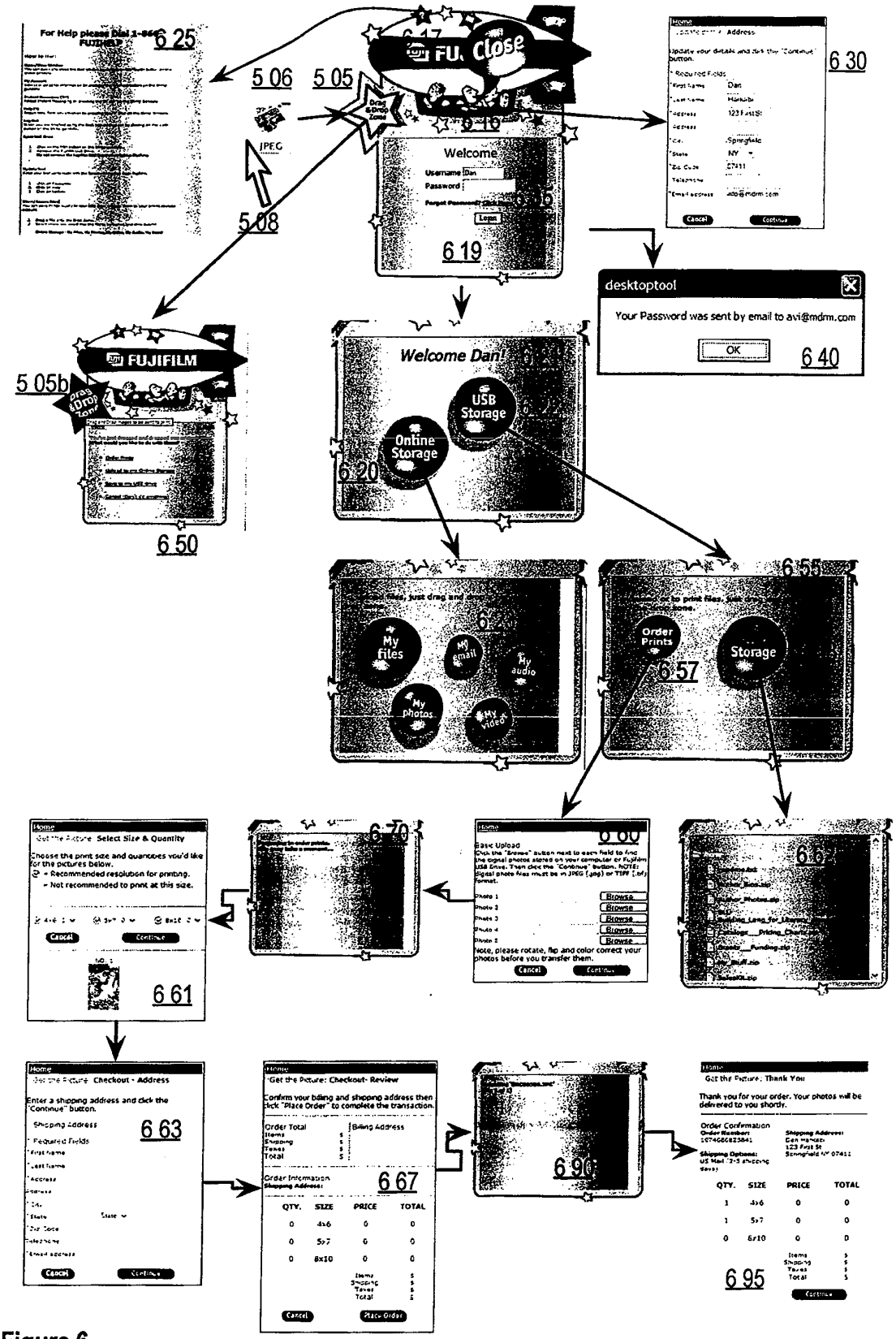

6 25
5 06
5 05
6 17
Close
6 19
6 30
JPEG
5 08
Welcome
Username Dan
Password
Login
6 16
Address
Update your details and click the "Continue" button.
Required Fields
Cancel
Continue
desktoptool
Your Password was sent by email to avi@mdrm.com
OK
6 40
FUJIFILM
5 05b
6 50
Welcome Dan!
USB Storage
Online Storage
6 20
My Files
My email
My audio
My photos
My video
6 55
Order Prints
Storage
6 57
Select Size & Quantity
Choose the print size and quantities you'd like for the pictures below.
= Recommended resolution for printing.
= Not recommended to print at this size.
Cancel
Continue
6 61
6 70
Basic Upload
Click the "Browse" button next to each field to find the digital photos stored on your computer or Fujifilm USB Drive. Then click the "Continue" button. NOTE: Digital photo files must be in JPEG (.jpg) or TIFF (.tif) format.
Photo 1
Photo 2
Photo 3
Photo 4
Photo 5
Browse...
Note, please rotate, flip and color correct your photos before you transfer them.
Cancel
Continue
6 60
6 62
Checkout - Address
Enter a shipping address and click the "Continue" button.
Shipping Address
Required Fields
First Name
Last Name
Address
City
State
Zip Code
Telephone
Email address
Cancel
Continue
6 63
Checkout- Review
Confirm your billing and shipping address then click "Place Order" to complete the transaction.
Order Total
Items
Shipping
Taxes
Total
Billing Address
Order Information
Shipping Address:
6 67
QTY.
SIZE
PRICE
TOTAL
4x6
5x7
8x10
Cancel
Place Order
6 90
Thank You
Thank you for your order. Your photos will be delivered to you shortly.
Order Confirmation
Order Number:
Shipping Address:
Shipping Options:
6 95
Continue

Figure 6

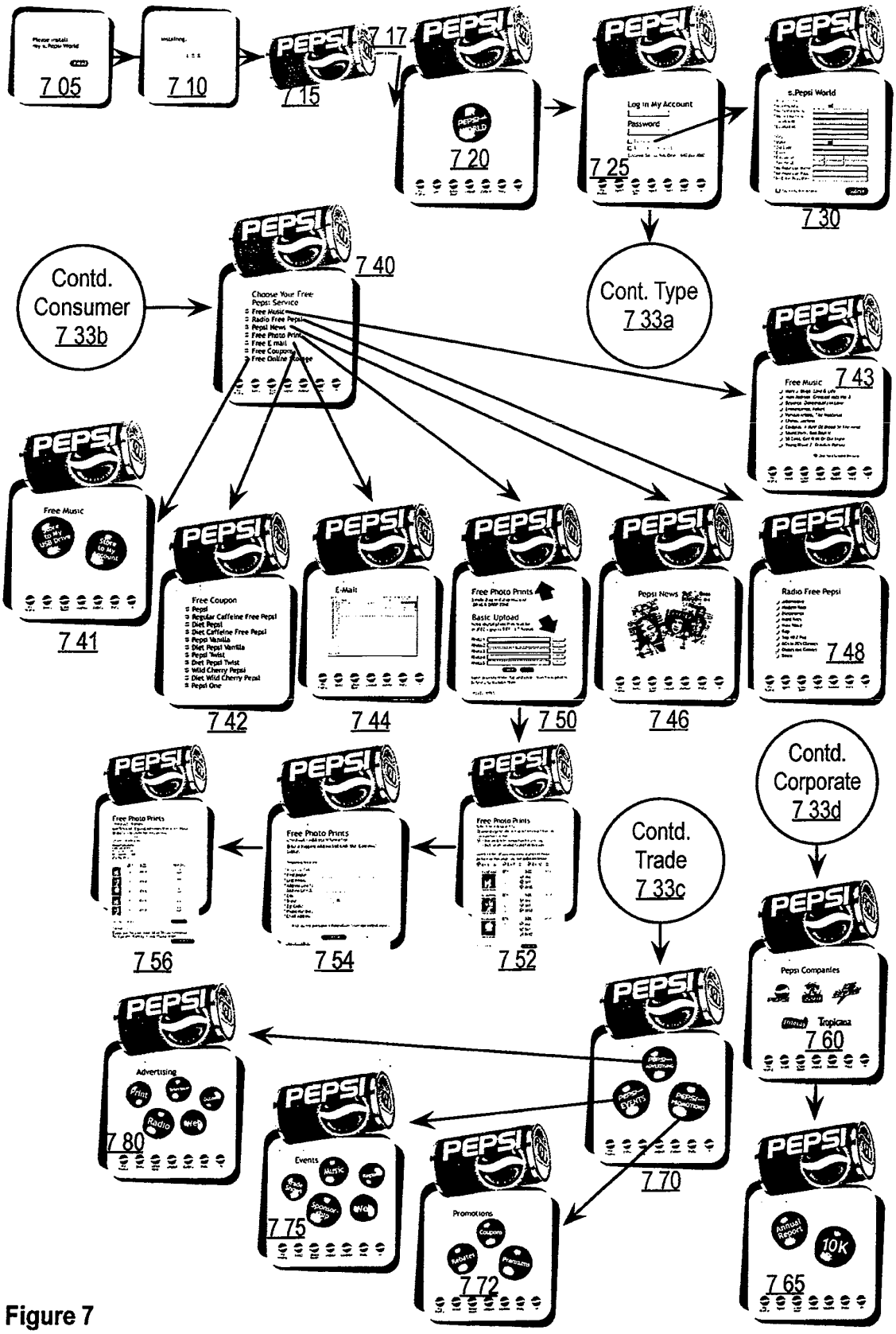

7 05
7 10
7 15
7 17
7 20
7 25
7 30
Log In My Account
Password
Contd. Consumer 7 33b
Cont. Type 7 33a
7 40
Choose Your Free Pepsi Service
Free Music
Radio Free Pepsi
Pepsi News
Free Photo Prints
Free E mail
Free Coupons
Free Online Storage
7 43
7 41
7 42
7 44
7 50
7 46
7 48
Free Coupon
Pepsi
Regular Caffeine Free Pepsi
Diet Pepsi
Diet Caffeine Free Pepsi
Pepsi Vanilla
Diet Pepsi Vanilla
Pepsi Twist
Diet Pepsi Twist
Wild Cherry Pepsi
Diet Wild Cherry Pepsi
Pepsi One
E-Mail
Basic Upload
Contd. Corporate 7 33d
Contd. Trade 7 33c
7 56
7 54
7 52
7 60
7 70
7 80
7 75
7 72
7 65
Advertising
Print
Radio
Web
Events
Music
Sponsorships
Promotions
Coupons
Rebates
Premiums
Pepsi Companies
Tropicana
Annual Report
10K

Figure 7

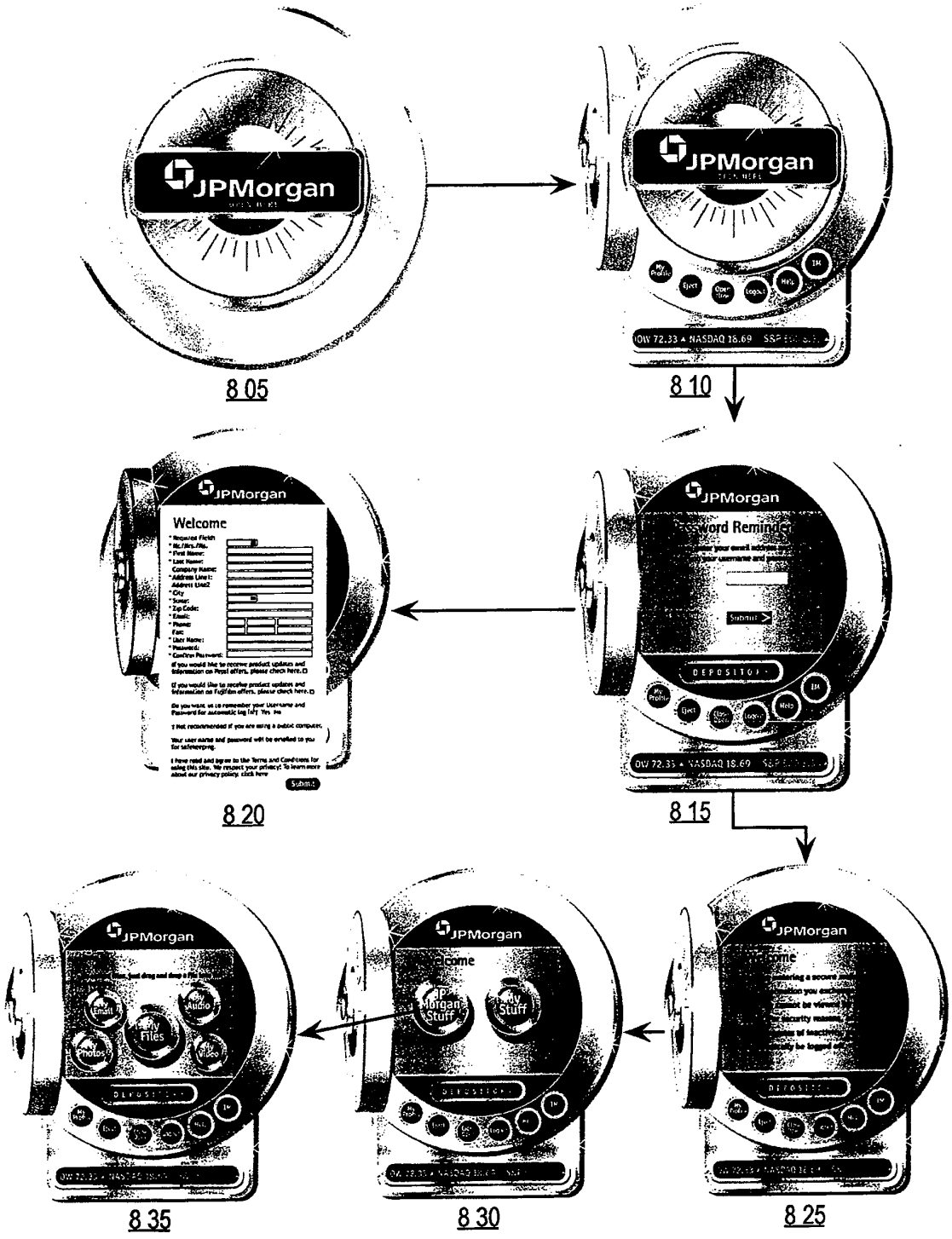
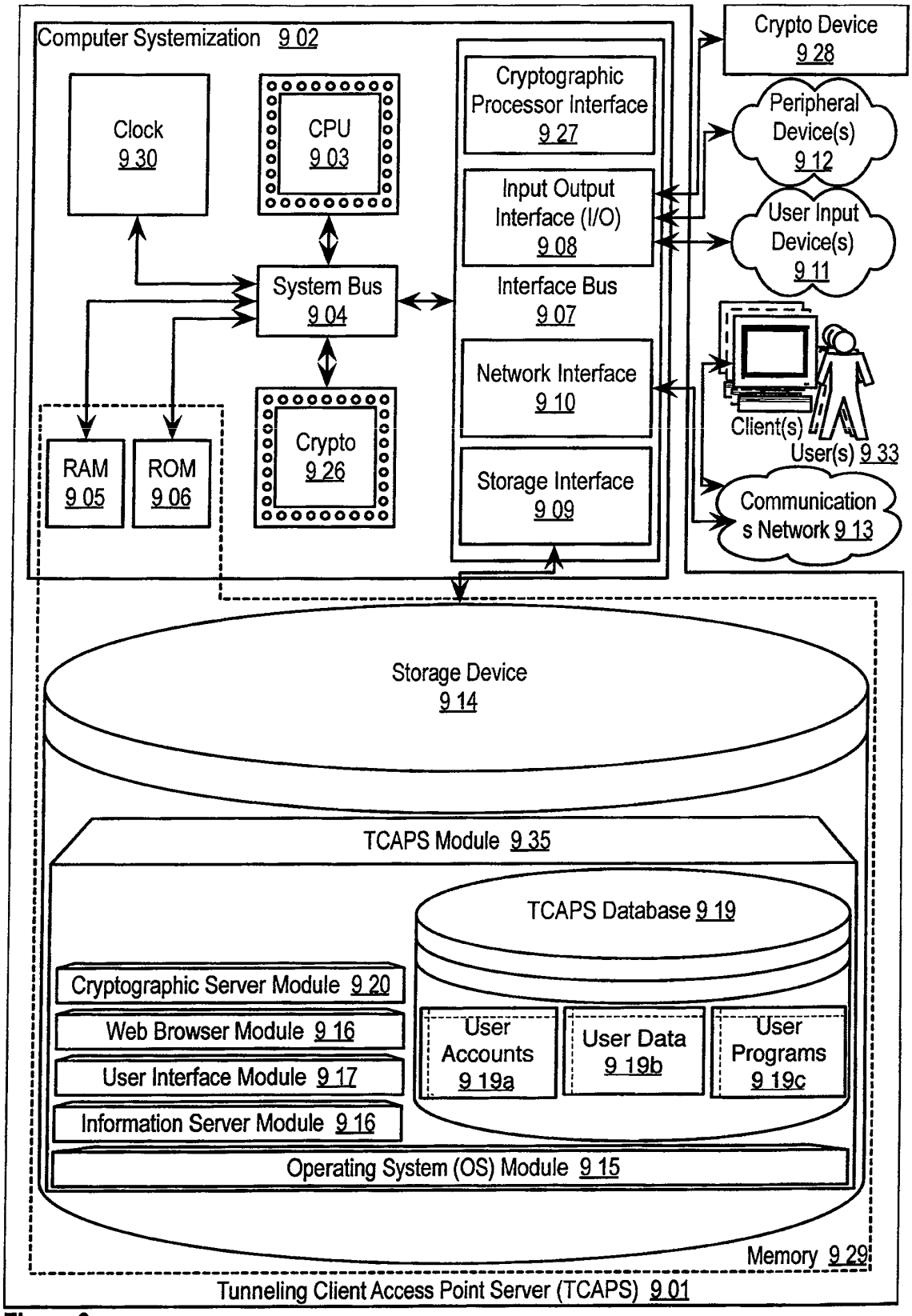


Figure 8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Clock 9 30
CPU 9 03
System Bus 9 04
RAM 9 05
ROM 9 06
Crypto 9 26
Cryptographic Processor Interface 9 27
Input Output Interface (I/O) 9 08
Interface Bus 9 07
Network Interface 9 10
Storage Interface 9 09
Crypto Device 9 28
Peripheral Device(s) 9 12
User Input Device(s) 9 11
Client(s) User(s) 9 33
Communication s Network 9 13
Storage Device 9 14
TCAPS Module 9 35
TCAPS Database 9 19
Cryptographic Server Module 9 20
Web Browser Module 9 16
User Interface Module 9 17
Information Server Module 9 16
User Accounts 9 19a
User Data 9 19b
User Programs 9 19c
Operating System (OS) Module 9 15
Memory 9 29
Tunneling Client Access Point Server (TCAPS) 9 01

Figure 9

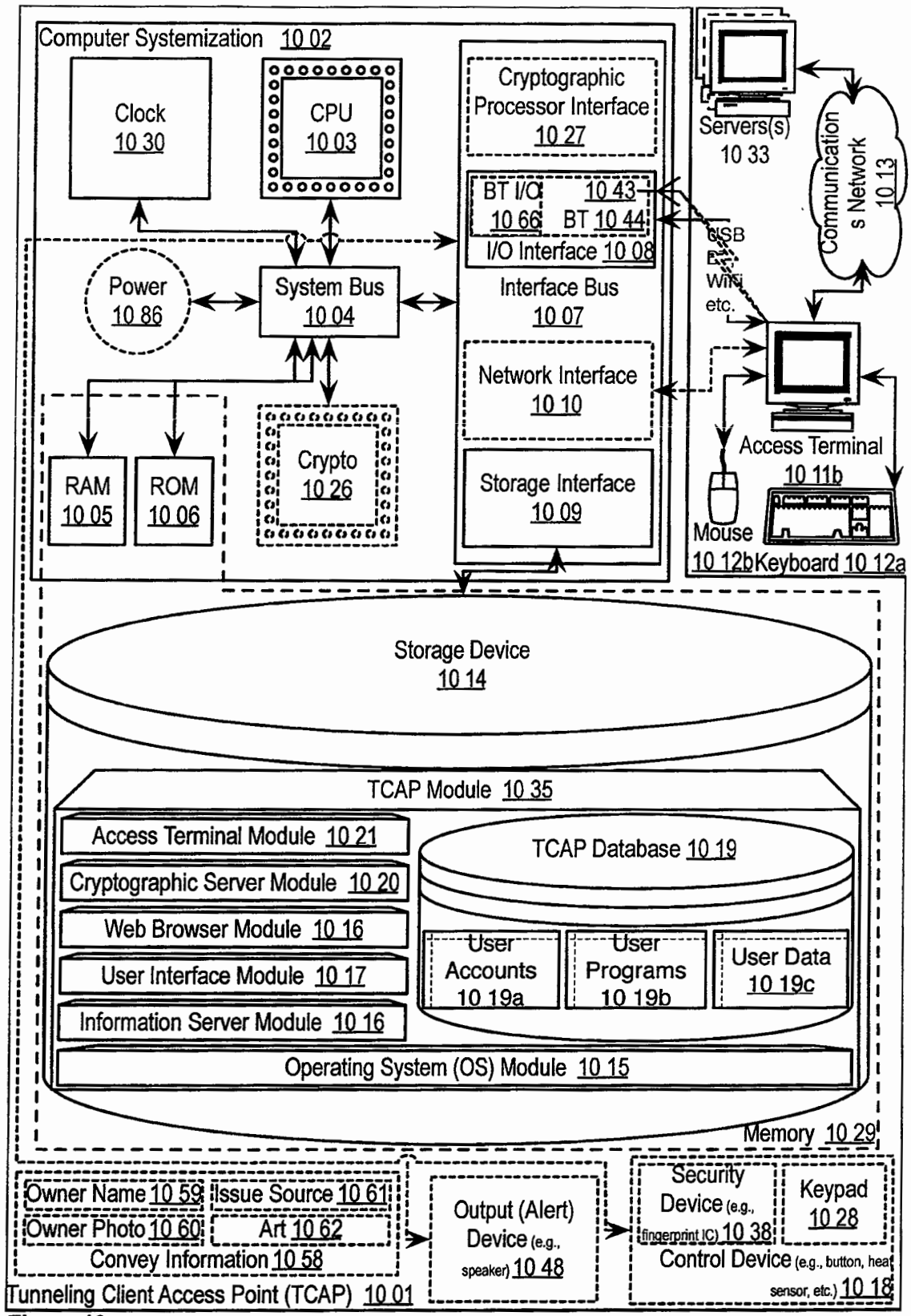
Computer Systemization 10 02
Clock 10 30
CPU 10 03
Cryptographic Processor Interface 10 27
BT I/O 10 43
10 66 BT 10 44
I/O Interface 10 08
Power 10 86
System Bus 10 04
Interface Bus 10 07
Network Interface 10 10
Storage Interface 10 09
RAM 10 05
ROM 10 06
Crypto 10 26
Servers(s) 10 33
Communication s Network 10 13
USB
BT
WiFi
etc.
Access Terminal 10 11b
Mouse 10 12b
Keyboard 10 12a
Storage Device 10 14
TCAP Module 10 35
Access Terminal Module 10 21
Cryptographic Server Module 10 20
Web Browser Module 10 16
User Interface Module 10 17
Information Server Module 10 16
TCAP Database 10 19
User Accounts 10 19a
User Programs 10 19b
User Data 10 19c
Operating System (OS) Module 10 15
Memory 10 29
Owner Name 10 59
Issue Source 10 61
Owner Photo 10 60
Art 10 62
Convey Information 10 58
Output (Alert) Device (e.g., speaker) 10 48
Security Device (e.g., fingerprint IC) 10 38
Keypad 10 28
Control Device (e.g., button, heat sensor, etc.) 10 18
Tunneling Client Access Point (TCAP) 10 01

Figure 10

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Anna Hill
Attorney Docket Number:	1004294.013US

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Pages:				
Claims:				
Claims in excess of 20	2202	9	40	360
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1090**

Electronic Acknowledgement Receipt

EFS ID:	16516976
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	06-AUG-2013
Filing Date:	
Time Stamp:	17:29:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1090
RAM confirmation Number	4776
Deposit Account	504827
Authorized User	

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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	Application Data Sheet	1004294013US_ApplicationDataSheet.pdf	1509589 2fff2ea832af986c8be9e8fdeeb34e1a6af70f08	no	6
Warnings:					
Information:					
2	Transmittal of New Application	1004294013US_PatentUtilityApplicationTransmittal.pdf	276196 d89eb474479115ccf04efba7db31abf31245ab05	no	2
Warnings:					
Information:					
3	Oath or Declaration filed	1004294013US_Declaration.pdf	524493 ee9aa3a5b3d3526d3e0e9f68d62cb8d5244120f4	no	9
Warnings:					
Information:					
4		1004294013US_SpecClaimsAbstractDrawings.pdf	4136512 ce92c10fdde8a122e61eb54114d3a0ebafdeb487	yes	87

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	68
Claims	69	75
Abstract	76	77
Drawings-only black and white line drawings	78	87

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	36529 e5820fe752954c5a8b84bb47874d067c6c358e0f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	6483319		

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New Applications Under 35 U.S.C. 111

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Electronic Acknowledgement Receipt

EFS ID:	16516976
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	06-AUG-2013
Filing Date:	
Time Stamp:	17:29:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1090
RAM confirmation Number	4776
Deposit Account	504827
Authorized User	

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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	Application Data Sheet	1004294013US_ApplicationDataSheet.pdf	1509589 2fff2ea832af986c8be9e8fdeeb34e1a6af70f08	no	6
Warnings:					
Information:					
2	Transmittal of New Application	1004294013US_PatentUtilityApplicationTransmittal.pdf	276196 d89eb474479115ccf04efba7db31abf31245ab05	no	2
Warnings:					
Information:					
3	Oath or Declaration filed	1004294013US_Declaration.pdf	524493 ee9aa3a5b3d3526d3e0e9f68d62cb8d5244120f4	no	9
Warnings:					
Information:					
4		1004294013US_SpecClaimsAbstractDrawings.pdf	4136512 ce92c10fdde8a122e61eb54114d3a0ebafdeb487	yes	87

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	68
Claims	69	75
Abstract	76	77
Drawings-only black and white line drawings	78	87

Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	36529 e5820fe752954c5a8b84bb47874d067c6c358e0f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	6483319		

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

PTO/AIA/14 (03-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	Apparatus, Method and System for a Tunneling Client Access Point	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

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

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Scott		McNulty	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Rowayton	State/Province	CT	Country of Residence i	US

Mailing Address of Inventor:

Address 1	22 Ensign Road		
Address 2			
City	Rowayton	**State/Province**	CT
Postal Code	06853	**Country** i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	85775		
Email Address	ptopatentcommunication@lockelord.com	Add Email	Remove Email

Application Information:

Title of the Invention	Apparatus, Method and System for a Tunneling Client Access Point		
Attorney Docket Number	1004294.013US	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)		**Suggested Figure for Publication (if any)**	

PTO/AIA/14 (03-13)
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	Application Number	
Title of Invention	Apparatus, Method and System for a Tunneling Client Access Point	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	85775		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
12950321	Continuation of	10807731	2010-11-19

Prior Application Status	Patented		Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
10807731	Continuation of		2004-03-23	7861006	2010-12-28

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) [1] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	Apparatus, Method and System for a Tunneling Client Access Point	

Application Number	Country [i]	Filing Date (YYYY-MM-DD)	Access Code [i] (if applicable)

Remove

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (03-13)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	Apparatus, Method and System for a Tunneling Client Access Point	

Applicant 1 Remove

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

Clear

◯ Assignee	◯ Legal Representative under 35 U.S.C. 117	◯ Joint Inventor
◯ Person to whom the inventor is obligated to assign.	◯ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country [i]		Postal Code	
Phone Number		Fax Number	
Email Address			

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

Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1

Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).

Remove

PTO/AIA/14 (03-13)
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	Apparatus, Method and System for a Tunneling Client Access Point	

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1	
Address 2	

City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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

Signature:

Remove

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

Signature	/Robert K. Goethals/			Date (YYYY-MM-DD)	2013-08-06
First Name	Robert	Last Name	Goethals	Registration Number	36813

Additional Signature may be generated within this form by selecting the Add button. Add

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

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

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

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

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

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

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

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

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

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/960,514

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	29 minus 20 =	* 9	x 40 =	360	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	1090		TOTAL	

APPLICATION AS AMENDED - PART II

		(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))	*	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	

		(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 B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/960,514	08/06/2013	2642	1090	1004294.013US	29	3

CONFIRMATION NO. 3560

85775
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

FILING RECEIPT

OC00000006337847 3

Date Mailed: 08/26/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)
Scott McNulty, Rowayton, CT;

Applicant(s)
Scott McNulty, Rowayton, CT;

Power of Attorney: None

Domestic Applications for which benefit is claimed - None.
A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 08/21/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/960,514**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No
** **SMALL ENTITY** **

Title

Apparatus, Method and System for a Tunneling Client Access Point

Preliminary Class

455

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/960,514	08/06/2013	Scott McNulty	1004294.013US

CONFIRMATION NO. 3560

85775
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

FORMALITIES LETTER

OC000000063378474

Date Mailed: 08/26/2013

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. 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 required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
  - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 6.
  - Numbers, letters, and reference characters on the drawings must measure at least 0.32 cm (1/8 inch) in height. See Figure(s) 3-8 and 10.
  - The drawings submitted to the Office are not electronically reproducible because portions of figures 6,6,8 are missing and/or blurry.
- A replacement abstract not exceeding 150 words in length and commencing on a separate sheet in compliance with 37 CFR 1.72(b) and 37 CFR 1.121 is required.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Items Required To Avoid Processing Delays:

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

A new inventor's oath or declaration that identifies this application (e.g., by Application Number and filing date) is required. The inventor's oath or declaration does not comply with 37 CFR 1.63 in that it:

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration.

  Scott McNulty

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

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

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/hnguyen/

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/960,514	08/06/2013	Scott McNulty	1004294.013US

CONFIRMATION NO. 3560

IMPROPER CPOA LETTER

85775
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

OC000000063364904

Date Mailed: 08/26/2013

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 08/06/2013. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney you provided did not comply with the power of attorney rules that became effective on June 25, 2004. See 37 CFR 1.32 and 69 Fed. Reg. 29865.

/solbrich/

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

Docket No. 1004294.013US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	13/960,514	Confirmation No.:	3560
Applicant:	Scott McNulty	Group Art Unit:	2642
		Examiner:	
Filed:	August 6, 2013		
		Customer No.:	85775

For: APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

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

Sir:

This responds to the Notice To File Corrected Application Papers dated August 26, 2013, requiring the submission of a replacement drawings in compliance with 37 C.F.R. 1.84 and 37 C.F.R. 1.121(d), and a replacement Abstract not exceeding 150 words in length and commencing on a separate sheet in compliance with 37 C.F.R. 1.72(b) and 37 C.F.R. 1.121. Applicant submits herewith 17 sheets of replacement drawings containing Figures 1, 2, 3a, 3b, 4a, 4b, 5a, 5b, 6a, 6b, 7a, 7b, 8, 9a, 9b, 10a and 10b, as well as a separate sheet containing a replacement Abstract. Applicant respectfully requests entry of this replacement drawings in place of the original drawings and replacement Abstract in place of the original Abstract. No new matter has been added by these replacement drawings and replacement Abstract.

The Commissioner is hereby authorized to charge any fees which may be required by this paper to Deposit Account No. 504827, Order No. 1004294.012US.

Respectfully submitted,
LOCKE LORD LLP

Dated: February 26, 2014

Robert K. Goethals
Registration No. 36,813

Correspondence Address:
Address Associated With Customer Number:
85775
(212) 415-8600 Telephone
(212) 303-2754 Facsimile

NY 751935

ABSTRACT

The disclosure details the implementation of a tunneling client access point (TCAP) that is a highly secure, portable, power efficient storage and data processing device. The TCAP "tunnels" data through an access terminal's (AT) input/output facilities. In one embodiment, the TCAP connects to an AT and a user employs the AT's user input peripherals for input, and views the TCAP's activities on the AT's display. This enables the user to observe data stored on the TCAP without it being resident on the AT, which can be useful to maintain higher levels of data security. Also, the TCAP may tunnel data through an AT across a communications network to access remote servers. The disclosure also teaches a plug-n-play virtual private network (VPN).

Fig. 1

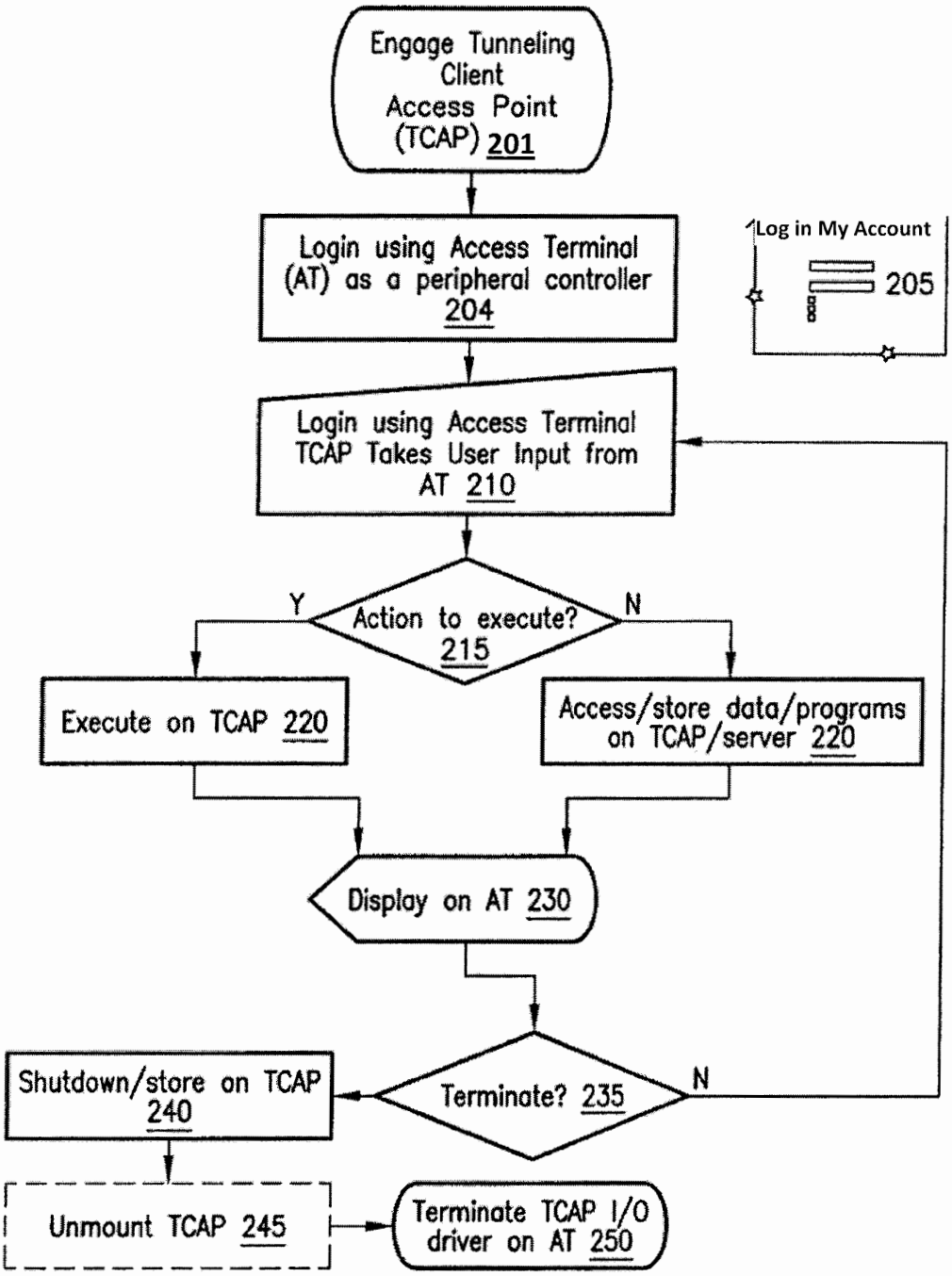

Engage Tunneling Client Access Point (TCAP) 201
Login using Access Terminal (AT) as a peripheral controller 204
Log in My Account
205
Login using Access Terminal TCAP Takes User Input from AT 210
Y
Action to execute? 215
N
Execute on TCAP 220
Access/store data/programs on TCAP/server 220
Display on AT 230
Shutdown/store on TCAP 240
Terminate? 235
N
Unmount TCAP 245
Terminate TCAP I/O driver on AT 250

Fig. 2

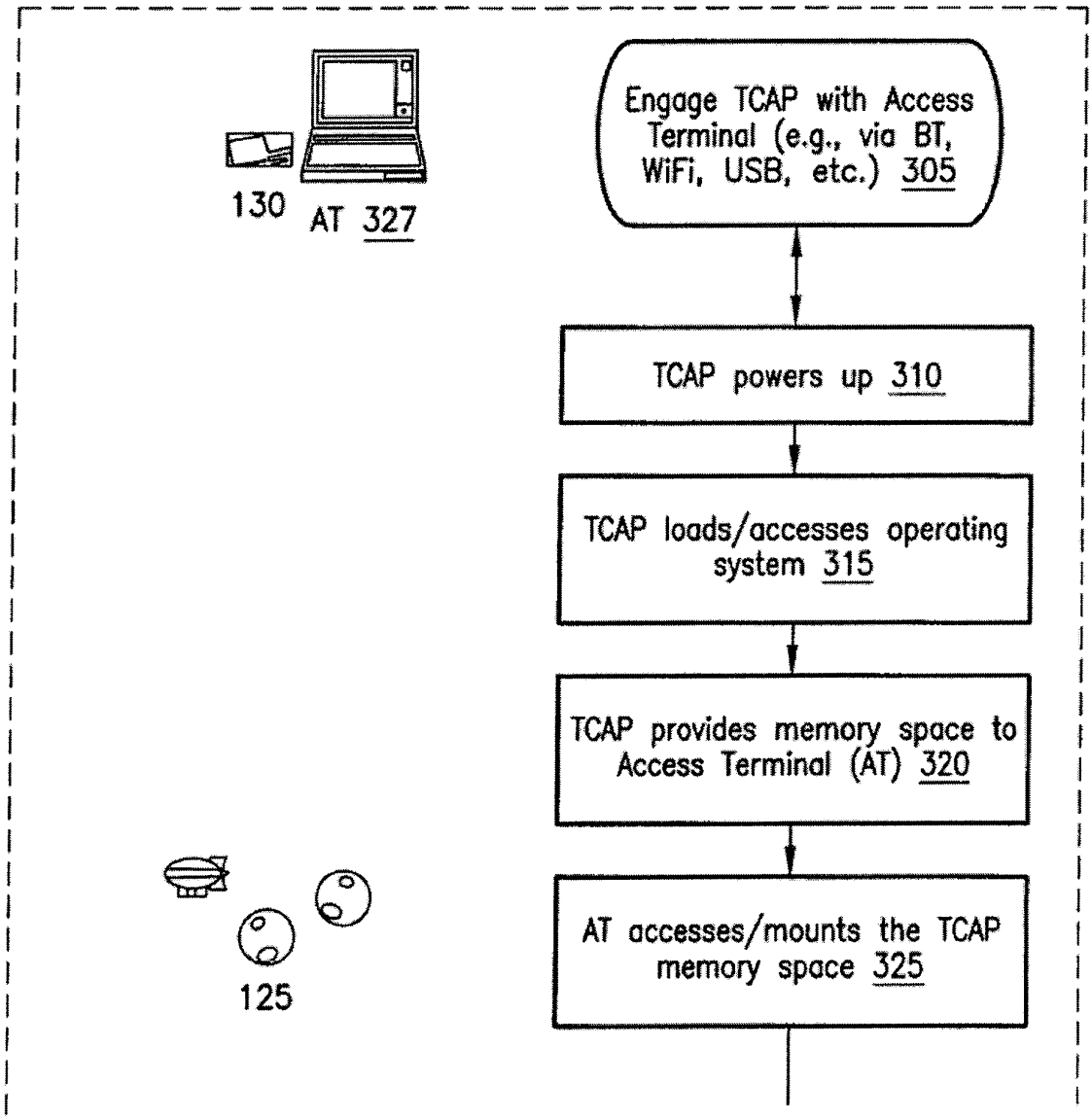

130
AT 327
125
Engage TCAP with Access Terminal (e.g., via BT, WiFi, USB, etc.) 305
TCAP powers up 310
TCAP loads/accesses operating system 315
TCAP provides memory space to Access Terminal (AT) 320
AT accesses/mounts the TCAP memory space 325

Fig. 3a

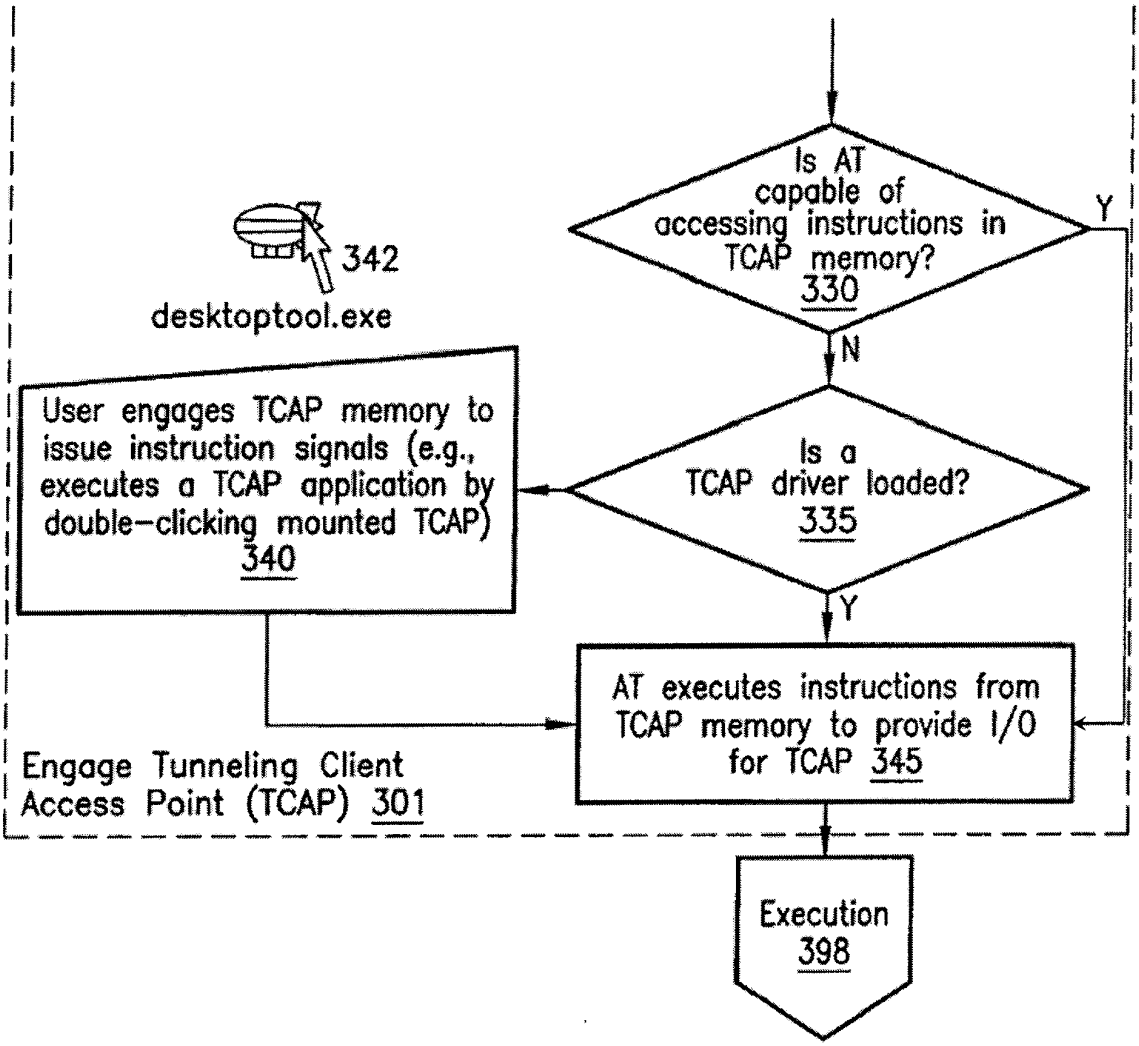


Fig. 3b

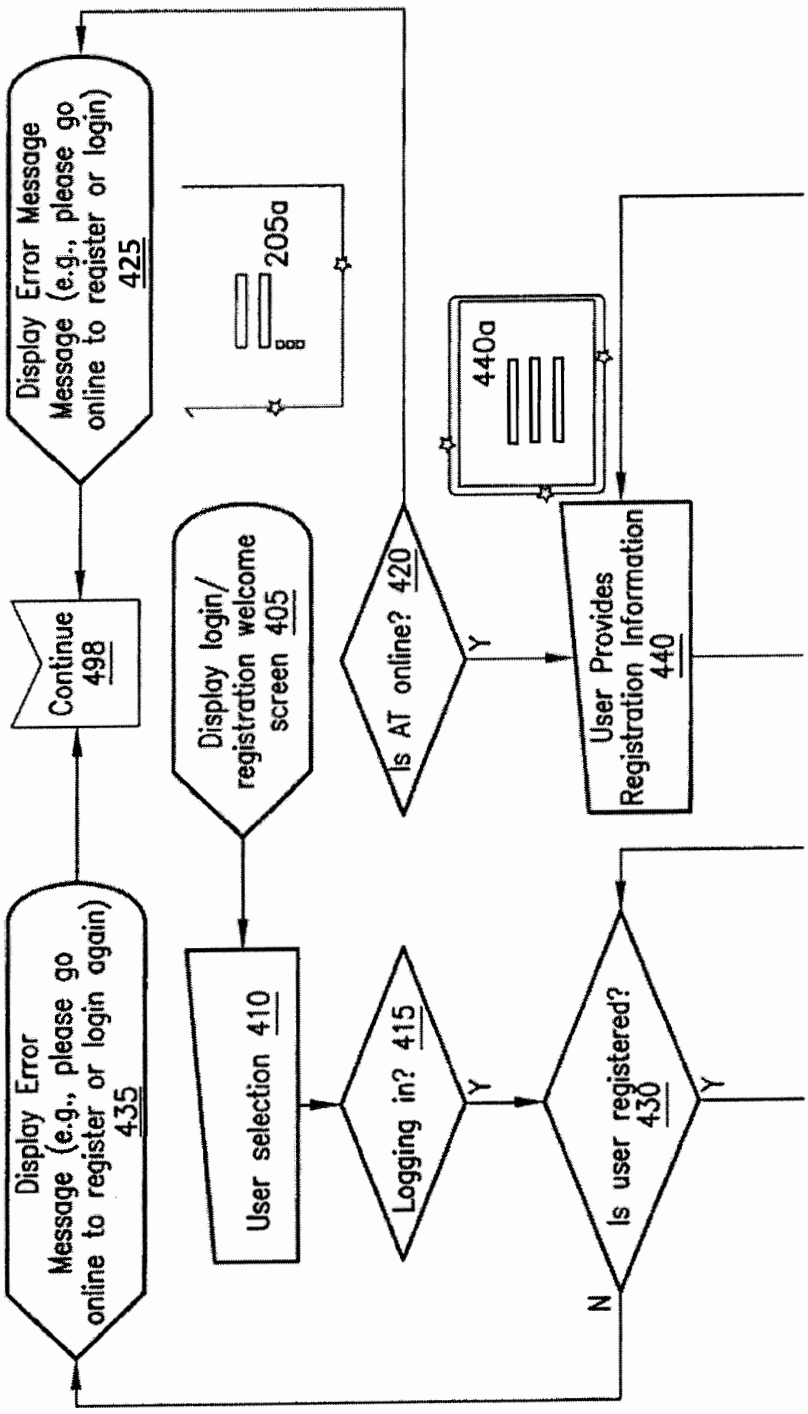


Fig. 4a

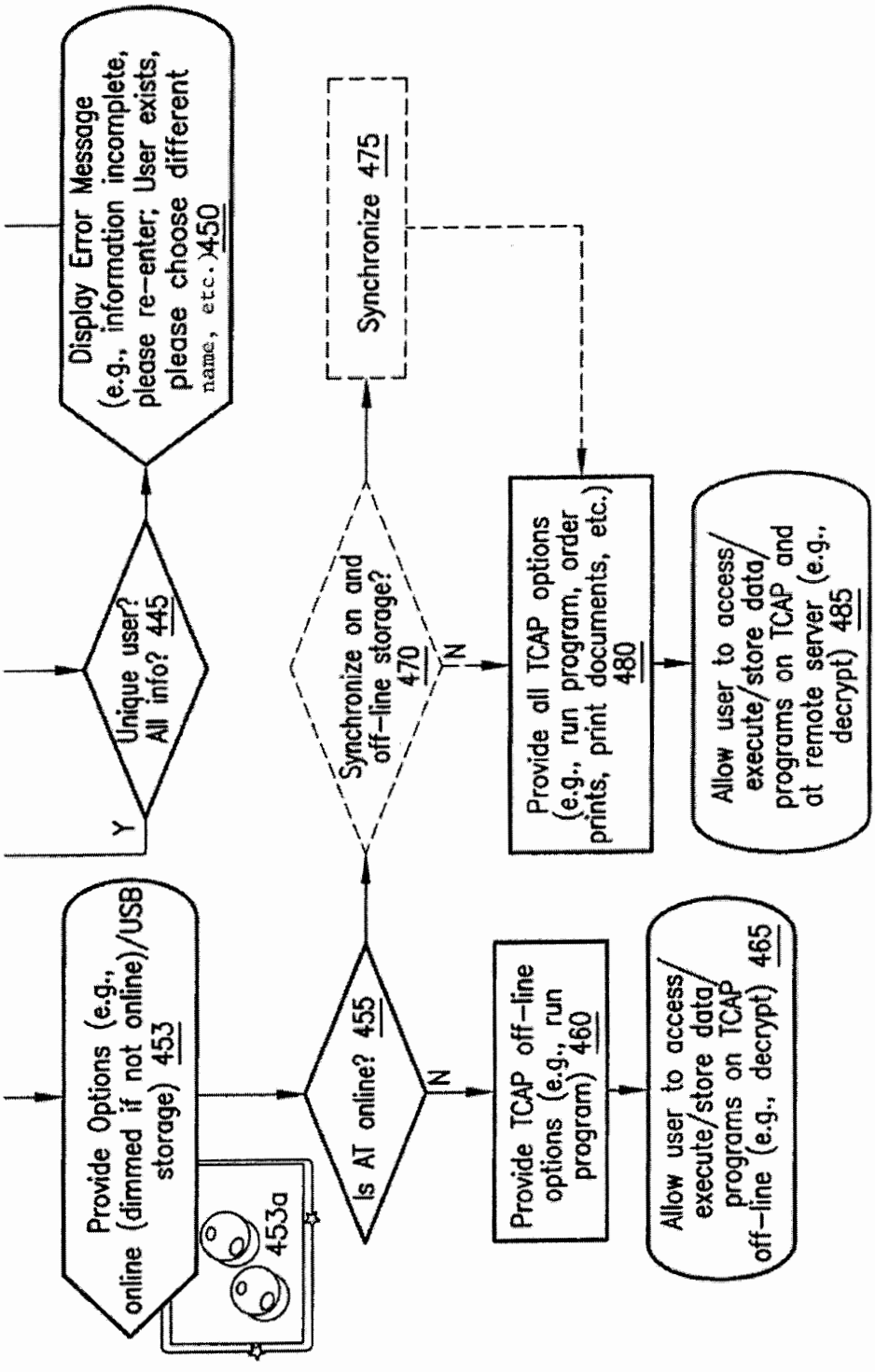


Fig. 4b

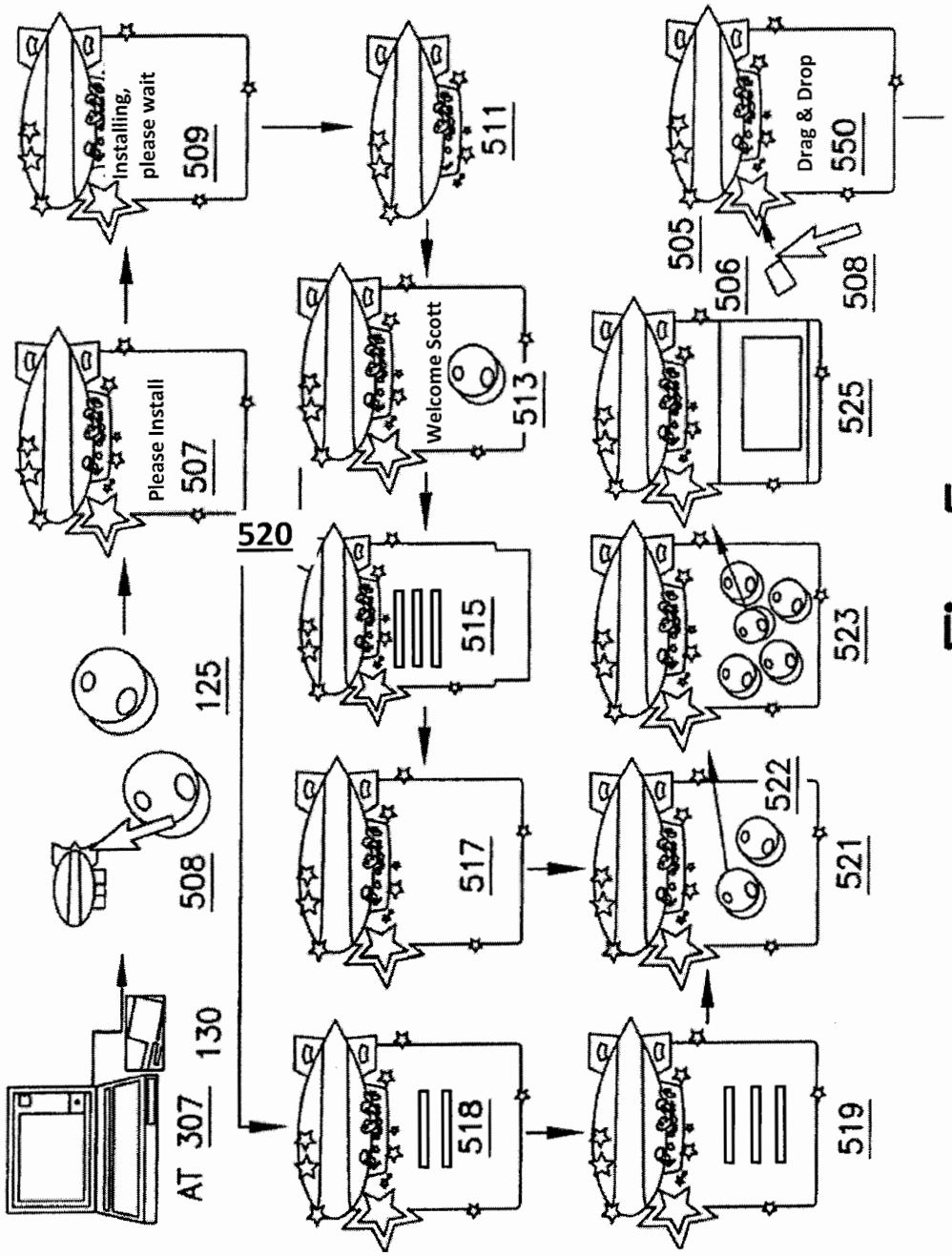


Fig. 5a

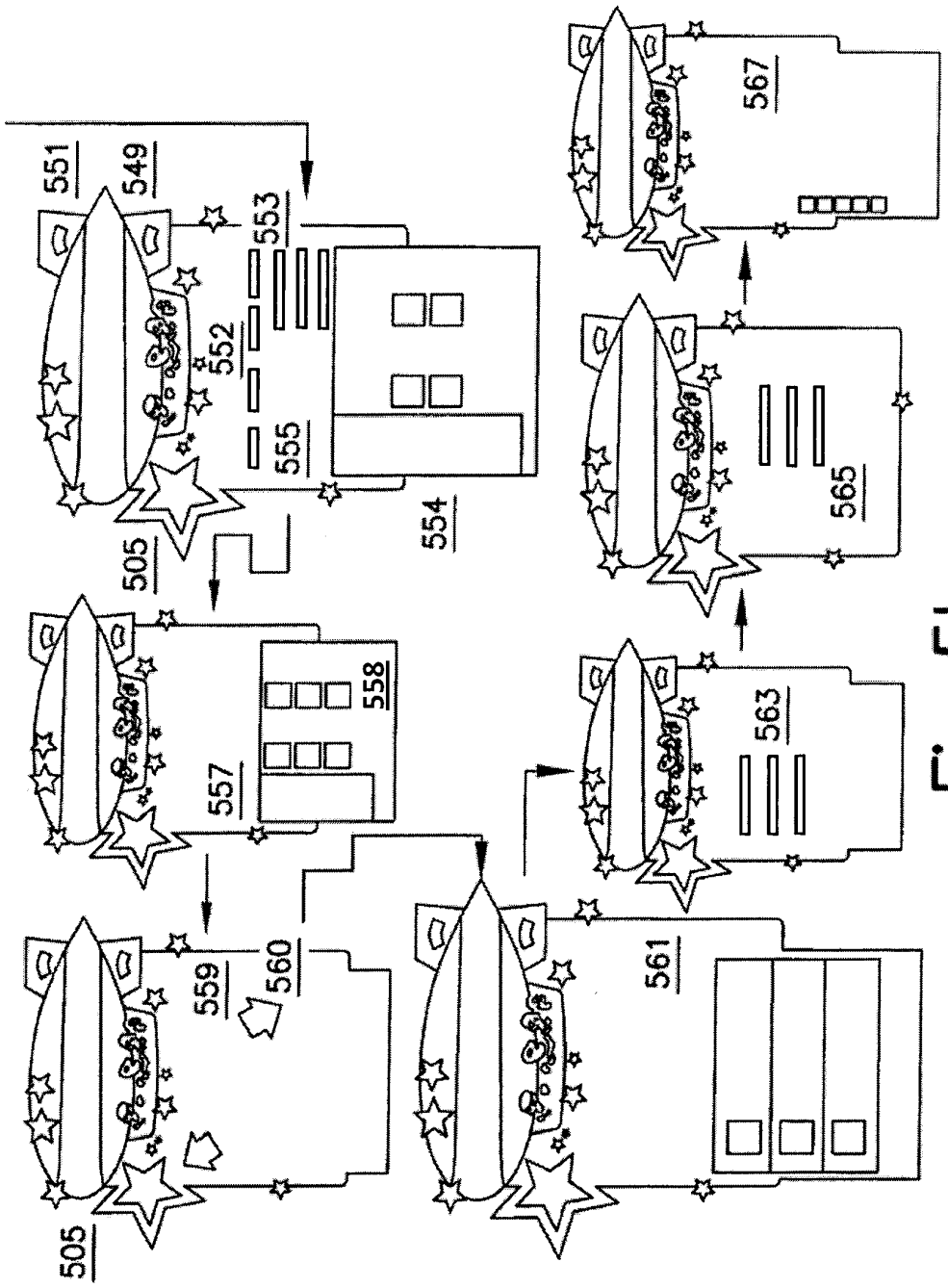


Fig. 5b

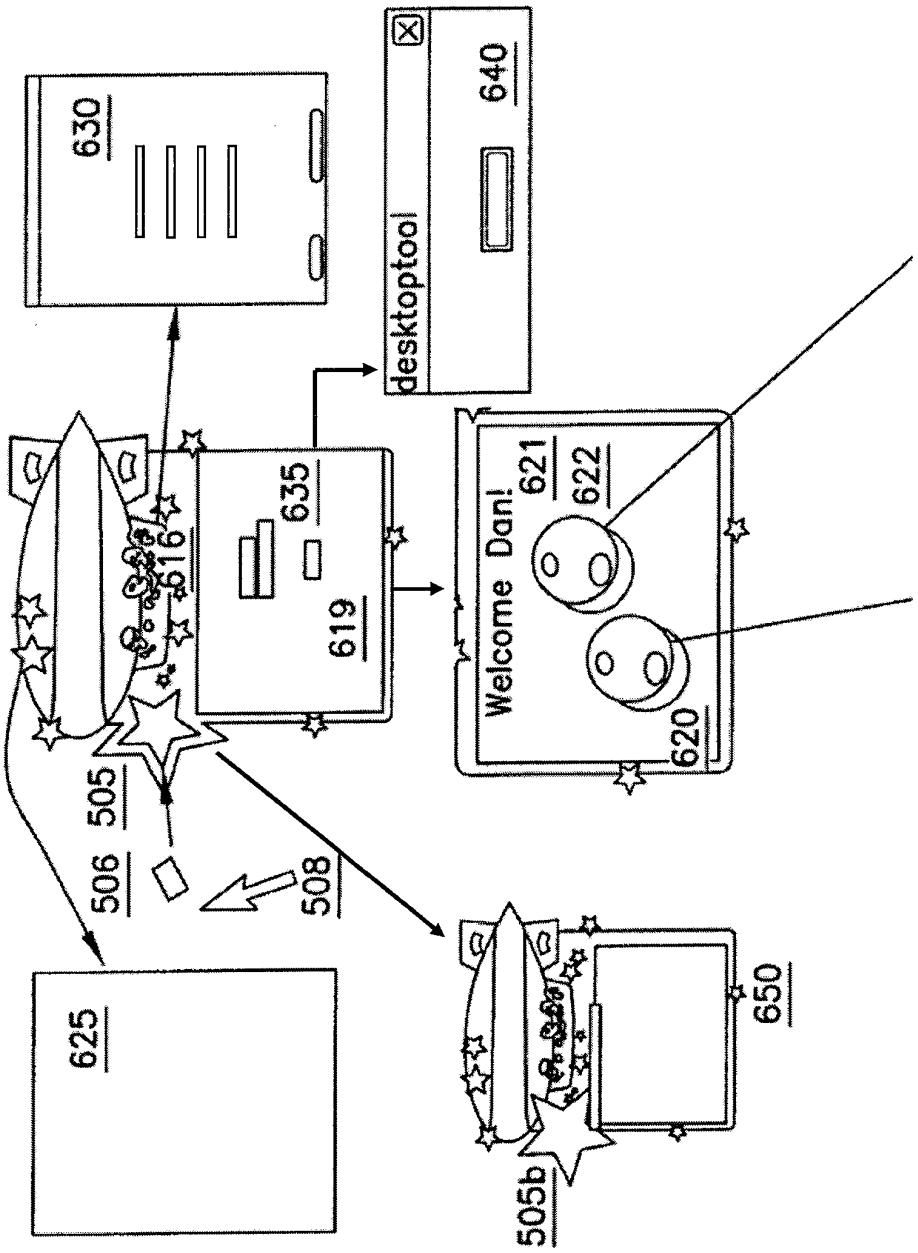

630
640
desktoptool
635
619
516
621
622
Welcome Dan!
620
505
506
508
625
650
505b

Fig. 6a

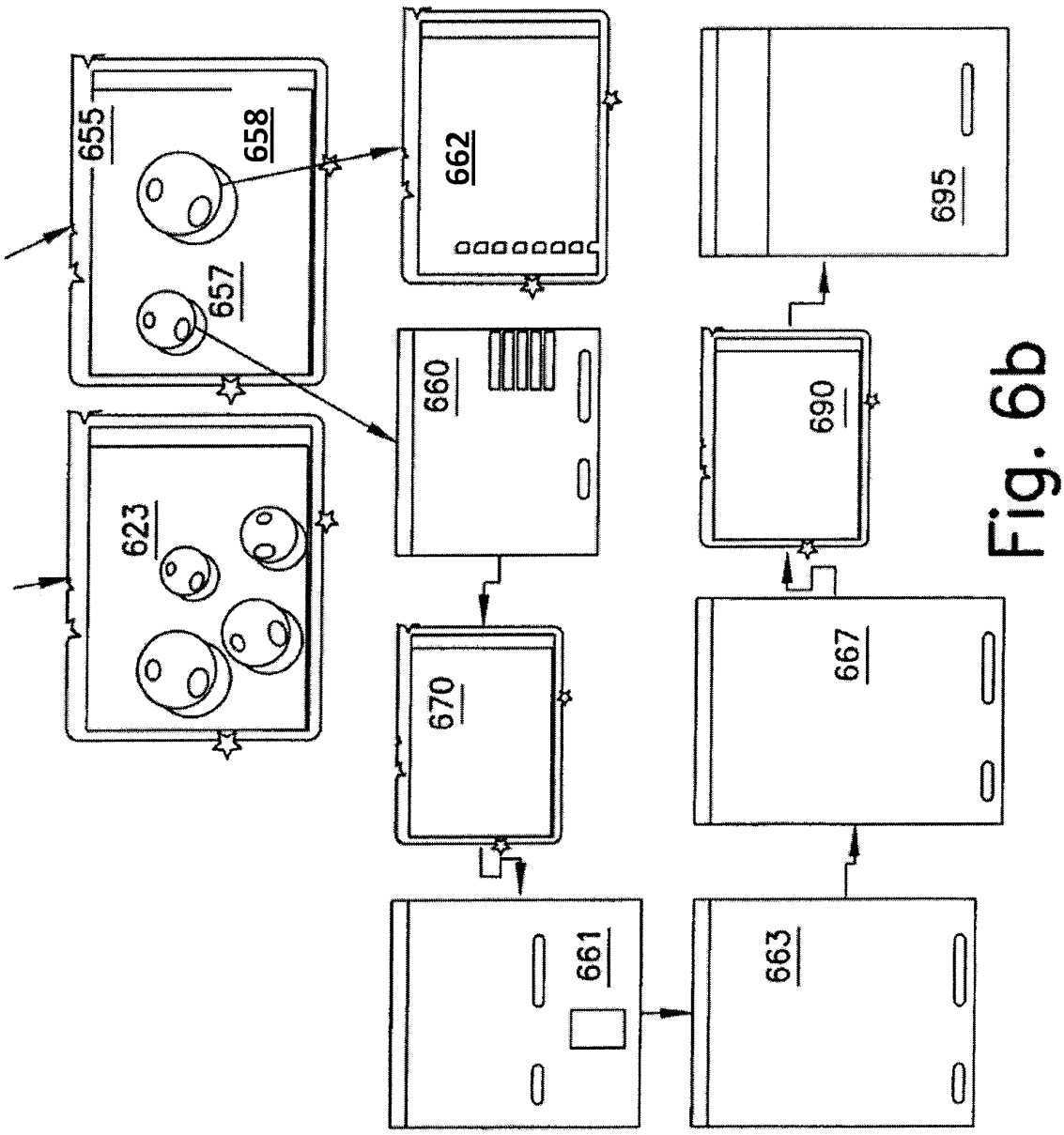
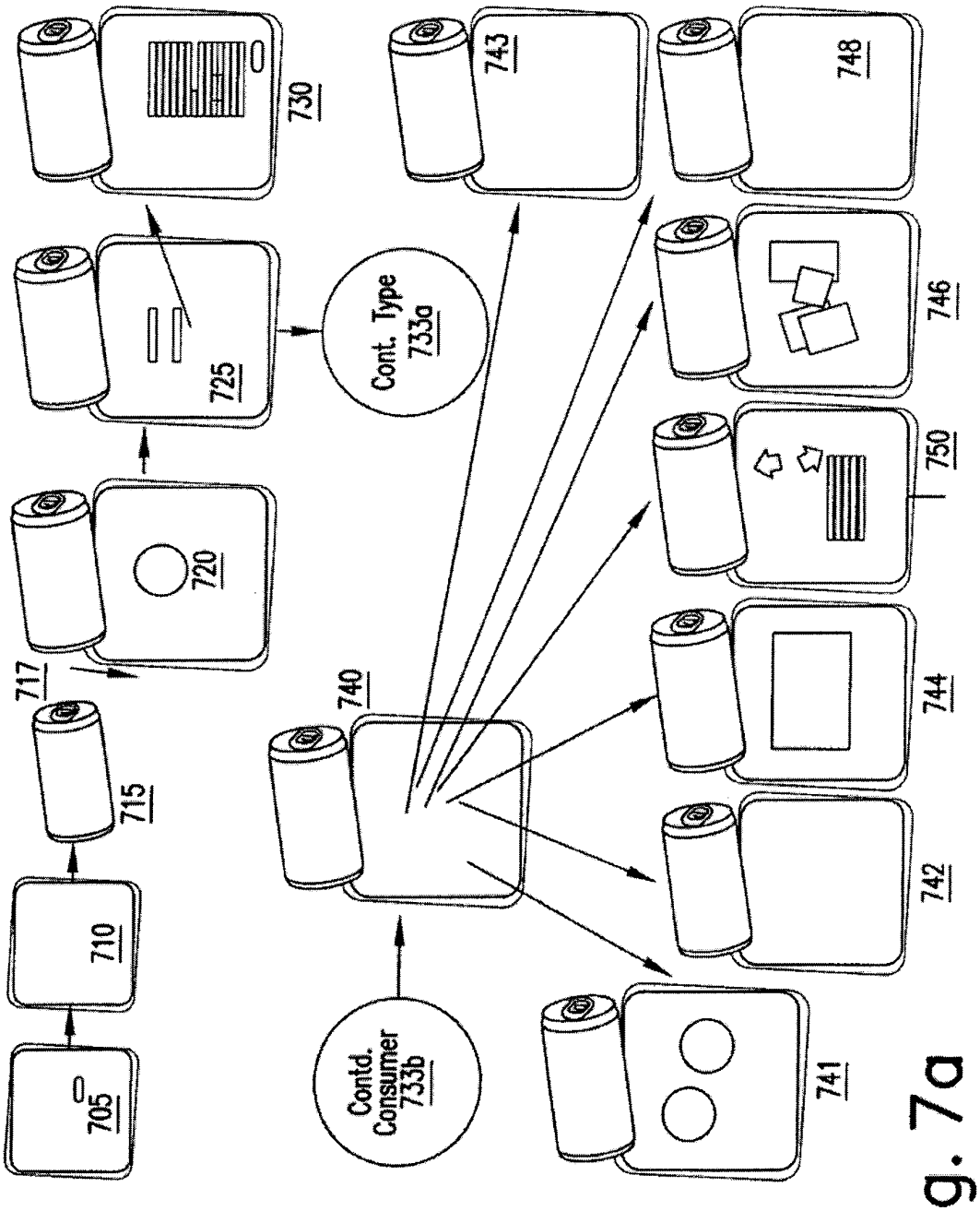


Fig. 6b


705
710
715
717
720
725
730
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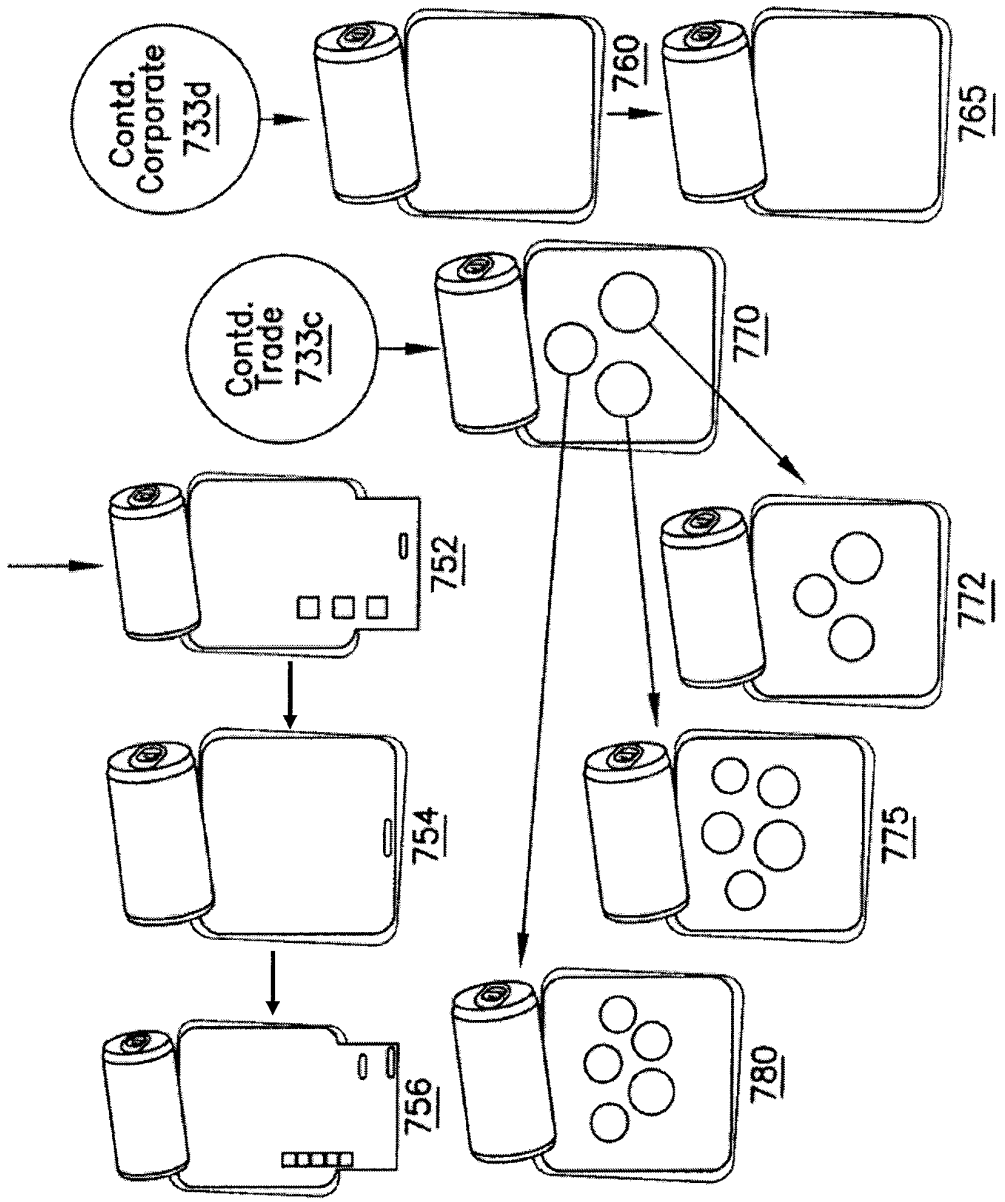
741
742
743
744
746
748
750
Cont. Type 733a
Contd. Consumer 733b

Fig. 7a


Contd. Corporate 733d
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765
Contd. Trade 733c
770
752
772
754
775
756
780

Fig. 7b

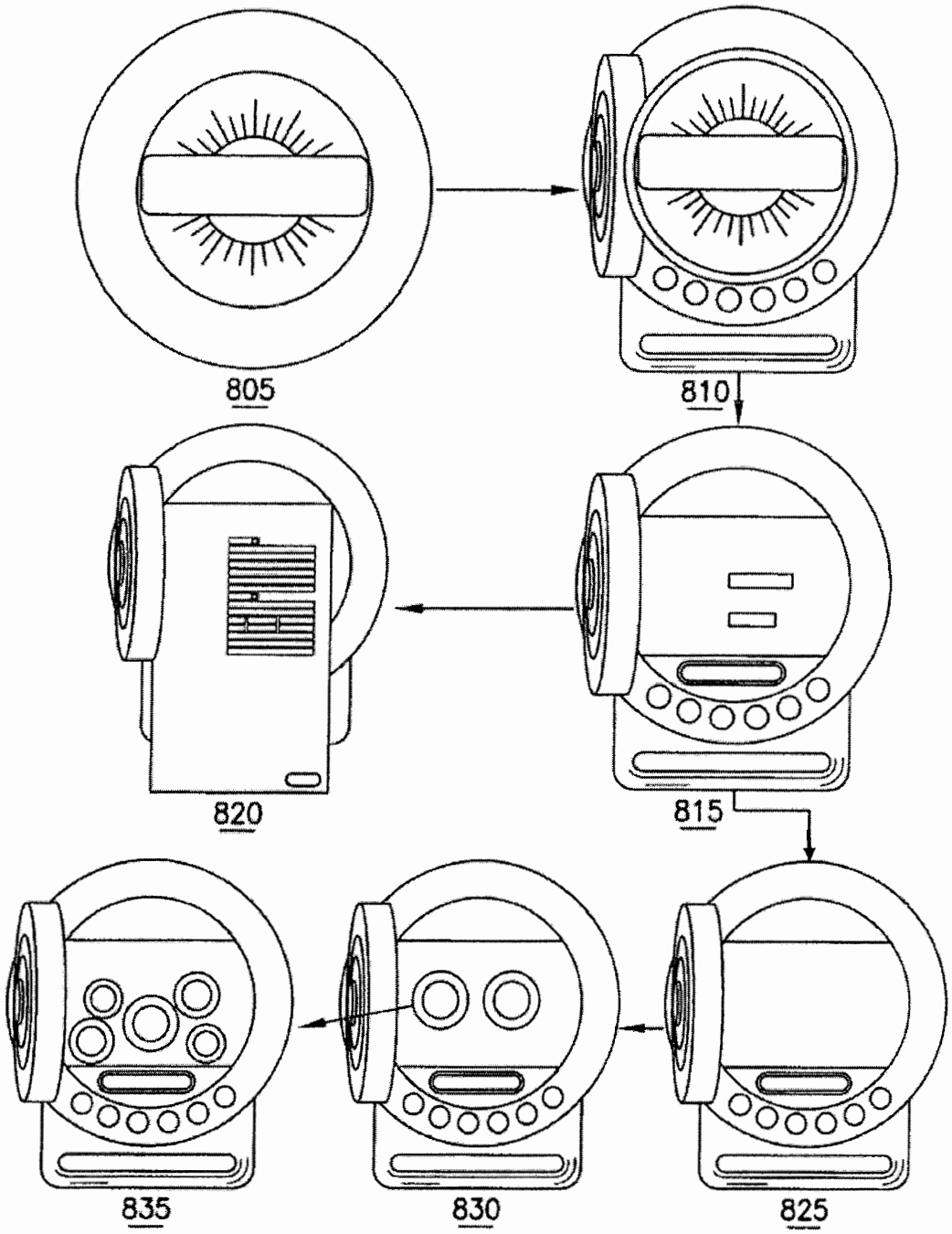


Fig. 8

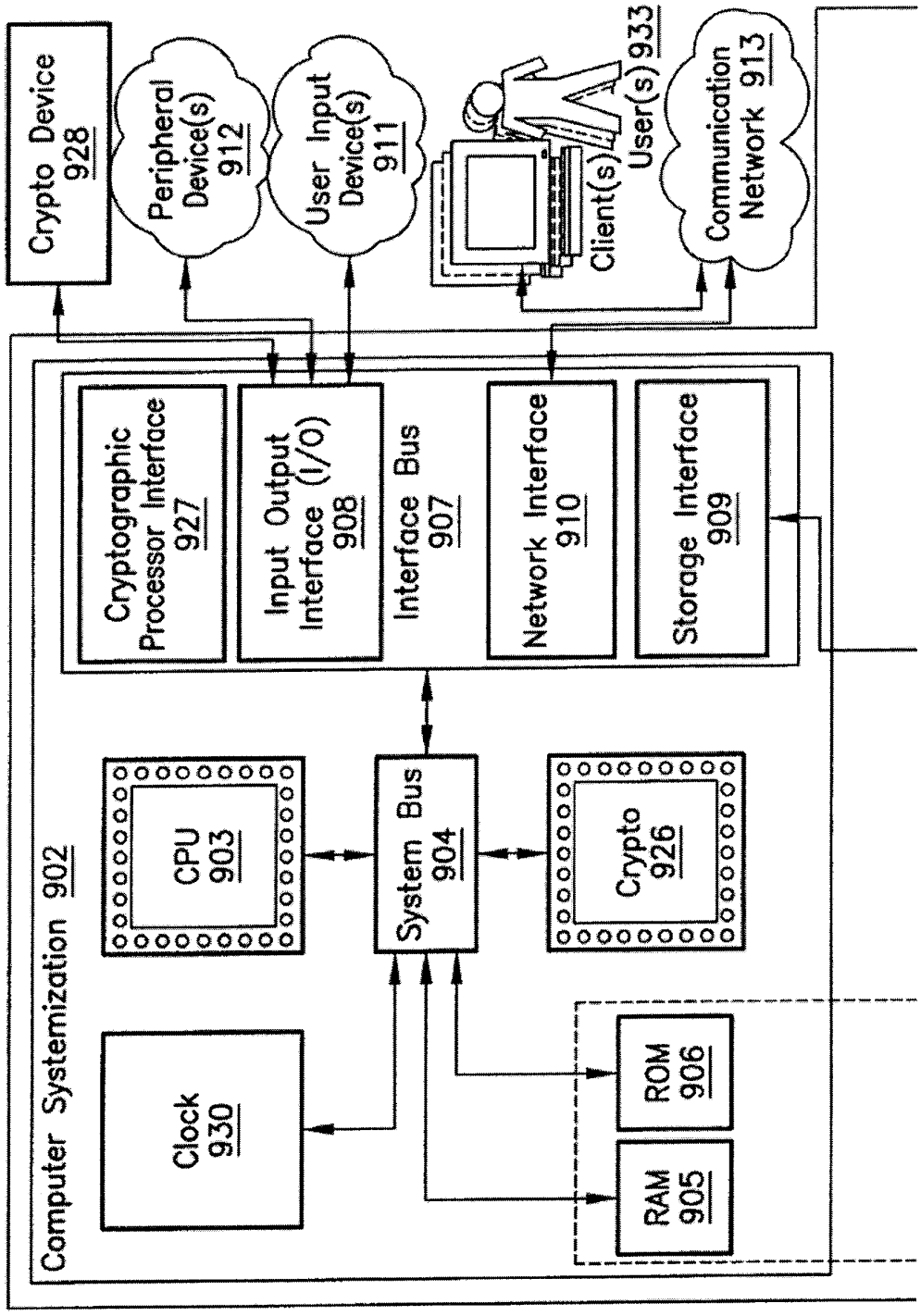


Fig. 9a

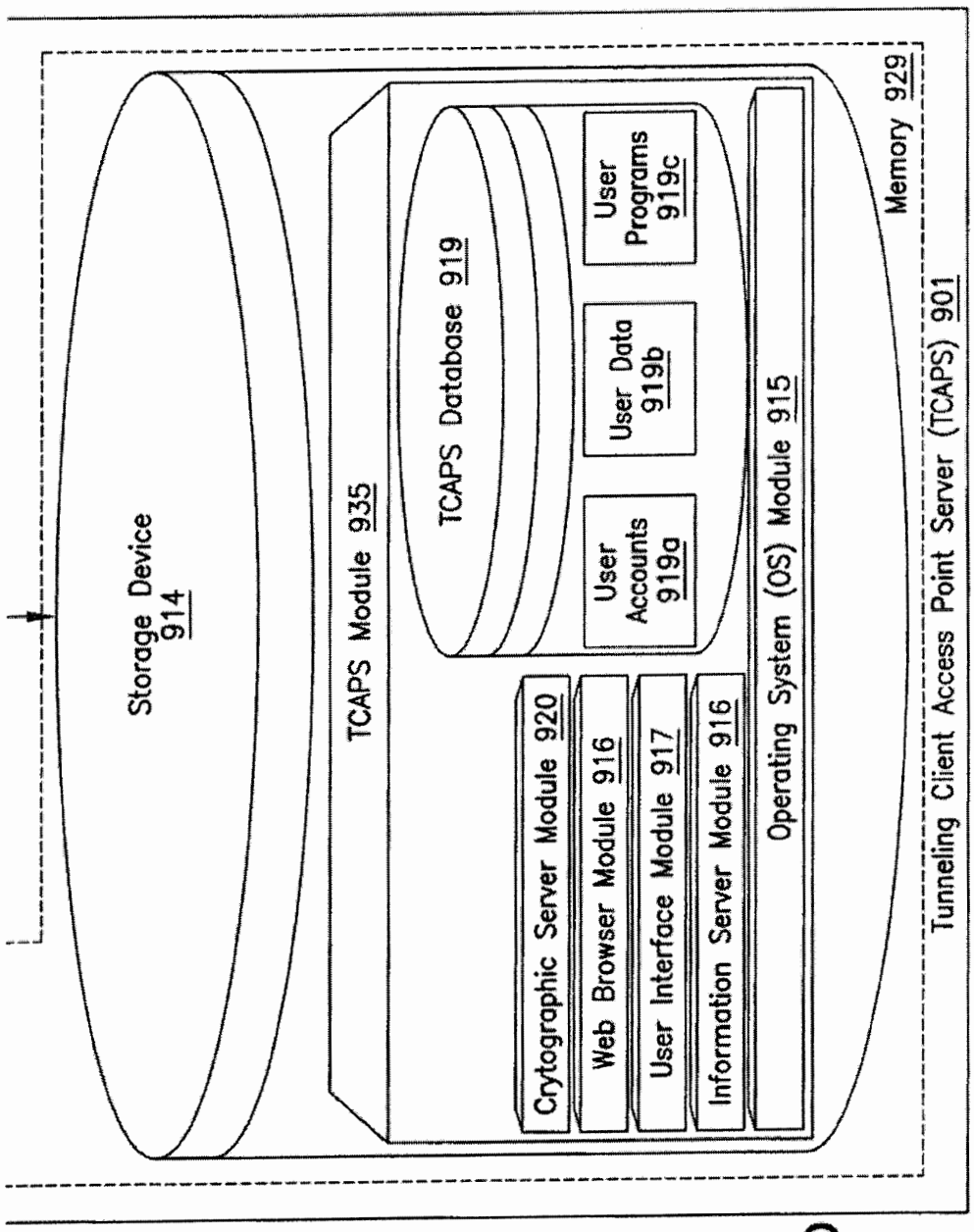


Fig.9b

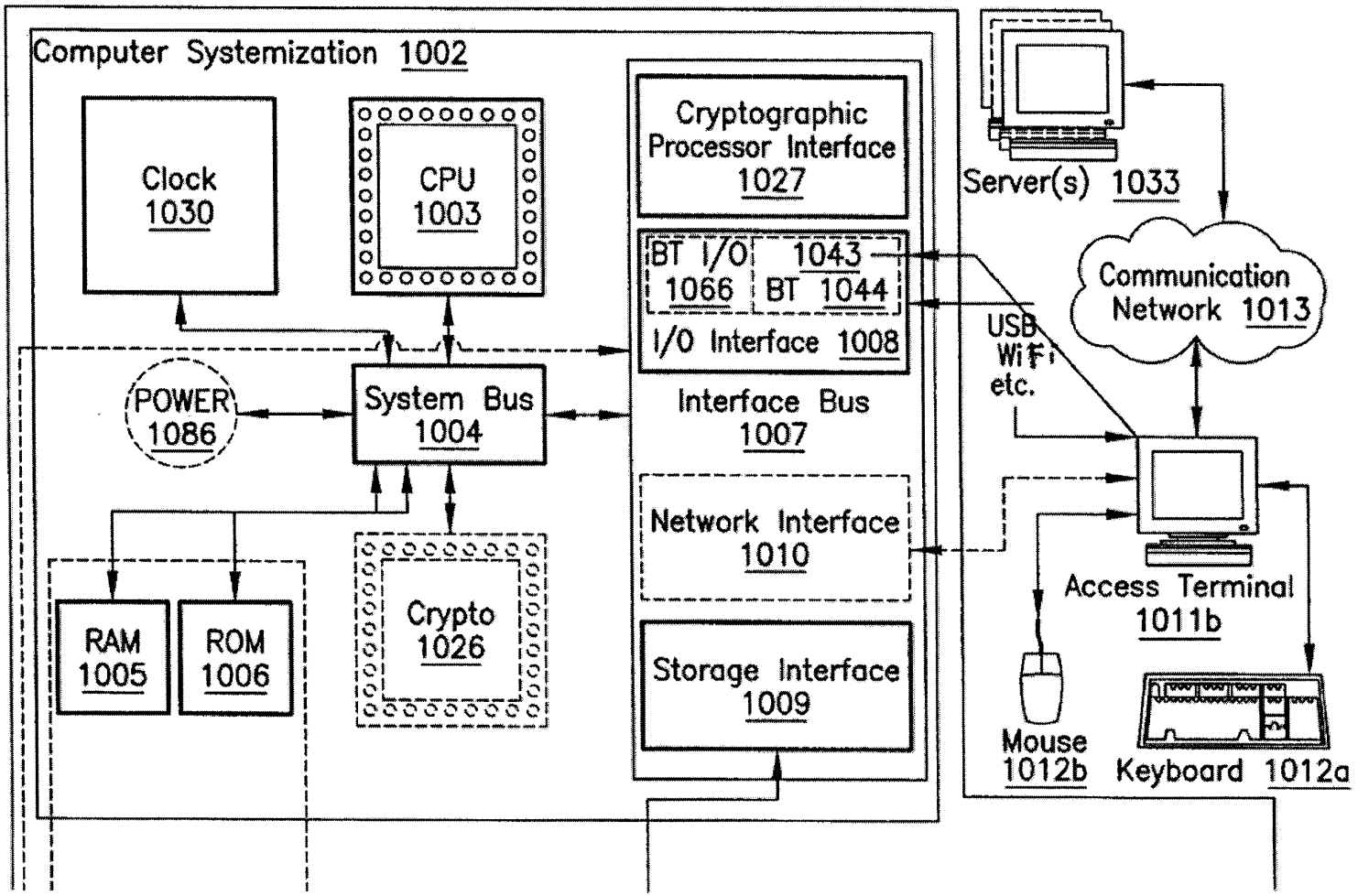


Fig. 10a

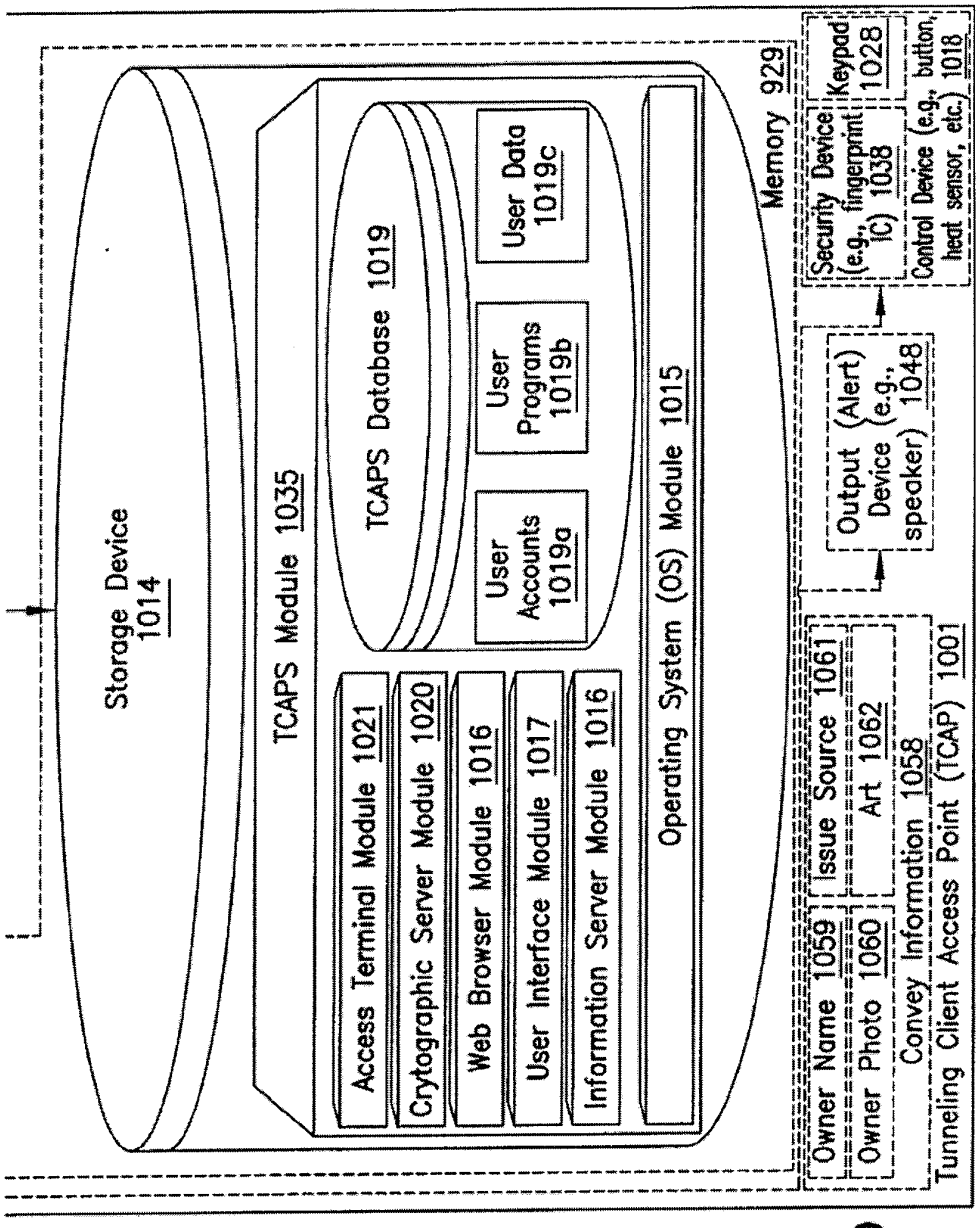


Fig.10b

Docket No. 1004294.013US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:	13/960,514	Confirmation No.:	3560
Applicant(s):	Scott McNulty	Group Art Unit:	2642
		Examiner:	TBA
Filed:	August 6, 2013		
		Customer No.:	85775

For: APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT

PETITION AND FEE FOR EXTENSION OF TIME (37 C.F.R. § 1.136(a))

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

Sir:

1. This is a petition for an extension of time for Response to Notice to File Corrected Application Papers.

2. The communication in connection with the matter for which this extension is requested
   - ☒ is filed herewith.
   - ☐ has been filed on _____.

3. ☒ Applicant(s) is/are entitled to Small Entity Status/ Micro Entity Status.
   - ☐ Statement has already been filed.

4.

		Total Months Requested	Fee for Other than Small Entity	Fee for Small Entity	Fee for Micro Entity
a.	☐	one month	$200.00	$100.00	$50.00
b.	☐	two months	$600.00	$300.00	$150.00
c.	☐	three months	$1,400.00	$700.00	$350.00
d.	☒	four months	$2,200.00	$1,100.00	$550.00
e.	☐	five months	$3,000.00	$1,500.00	$750.00

f. ☐ An extension for _____ months has already been secured for filing the above-identified communication and the fee paid therefor of $_____ is deducted from the total fee due for the total months of extension now requested. The fee for this extension ($), minus the fee previously paid ($_____) equals $_____ (total fee due).

5. ☐ A check in the amount of $_____ to cover the extension fee is attached.

6. ☒ Charge fee to Deposit Account No. **504827**, Order No. 1004294.013US.

7. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. **504827**, Order No. 1004294.013US.

Respectfully submitted,
LOCKE LORD LLP

Dated: February 26, 2014

Robert K. Goethals
Registration No. 36812

Correspondence Address:
Address Associated With Customer Number:
85775

(212) 415-8600 Telephone
(212) 303-2754 Facsimile

Electronic Patent Application Fee Transmittal

Application Number:	13960514
Filing Date:	06-Aug-2013
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Anna Hill
Attorney Docket Number:	1004294.013US

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 - 4 months with $0 paid	2254	1	1100	1100

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**1100**

Electronic Acknowledgement Receipt

EFS ID:	18303873
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	26-FEB-2014
Filing Date:	06-AUG-2013
Time Stamp:	10:51:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1100
RAM confirmation Number	13365
Deposit Account	504827
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 1.17 (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		1004294013US_ResponseNoticeFileCorrectedApplicationPapers.pdf	3088782 a127ac0dad29cc90daec91587f58b7323c8fb551	yes	19

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Applicant Response to Pre-Exam Formalities Notice	1	1
	Abstract	2	2
	Drawings-only black and white line drawings	3	19

Warnings:

Information:

2	Extension of Time	1004294013US_PetitionForExtensionOfTime.pdf	232797 1703325dae5e1ba34b3705b49f1193b2eb168745	no	2

Warnings:

Information:

3	Fee Worksheet (SB06)	fee-info.pdf	30255 6f534e1d63b8aaa99dab8dcb4d63e052a1d0e231	no	2

Warnings:

Information:

Total Files Size (in bytes):	3351834

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.

Doc Code: PA..
Document Description: Power of Attorney

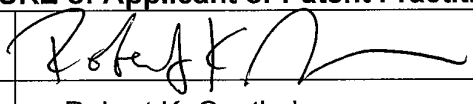
PTO/AIA/82A (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	13/960,514
Filing Date	August 6, 2013
First Named Inventor	Scott McNulty
Title	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT
Art Unit	2642
Examiner Name	TBA
Attorney Docket Number	1004294.013US

SIGNATURE of Applicant or Patent Practitioner

Signature		Date (Optional)	
Name	Robert K. Goethals	Registration Number	36,813
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY BY APPLICANT

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

Application Number	Filing Date
13/960,514	August 6, 2013

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 85775

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

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

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

☑ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Scott McNulty/	Date (Optional)	
Name	Scott McNulty		
Title			

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

☑ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Privacy Act Statement

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

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

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

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 13/960,514

filed on August 6, 2013.

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

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

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

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Scott McNulty Date (Optional) :

Signature: Scott McNulty

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	18322792
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	27-FEB-2014
Filing Date:	06-AUG-2013
Time Stamp:	15:07:15
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	Application Data Sheet	1004294013US_SupplementalADS.pdf	392779 fb5b5c4f71844d3b421ffef5a8e49e56dc9d20f1	no	7
Warnings:					
Information:					

This is not an USPTO supplied ADS fillable form					
2	Power of Attorney	1004294013US_PowerOfAttorney.pdf	215842 349240ae70463d40731d837fe631b485a1c286d6	no	3
Warnings:					
Information:					
3	Oath or Declaration filed	1004294013US_Declaration.pdf	141499 02a742d9ba6ed618ede1497b37f7b98f31727168	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	750120	

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

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

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

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

PTO/AIA/14 (12-13)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

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

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Scott		McNulty	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Rowayton	State/Province	CT	Country of Residence	US

Mailing Address of Inventor:

Address 1	22 Ensign Road		
Address 2			
City	Rowayton	State/Province	CT
Postal Code	06853	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	85775		
Email Address	ptopatentcommunication@lockelord.com	Add Email	Remove Email

Application Information:

Title of the Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT		
Attorney Docket Number	1004294.013US	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter			
Total Number of Drawing Sheets (if any)	17	Suggested Figure for Publication (if any)	

Filing By Reference :

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT	

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	85775		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the application number blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13960514	Continuation of	12950321	2010-11-19
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
12950321	Continuation of	10807731	2004-03-23

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT	

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT	

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.
In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

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

Clear

○ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT	

Mailing Address Information For Applicant:			
Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication . An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:			
Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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

PTO/AIA/14 (12-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	1004294.013US
	Application Number	
Title of Invention	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT	

Signature:

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

Signature				Date (YYYY-MM-DD)	2014-02-27
First Name	Robert	Last Name	Goethals	Registration Number	36813

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

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

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

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).

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

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

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/960,514	08/06/2013	Scott McNulty	1004294.013US

CONFIRMATION NO. 3560

85775
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

POA ACCEPTANCE LETTER

OC0000000668914 51

Date Mailed: 03/11/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/27/2014.

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

/tchaka/

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/960,514	08/06/2013	2642	1090	1004294.013US	29	3

CONFIRMATION NO. 3560

UPDATED FILING RECEIPT

85775
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

OC000000066892188

Date Mailed: 03/11/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Scott McNulty, Rowayton, CT;

Applicant(s)

Scott McNulty, Rowayton, CT;

Power of Attorney: The patent practitioners associated with Customer Number 85775

Domestic Priority data as claimed by applicant

This application is a CON of 12/950,321 11/19/2010 PAT 8539047
which is a CON of 10/807,731 03/23/2004 PAT 7861006

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 08/21/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/960,514**

Projected Publication Date: 06/19/2014

Non-Publication Request: No

Early Publication Request: No
** **SMALL ENTITY** **

Title

Apparatus, Method and System for a Tunneling Client Access Point

Preliminary Class

455

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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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.

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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).

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/960,514

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	29 minus 20 =	* 9	x 40 =	360	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	1090		TOTAL	

APPLICATION AS AMENDED - PART II

		(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))	*	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	

		(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 B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

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

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/960,514	08/06/2013	Scott McNulty	1004294.013US

CONFIRMATION NO. 3560

85775
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

PUBLICATION NOTICE

Title: Apparatus, Method and System for a Tunneling Client Access Point

Publication No.US-2014-0172958-A1
Publication Date:06/19/2014

NOTICE OF PUBLICATION OF APPLICATION

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

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

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

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

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/960,514	08/06/2013	Scott McNulty	1004294.013US	3560

85775 7590 10/24/2014

Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2443	

NOTIFICATION DATE	DELIVERY MODE
10/24/2014	ELECTRONIC

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

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

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

ptopatentcommunication@lockelord.com

Office Action Summary	Application No. 13/960,514	Applicant(s) MCNULTY, SCOTT	
	Examiner ALINA N. BOUTAH	Art Unit 2443	AIA (First Inventor to File) Status No

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *8/6/13*.

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

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

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

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

Disposition of Claims*

5)☒ Claim(s) *1-29* is/are pending in the application.

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

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-29* is/are rejected.

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

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

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

Application Papers

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

11)☒ The drawing(s) filed on *8/6/13* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

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

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 double patenting rejection is appropriate where the claims at issue 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 reference 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. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO internet Web site contains terminal disclaimer forms which may be used. Please visit http://www.uspto.gov/forms/. The filing date of the application will determine what form should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 1-29 are rejected on the ground of nonstatutory double patenting over claims 1-30 of U.S. Patent No. 9,539,047 since the claims, if allowed, would improperly extend the “right to exclude” already granted in the patent. The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: “first program code which, when executed by the terminal processor, is configured to present an interactive user interface on the terminal output component, and second program code which, when executed by the terminal processor, is configured to provide a communications node on the terminal to facilitate communications to the portable device and to a communications network node through the terminal network communication interface, the portable device comprising: (a) an external communication interface configured to enable the transmission of communications between the portable device and the terminal; (b) a processor; and (c) a memory having executable program

code stored thereon, including: (1) third program code which, when executed by the portable device processor, is configured to provide a communications node on the portable device to coordinate with the communications node on the terminal and establish a communications link between the portable device and the terminal, and facilitate communications to the terminal and to a communications network node through the terminal network communication interface; and (2) fourth program code which is configured to be executed by the portable device processor in response to a communication received by the portable device resulting from user interaction with the interactive user interface; wherein the portable device is configured to facilitate communications through the communication node on the terminal and the terminal network interface to a communications network node."

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALINA N. BOUTAH whose telephone number is (571)272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L.M. Dollinger can be reached on 571-272-4170. 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.

/ALINA N BOUTAH/
Primary Examiner, Art Unit 2443

Notice of References Cited	Application/Control No. 13/960,514	Applicant(s)/Patent Under Reexamination MCNULTY, SCOTT	
	Examiner ALINA N. BOUTAH	Art Unit 2443	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0044663 A1	04-2002	King et al.	380/284
*	B	US-2003/0028649 A1	02-2003	Uhlik et al.	709/228
*	C	US-2003/0158891 A1	08-2003	Lei et al.	709/203
*	D	US-2004/0127254 A1	07-2004	Chang, William Ho	455/557
*	E	US-6,763,399 B2	07-2004	Margalit et al.	710/13
*	F	US-6,928,463 B1	08-2005	Tene et al.	709/203
*	G	US-2005/0198221 A1	09-2005	Manchester et al.	709/220
*	H	US-2005/0197859 A1	09-2005	Wilson et al.	705/002
*	I	US-2006/0052085 A1	03-2006	Gregrio Rodriguez et al.	455/411
*	J	US-2006/0071066 A1	04-2006	Vanzini et al.	235/380
*	K	US-7,051,157 B2	05-2006	James, Barry Edmund	711/115
*	L	US-7,213,766 B2	05-2007	Ryan et al.	235/492
*	M	US-2007/0274291 A1	11-2007	Diomelli, Giuseppe	370/352

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	

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 13/960,514	Applicant(s)/Patent Under Reexamination MCNULTY, SCOTT	
	Examiner ALINA N. BOUTAH	Art Unit 2443	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2008/0233942 A9	09-2008	Kim, Jong-Hwan	455/419
*	B	US-7,546,340 B2	06-2009	Terasawa, Toshiharu	709/203
*	C	US-7,558,953 B2	07-2009	Osthoff et al.	713/161
*	D	US-7,762,470 B2	07-2010	Finn et al.	235/492
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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	N					
	O					
	P					
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	S					
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	Art Unit
	ALINA N BOUTAH	2443

CPC- SEARCHED		
Symbol	Date	Examiner
H04L 2209/56,76,80	10/17/2014	ANB
H04L 63/0272,0428	10/24/2014	ANB
H04L 67/04	10/17/2014	ANB
H04L 9/3226,3247	10/17/2014	ANB

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	203,250	10/17/2014	ANB
713	150	10/17/2014	ANB
711	115	10/17/2014	ANB

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor and assignee search	10/17/2014	ANB
EAST search	10/17/2014	ANB

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

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4274	709/250.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:32
L2	3970	713/150.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:32
L3	2346	711/115.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:32
L4	737725	usb (external$4 with (usb interface gui ui))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:34
L5	5047	tcap (tunnel$4 with client with access with point)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
L6	117819	((H04L2209/56 OR H04L2209/76 OR H04L2209/80 OR H04L63/0272 OR H04L63/0428 OR H04L67/04 OR H04L9/3226 OR H04L9/3247).CPC. OR (709/203).CCLS.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
L7	126610	L6 1 2 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
L8	281	5 and 7	US-PGPUB;	OR	ON	2014/10/17

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:36
L9	111	8 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:39
L10	706961	(portable mobile wearable) with terminal	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:42
L11	20	9 and 10	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:42
L12	64985	interactive with (ui gui interface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:44
L13	2	11 and 12	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:44
L14	357976	(portable mobile wearable) with terminal with (connect$4 communicat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:45
L15	25	14 same 4 same 12	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:45
L16	2	15 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2014/10/17 18:45

			IBM_TDB			
L17	285	14 same 12	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:46
L18	54	17 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:46
L19	438	(tunnel$4 with client with access with point)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:48
L20	8	12 and 19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:48
L21	1	20 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:48
L22	48	("7103772" | "20050198221" | "7454783" | "7032240" | "7310734" | "20020044663" | "7762470" | "7032240" | "20040127254" | "6763399" | "6970927" | "6763399" | "7051157" | "20060071066" | "6233568" | "20050197859" | "7213766" | "6732278" | "20050132183" | "7310734").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:49
L23	1	22 and 12	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:49

EAST Search History (Interference)

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CONFIRMATION NO. 3560

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/960,514	08/06/2013 RULE	709	2443	1004294.013US

APPLICANTS

INVENTORS

Scott McNulty, Rowayton, CT;

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

This application is a CON of 12/950,321 11/19/2010 PAT 8539047
which is a CON of 10/807,731 03/23/2004 PAT 7861006

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

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08/21/2013

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	/ALINA BOUTAH/ Examiner's Signature	Initials	CT	10	29	3

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UNITED STATES

TITLE

Apparatus, Method and System for a Tunneling Client Access Point

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	Art Unit
	ALINA N BOUTAH	2443

✓	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	10/17/2014								
	1	✓								
	2	✓								
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Application Number	13960514
Filing Date	2013-08-06
First Named Inventor	Scott McNulty
Art Unit	2443
Examiner Name	BOUTAH, Alina A.
Attorney Docket Number	1004294.013US

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5960085		1999-09-28	de la Huerga	
	2	6547130		2003-04-15	Shen	
	3	7178724		2007-02-20	Tamagno et al.	
	4	7308584		2007-12-11	Himmel et al.	
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	Application Number	13960514
	Filing Date	2013-08-06
	First Named Inventor	Scott McNulty
	Art Unit	2443
	Examiner Name	BOUTAH, Alina A.
	Attorney Docket Number	1004294.013US

	2	20020194499		2002-12-19	Audebert et al.	
	3	20030005337		2003-01-02	Poo et al.	
	4	20030182456		2003-09-25	Lin et al.	
	5	20040044897		2004-03-04	Lim	
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	1	1168137	EP		2002-01-02	Della Valle		☐

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	Application Number	13960514
	Filing Date	2013-08-06
	First Named Inventor	Scott McNulty
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	Application Number	13960514
	Filing Date	2013-08-06
	First Named Inventor	Scott McNulty
	Art Unit	2443
	Examiner Name	BOUTAH, Alina A.
	Attorney Docket Number	1004294.013US

CERTIFICATION STATEMENT

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

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Signature	/s/Robert K. Goethals	Date (YYYY-MM-DD)	2014-12-10
Name/Print	Robert K. Goethals	Registration Number	36812

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(54) Smart card reader with usb interface for connection to personal computers and the like

(57) A smart card reader (1) suitable to be connected to a personal computer, comprising at least one connector (3) adapted to be connected to a communication port of the computer and at least one smart card which, when activated, is suitable to enable a communication between the reader (1) and the personal computer, in order to allow a user to access an application program installed on the personal computer.

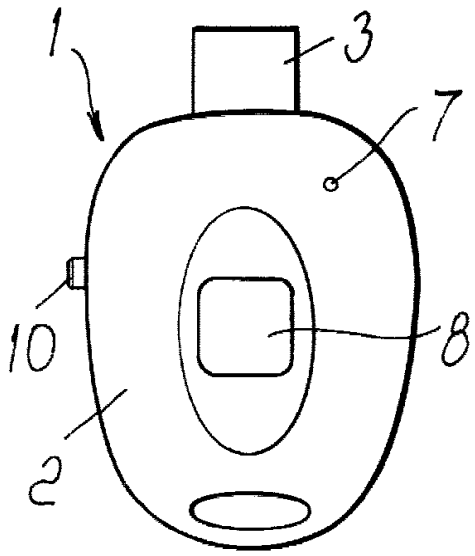

Fig. 1

EP 1 168 137 A1

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Description

[0001] The present invention relates to a smart card reader with USB interface, for connection to personal computers and the like.

[0002] It is known that software houses need to copy-protect their programs, which require hundreds of man-hours to be developed.

[0003] Illegal copying of programs is one of the factors that leads to extremely high costs for software. Accordingly, it seems absolutely necessary for software houses to find a system which allows them to avoid fraudulent duplication of said programs.

[0004] Currently, one of the most widely used systems consists in providing electronic keys which are generally connected to the parallel port of the computer; without said keys, the software program does not run.

[0005] Such electronic keys are hardware components dedicated expressly to an appropriately provided computer and/or program, since they have wiring which corresponds to the hardware structure of the computer proper and to software control functions.

[0006] Accordingly, one of the drawbacks suffered by hardware keys thus conceived is that they are expressly dedicated to a single computer, so that they cannot be used on different computers and cannot be reprogrammed in any way.

[0007] Another drawback of conventional electronic keys is that an expert in the field can duplicate the hardware configuration of the electronic key and therefore bypass the protection devised by the software house for its program.

[0008] Moreover, conventional electronic keys cannot be personalized by the user; it is therefore impossible to determine unequivocally whether the user who is using the key is the one who is authorized to do so.

[0009] Accordingly, for example if the electronic key is lost, anyone can use a given program already installed on a personal computer, with the dedicated key.

[0010] This of course entails a fault in data security, since the user has no assurance that his program cannot be run in any way by unauthorized individuals, since operation is entrusted exclusively to the electronic key, which if lost can be used by anyone on the personal computer on which said program is installed.

[0011] The aim of the present invention is to provide a smart card reader with USB interface which allows to connect to the personal computer an electronic key for enabling the operation of a given software program or of the entire personal computer and in which the smart card is able to interact with the control application or software installed on the computer.

[0012] Within this aim, an object of the present invention is to provide a smart card reader with USB interface for connection to a personal computer which is provided with means for unequivocal identification of the user, capable of enabling the operation of a given software application or of the entire system only if the user who is using the smart card reader is the one who is actually authorized to do so.

[0013] Another object of the present invention is to provide a smart card reader which allows to use the same reader on different personal computers without the need to install appropriate software.

[0014] Another object of the present invention is to provide a smart card reader for connection to a personal computer and the like which is highly reliable, and be relatively simple to manufacture and at competitive costs.

[0015] This aim and these and other objects which will become better apparent hereinafter are achieved by a smart card reader suitable for connection to a personal computer, characterized in that it comprises at least one connector adapted to be connected to a communication port of said computer and at least one smart card which, when activated, is suitable to enable a communication between the reader and the personal computer, in order to allow a user to access an application program installed on such personal computer.

[0016] Further characteristics and advantages of the present invention will become better apparent from the description of preferred but not exclusive embodiments of the smart card reader according to the present invention, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a top plan view of the card reader according to the present invention;
Figure 2 is a side view of the device of Figure 1;
Figure 3 is a bottom plan view of the card reader according to the present invention; and
Figure 4 is a block diagram of the card reader according to the present invention.

[0017] With reference to the figures, the smart card reader according to the present invention, generally designated by the reference numeral 1, comprises an external container 2 which has, in a protruding position, a connector 3, preferably of the USB type, for connection to a standard port of a personal computer or the like.

[0018] The body 2 has, in an upward region and below the connector 3, at least one slot 4 which allows to insert a smart card 5 in which the application program for communication with the personal computer is stored.

[0019] Conveniently, the container 2 can be provided, in a downward region, with a window 6 which allows to view the smart card 5 inserted in the slot 4.

[0020] Preferably, the smart card can be of the SIM (Subscriber Identity Module) type.

[0021] Moreover, the smart card reader 1 is preferably provided with at least one LED 7 which is suitable to indicate to the user that a correct connection is present, by means of the USB connector 3, between the reader 1 and the personal computer.

[0022] Access to the personal computer or to an application running on the personal computer is enabled

by the smart card 5 without further interaction by the user or, if provided by the system, by entering a PIN (Personal Identification Number) by means of the keyboard of the personal computer.

[0023] Accordingly, in this first embodiment of the reader according to the invention, the smart card 5 allows to perform an advanced interaction with the software application installed on the personal computer. In particular, a portion of the application program installed on the personal computer can be stored on the smart card, so that if the reader 1 is not present the program that is present on the personal computer is completely unusable because part of it is missing.

[0024] A second embodiment of the reader according to the present invention provides, instead of entering the PIN to enable the smart card, or alternatively in addition thereto, an internal enabling function by direct identification of the user by the reader 1.

[0025] For this purpose sensor means 8 are provided, which are arranged for example at the upper face of the container 1, by which it is possible to detect the print of one of the user's fingers, for example the thumb.

[0026] Figure 4 illustrates, as a block diagram, a possible implementation of the reader according to the present invention.

[0027] In this block diagram, the sensor means 8 is connected to microprocessor means 9, which are in turn connected to memory means 10. In this case, the memory means 10 contain the user's fingerprint, which is compared in each instance, by the microprocessor means 9, with the print left by the user on the sensor means 8 by resting his finger on said sensor means.

[0028] Accordingly, access to the smart card is enabled, in this manner, thanks to a method which allows to ensure the inviolability of the system.

[0029] In fact it is known that fingerprints cannot be duplicated and therefore recognition of the user's fingerprint by the sensor means 8 gives the user the assurance that the reader cannot be used fraudulently.

[0030] In this case, therefore, it would be possible to avoid the need to memorize a PIN and enter it each time in order to access the functions of the smart card 5.

[0031] Since the information (data) related to the fingerprints of the owner of the reader 1 are stored in the reader itself, and more specifically in the memory means 10, they cannot be accessed in any way.

[0032] Since security is ensured by elements which are all contained in the reader according to the invention, it can be transferred from one personal computer to another and used by a same user regardless of the workstation, without the need to install appropriate software for each different key on each specific personal computer.

[0033] A third embodiment of the smart card reader according to the present invention provides for the addition of application or identification selection means 11 which, by being moved to different positions, allow to enable a corresponding number of PINs.

[0034] The application selection means 11 are associated with the sensor means 8; therefore, once the user's fingerprint has been recognized, the PIN that corresponds to the position indicated by the selection means 11 is sent to the smart card 5.

[0035] This allows to use different smart cards 5, each with its own specific PIN, or a multiple-application smart card, in which each application has a separate PIN which can be selected by the selection means 11.

[0036] The selection means 11 are operatively connected to the microprocessor means 9, as already shown in Figure 4; such means are in turn connected to an internal bus 12, which connects the microprocessor means 9 to the sensor means 8, to the memory means 10 and to second microprocessor means 13, which control the connection means 3 which allow the connection of the reader 1 to the USB serial port of a personal computer 15.

[0037] The reference numeral 5 (Figure 4) illustrates, like in the preceding figures, the smart card, inserted in a smart card reader, which is designated by the reference numeral 16 and is accommodated in the container 2 and connected to a driver 17 of the smart card 5, being in turn connected to the internal bus 12 of the reader.

[0038] The second microprocessor means 13 are adapted to handle communication toward the personal computer 15, while the smart card 5 has an additional microprocessor, schematically designated by the reference numeral 18 for the sake of simplicity, which is adapted to interface the first and second microprocessor means 9 and 13 with the smart card 5.

[0039] With reference to the above cited figures, the operation of the reader according to the invention is as follows.

[0040] First of all, an initialization step is performed; during this step, after connecting the reader 1 to the USB serial port of the computer 15, by means of the USB connector 3, an appropriate software program interacts with the microprocessor means 9, which compare the fingerprint stored in the memory means 10 with the print of the finger detected by the sensor means 8.

[0041] At this point, the software program activates a function for processing the fingerprint by means of the first microprocessor means 9, and if the quality of the detected fingerprint is sufficient, the first microprocessor means 9 send a confirmation message to the software program.

[0042] The significant features of the fingerprint are encrypted and stored in the memory means 10.

[0043] Finally, the software program communicates a PIN code of the associated smart card 5. The PIN is encrypted and stored.

[0044] The PIN for enabling the smart card 5 can be sent, as mentioned, either by manually entering it or by providing for the automatic sending of the PIN by the first microprocessor means 9, after the user's fingerprint has been recognized by the sensor means 8.

[0045] In this case, the smart card replies to the un-

lock request exactly as if the PIN had been entered by means of the keyboard of the personal computer 15.

[0046] If the selection means 11 are present, at this point it is possible to select, in each instance, the sending of a chosen PIN, selected by the selection means 11.

[0047] In practice it has been observed that the smart card reader according to the invention fully achieves the intended aim and objects, since it allows to provide an electronic security key for a software program and allows, by using a smart card inside it, to store for example part of the program on the smart card itself, to send a smart card activation recognition PIN which accordingly enables communication with the personal computer to which the reader is connected, and to detect an unequivocal distinctive feature of the user, such as his fingerprint, in order to allow him to access the software program installed on the personal computer.

[0048] Finally, the possibility of having a smart card in which multiple PINs are stored allows the user, by way of the selection means, to select in each instance the PIN he wants and therefore for example to allow the enabling of a particular software program or to differentiate the user, for example by storing the fingerprints of multiple users on the same reader.

[0049] In this manner, the reader according to the invention can be used not only on different personal computers but also for different software programs, allowing to program in each instance the chosen PIN in order to allow communication between the reader and the personal computer, as regards a particular software program to which the user is to be allowed access.

[0050] The reader thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the same inventive concept; all the details may furthermore be replaced with other technically equivalent elements.

[0051] In practice, the materials used, as well as the contingent shapes and dimensions, so long as they are compatible with the specific use, may be any according to requirements and to the state of the art.

[0052] The disclosures in Italian Patent Application No. MI2000A001425 from which this application claims priority are incorporated herein by reference.

[0053] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A smart card reader suitable for connection to a personal computer, **characterized in that** it comprises at least one connector meant to be connected to a communication port of said computer and at least one smart card which, when activated, is suitable to enable a communication between said reader and said personal computer, in order to allow a user to access an application program installed on said personal computer.

2. The reader according to claim 1, **characterized in that** said connector of said reader is a USB connector, and **in that** said communication port of said personal computer is a USB serial communications port.

3. The reader according to claim 1, **characterized in that** it comprises a container which is suitable to accommodate said at least one smart card, a slot being formed in said container for the insertion of said at least one smart card.

4. The reader according to one or more of the preceding claims, **characterized in that** said container comprises a window which is arranged so as to allow to view said smart card when said smart card is inserted in said slot of the container.

5. The reader according to one or more of the preceding claims, **characterized in that** it comprises first microprocessor means which are connected to memory means and are connected, by way of an internal bus, to second microprocessor means which are suitable to handle the communication between said reader and said personal computer.

6. The reader according to one or more of the preceding claims, **characterized in that** it comprises sensor means which are arranged at the surface of said container and are connected to said first microprocessor means.

7. The reader according to claim 6, **characterized in that** said sensor means comprise at least one fingerprint sensor which is suitable to detect the fingerprint of a user and compare it, through said memory means and said first microprocessor means, with a fingerprint which is stored beforehand in said memory means and unequivocally identifies the authorized user.

8. The reader according to one or more of the preceding claims, **characterized in that** it comprises selection means which are connected to said first microprocessor means and are suitable to select a specific PIN of said at least one smart card.

9. The reader according to one or more of the preceding claims, **characterized in that** said at least one smart card contains part of said software program installed on said personal computer.

10. The reader according to one or more of the preceding claims, **characterized in that** it comprises at least one LED which is suitable to give indications as to the result of the connection between said reader and said personal computer.

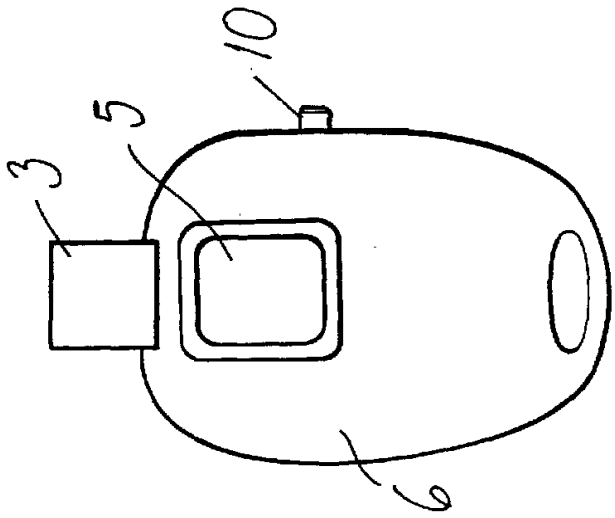

Fig. 3

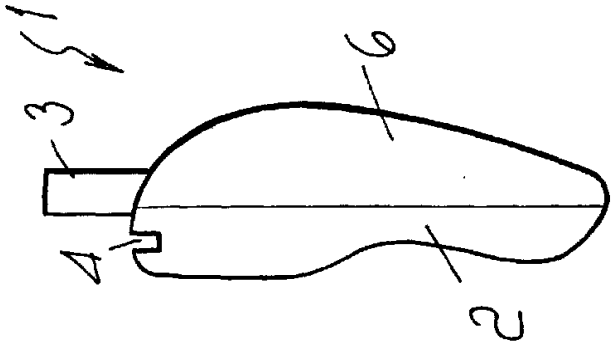

Fig. 2

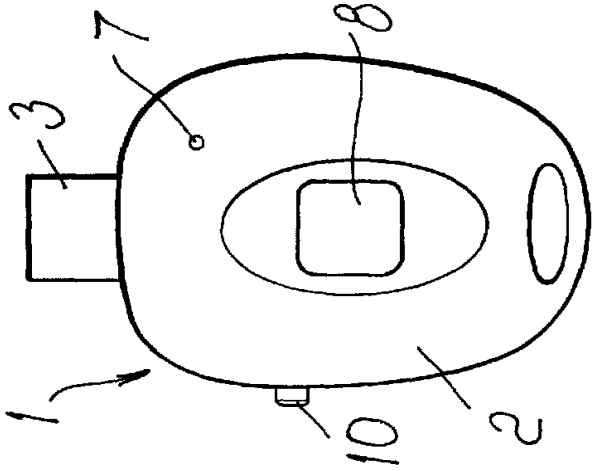

Fig. 1

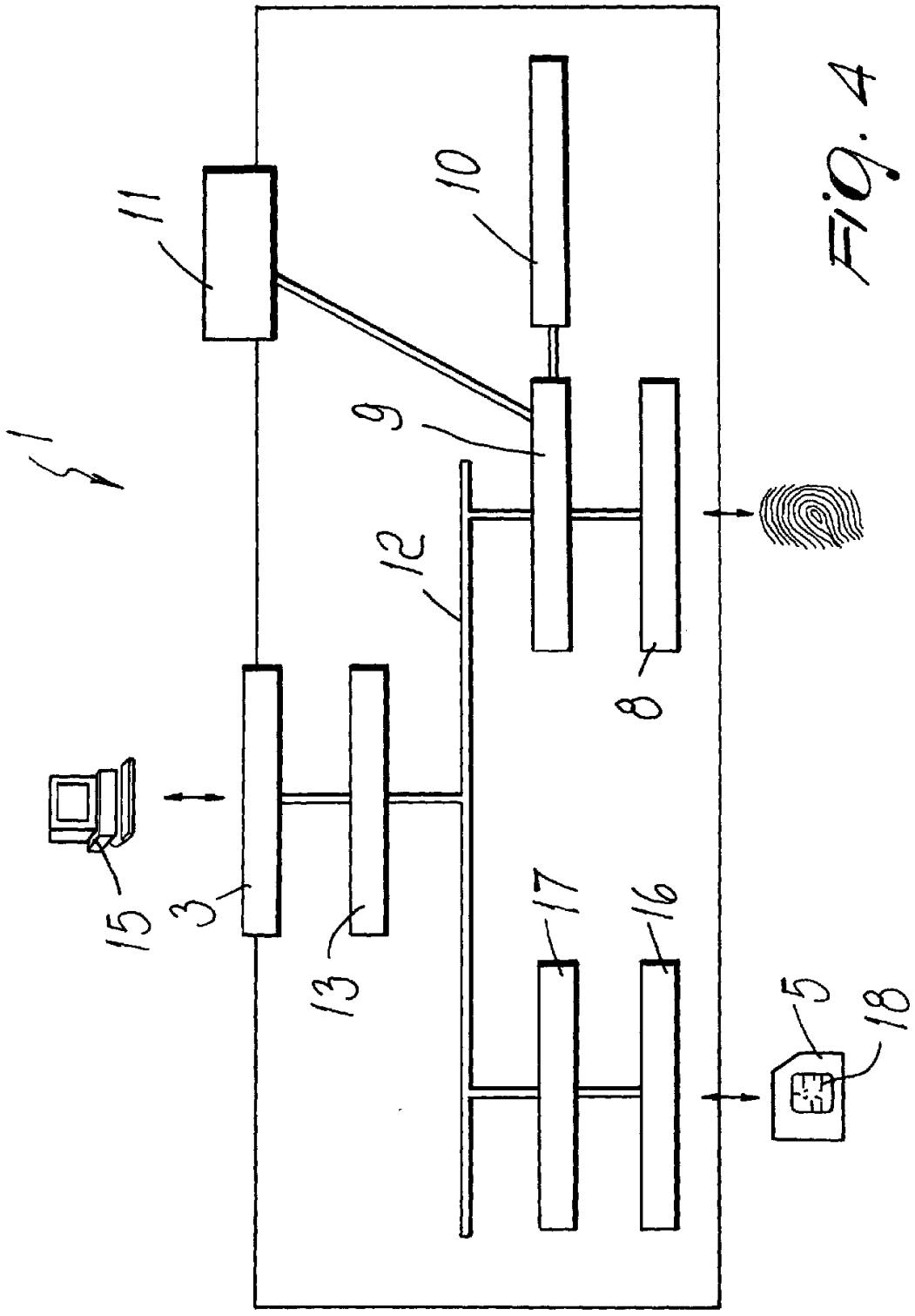

Fig. 4

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 11 2947

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	WO 00 23936 A (LITRONIC INC) 27 April 2000 (2000-04-27) * page 1, line 1 - page 17, line 6 * * abstract; figures 1,2A *	1-10	G06F1/00 G06K7/00 G11B20/00
Y	US 4 757 534 A (MATYAS STEPHEN M ET AL) 12 July 1988 (1988-07-12) * abstract * * column 8, line 23 - line 30 *	1-10	
Y	EP 0 843 250 A (ALPS ELECTRIC IRELAND LTD) 20 May 1998 (1998-05-20) * abstract; figures 1,2,5 *	1-10	
Y	EP 0 881 557 A (SIEMENS AG) 2 December 1998 (1998-12-02) * column 1, line 5 - line 22 * * column 14, line 5 - line 13 *	1-10	
Y	US 5 131 091 A (MIZUTA MASAHARU) 14 July 1992 (1992-07-14) * abstract * * column 1, line 11 - line 51 * * column 5, line 2 - line 3 *	1-10	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G06F G06K G11B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
MUNICH	30 August 2001	Heusler, N

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 11 2947

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-08-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0023936 A	27-04-2000	US 6168077 B	02-01-2001
		AU 6268699 A	08-05-2000
		US 2001000405 A	26-04-2001
US 4757534 A	12-07-1988	CA 1238427 A	21-06-1988
		DE 3587072 A	18-03-1993
		DE 3587072 T	12-08-1993
		EP 0191162 A	20-08-1986
		JP 1630801 C	26-12-1991
		JP 2060007 B	14-12-1990
		JP 61145642 A	03-07-1986
EP 0843250 A	20-05-1998	IE 960815 A	19-11-1997
		US 6056193 A	02-05-2000
EP 0881557 A	02-12-1998	NONE	
US 5131091 A	14-07-1992	JP 1296361 A	29-11-1989

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Electronic Patent Application Fee Transmittal

Application Number:	13960514
Filing Date:	06-Aug-2013
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Anna Hill
Attorney Docket Number:	1004294.013US

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**90**

Electronic Acknowledgement Receipt

EFS ID:	20922158
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	10-DEC-2014
Filing Date:	06-AUG-2013
Time Stamp:	15:29:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$90
RAM confirmation Number	1926
Deposit Account	504827
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 1.17 (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	Information Disclosure Statement (IDS) Form (SB08)	1004294013US_IDS.pdf	613002 5a7f7a94147366612c66d2fed6a54df4477222aa	no	5
Warnings:					
Information:					
2	Foreign Reference	EP1168137A1.pdf	248775 bb7d1131ce8c1a5326806d49c73e8ac3be3c296c	no	9
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30560 981f108c3b89556baa91835c720ce20592b38162	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	892337		

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

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.	:	13/960,514	Confirmation	: 3560
Applicant(s)	:	Scott McNulty		
Filed	:	August 6, 2013		
Title	:	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT		
Art Unit	:	2443		
Examiner	:	Alina A. BOUTAH		
Docket No.	:	1004294.013US		
Customer No.	:	85775		

RESPONSE TO NON-FINAL OFFICE ACTION

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

Sir:

This paper is being filed in response to the non-final Office Action dated October 24, 2014, for which a three month shortened statutory period of time for response expires January 24, 2015. Reconsideration of this application is respectfully requested in light of this paper, which is set forth as follows:

- **Remarks** begin on page 2 of this paper.

REMARKS

Claims 1-29 are pending in the present application.

Claims 1-29 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 8,539,047. Applicant submits herewith a terminal disclaimer to disclaim the terminal part of any patent that may issue from the present application to the extent such term would extend beyond the term of U.S. Patent No. 8,539,047. Accordingly, applicant respectfully submits that this rejection has been rendered moot and the application is in condition for allowance.

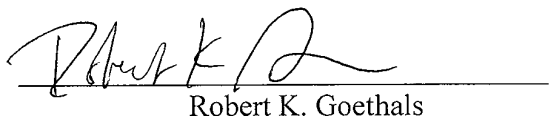
CONCLUSION

Based on the foregoing remarks it is respectfully submitted that all of the claims are allowable and early, favorable action in that regard is requested.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this Reply under 37 C.F.R. §§ 1.16 AND 1.17, or credit any overpayment to Deposit Account No. 50-4827, Order No. 1004294-013US.

Respectfully submitted,
Locke Lord LLP

Dated: January 23, 2015 By: 

Robert K. Goethals
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(212) 415-8522 Telephone
(212) 303-2754 Facsimile

PTO/AIA/26 (04-14)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

In re Application of: Scott McNulty

Application No.: 13/960,514

Filed: August 6, 2013

For: APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT

The applicant, Scott McNulty, owner 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 of **prior patent** No. 8,539,047 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The applicant 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 applicant does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

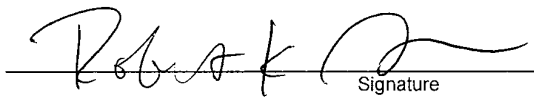
expires for failure to pay a maintenance fee;
is held unenforceable;
is found invalid by a court of competent jurisdiction;
is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
has all claims canceled by a reexamination certificate;
is reissued; or
is in any manner terminated 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. ☐ The undersigned is the applicant. If the applicant is an assignee, the undersigned is authorized to act on behalf of the assignee.

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

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 36,813



Signature — January 23, 2015 (Date)

Robert K. Goethals
Typed or printed name

Title — Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	13960514
Filing Date:	06-Aug-2013
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Anna Hill
Attorney Docket Number:	1004294.013US

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory or Terminal Disclaimer	1814	1	160	160
		Total in USD ($)		**160**

Electronic Acknowledgement Receipt

EFS ID:	21293212
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	23-JAN-2015
Filing Date:	06-AUG-2013
Time Stamp:	14:49:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$160
RAM confirmation Number	1230
Deposit Account	504827
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 1.17 (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		1004294013US_ResponseNonFinalOATerminalDisclaimer.pdf	203595 17ae95d52c9f827f907b160fa07857982c54c4d9	yes	4

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Applicant Arguments/Remarks Made in an Amendment	2	2
Terminal Disclaimer Filed	3	4

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30535 05ce1bad5a80acc721c79c556b9bc33bb1367ac2	no	2

Warnings:

Information:

Total Files Size (in bytes):	234130

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

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

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

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	13/960,514	MCNULTY, SCOTT	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 1/23/15	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

jean proctor

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

85775 7590 02/13/2015

Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

EXAMINER
BOUTAH, ALINA A

ART UNIT	PAPER NUMBER
2443	

DATE MAILED: 02/13/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/960,514	08/06/2013	Scott McNulty	1004294.013US	3560

TITLE OF INVENTION: Apparatus, Method and System for a Tunneling Client Access Point

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	05/13/2015

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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PTOL-85 (Rev. 02/11)

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)

85775 7590 02/13/2015
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

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.

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/960,514	08/06/2013	Scott McNulty	1004294.013US	3560

TITLE OF INVENTION: Apparatus, Method and System for a Tunneling Client Access Point

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	05/13/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
BOUTAH, ALINA A	2443	709-203000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

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

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

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

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

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

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

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

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29
  NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27
  NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status.
  NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/960,514	08/06/2013	Scott McNulty	1004294.013US	3560

85775 7590 02/13/2015

Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2443	

DATE MAILED: 02/13/2015

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

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

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

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

PTOL-85 (Rev. 02/11)

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

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

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

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 13/960,514	Applicant(s) MCNULTY, SCOTT	
	Examiner ALINA N. BOUTAH	Art Unit 2443	AIA (First Inventor to File) Status No

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

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

1. ☒ This communication is responsive to *1/23/15*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-29*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

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

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

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 12/10/14
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/ALINA N BOUTAH/
Primary Examiner, Art Unit 2443

Notice of References Cited	Application/Control No. 13/960,514	Applicant(s)/Patent Under Reexamination MCNULTY, SCOTT	
	Examiner ALINA N. BOUTAH	Art Unit 2443	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2005/0172075 A1	08-2005	Marcus, R. Cameron	711/115
*	B	US-2002/0184349 A1	12-2002	Manukyan, Jacques A.	709/221
*	C	US-6,799,077 B1	09-2004	Hauet, Jean-Pierre	700/2
*	D	US-6,199,108 B1	03-2001	Casey et al.	709/220
*	E	US-6,134,662 A	10-2000	Levy et al.	726/11
*	F	US-6,098,097 A	08-2000	Dean et al.	709/220
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	1	13/960514	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:34
L3	77838	709/203,217-219,220,249,250.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:38
L4	808	virtual$4 with (pnp plug-n-play "plug and play" plug-and-play (plug adj2 play))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:39
L5	67862	interactive with (ui gui interface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L6	458	(tunnel$4 with client with access with point)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L7	8	L5 and L6	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L8	1	L7 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L9	375186	(portable mobile wearable) with terminal	US-PGPUB;	OR	ON	2015/02/09

		with (connect$4 communicat$4)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			10:56
L10	298	L9 same L5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L11	54	L10 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L12	4415	709/250.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L13	4215	713/150.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L14	2417	711/115.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L15	5136	tcap (tunnel$4 with client with access with point)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L16	123623	((H04L2209/56 OR H04L2209/76 OR H04L2209/80 OR H04L63/0272 OR H04L63/0428 OR H04L67/04 OR H04L9/3226 OR H04L9/3247).CPC. OR (709/203).CCLS.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L17	132754	L16 L12 L13 L14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/02/09 10:56

			IBM_TDB			
L18	291	L15 and L17	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L19	112	L18 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 10:56
L20	871994	usb (external$4 with (usb interface gui ui)) (pnp plug-n-play "plug and play" plug-and-play (plug adj2 play))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 11:13
L21	67862	interactive with (ui gui interface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 11:14
L22	3151	20 same 21	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 11:14
L23	77	17 and 22	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 11:14
L24	22	23 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/09 11:14
S3	117798	((H04L2209/56 OR H04L2209/76 OR H04L2209/80 OR H04L63/0272 OR H04L63/0428 OR H04L67/04 OR H04L9/3226 OR H04L9/3247).CPC. OR (709/203).CCLS.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/15 16:26
S4	3	"8539047".pn.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2014/10/17 15:42

			EPO; JPO; DERWENT; IBM_TDB			
S5	4274	709/250.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:32
S6	3970	713/150.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:32
S7	2346	711/115.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:32
S8	737725	usb (external$4 with (usb interface gui ui))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:34
S9	5047	tcap (tunnel$4 with client with access with point)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
S10	117819	((H04L2209/56 OR H04L2209/76 OR H04L2209/80 OR H04L63/0272 OR H04L63/0428 OR H04L67/04 OR H04L9/3226 OR H04L9/3247).CPC. OR (709/203).CCLS.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
S11	126610	S10 S5 S6 S7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
S12	281	S9 and S11	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:36
S13	111	S12 and @ad<"20040323"	US-PGPUB; USPAT;	OR	ON	2014/10/17 18:39

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S14	706961	(portable mobile wearable) with terminal	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:42
S15	20	S13 and S14	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:42
S16	64985	interactive with (ui gui interface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:44
S17	2	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:44
S18	357976	(portable mobile wearable) with terminal with (connect$4 communicat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:45
S19	25	S18 same S8 same S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:45
S20	2	S19 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:45
S21	285	S18 same S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:46

S22	54	S21 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:46
S23	438	(tunnel$4 with client with access with point)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:48
S24	8	S16 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:48
S25	1	S24 and @ad<"20040323"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:48
S26	48	("7103772" | "20050198221" | "7454783" | "7032240" | "7310734" | "20020044663" | "7762470" | "7032240" | "20040127254" | "6763399" | "6970927" | "6763399" | "7051157" | "20060071066" | "6233568" | "20050197859" | "7213766" | "6732278" | "20050132183" | "7310734").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:49
S27	1	S26 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/10/17 18:49
S28	77	("20020044663" | "20080233942" | "20020194499" | "20070038870" | "20050198221" | "20060052085" | "7762470" | "20060294249" | "20070274291" | "20030182456" | "7558953" | "20030028649" | "6763399" | "6928463" | "7051157" | "7213766" | "20020073340" | "6547130" | "20050197859" | "20030005337" | "20040127254" | "7546340" | "7178724" | "7308584" | "7549161" | "20030158891" | "20060071066" | "20040044897" | "5960085").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/08 13:15

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp

L25	60419	709/203,217-219,220,249,250.ccls.	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:15
L26	3076	713/150.ccls.	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:15
L27	1981	711/115.ccls.	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:15
L28	652531	usb (external$4 with (usb interface gui ui)) (pnp plug-n-play "plug and play" plug-and-play (plug adj2 play))	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:15
L29	56430	interactive with (ui gui interface)	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:15
L30	2592	28 same 29	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:16
L31	55150	((H04L2209/56 OR H04L2209/76 OR H04L2209/80 OR H04L63/0272 OR H04L63/0428 OR H04L67/04 OR H04L9/3226 OR H04L9/3247).CPC. OR (709/203).CCLS.)	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:16
L32	112	(25 26 27 31) and 30	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:16
L33	37	32 and @ad<"20040323"	US-PGPUB; USPAT; UPAD	OR	ON	2015/02/09 11:16

2/9/2015 11:22:26 AM
C:\Users\aboutah\Documents\EAST\Workspaces\13960514.wsp

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	**Art Unit**
	ALINA N BOUTAH	2443

CPC							
Symbol						**Type**	**Version**
H04L		67	/	04		F	2013-01-01
H04L		63	/	0272		I	2013-01-01
H04L		63	/	0428		I	2013-01-01
H04L		9	/	3226		I	2013-01-01
H04L		9	/	3247		I	2013-01-01
H04L		2209	/	56		A	2013-01-01
H04L		2209	/	76		A	2013-01-01
H04L		2209	/	80		A	2013-01-01
			/				
			/				
			/				
			/				
			/				
			/				
			/				

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	29	
/ALINA N BOUTAH/ Primary Examiner.Art Unit 2443	2/9/15	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3a

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	**Art Unit**
	ALINA N BOUTAH	2443

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
709	250

CROSS REFERENCE(S)					
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**				
709	203	217	219	220	249
713	150				
711	115				

INTERNATIONAL CLASSIFICATION										
CLAIMED					**NON-CLAIMED**					
G	0	6	F	15 / 16 (2006.01.01)	G	0	6	F	13 / 00 (2006.01.01)
G	0	6	F	15 / 177 (2006.01.01)	H	0	4	L	29 / 06 (2006.01.01)

NONE		Total Claims Allowed: 29	
(Assistant Examiner)	(Date)		
/ALINA N BOUTAH/ Primary Examiner.Art Unit 2443	2/9/15	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3a

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	**Art Unit**
	ALINA N BOUTAH	2443

☒ 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

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 29	
/ALINA N BOUTAH/ Primary Examiner.Art Unit 2443	2/9/15	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3a

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	Art Unit
	ALINA N BOUTAH	2443

✓	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	10/17/2014	02/09/2015							
	1	✓	=							
	2	✓	=							
	3	✓	=							
	4	✓	=							
	5	✓	=							
	6	✓	=							
	7	✓	=							
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	25	✓	=							
	26	✓	=							
	27	✓	=							
	28	✓	=							
	29	✓	=							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13960514	MCNULTY, SCOTT
	Examiner	**Art Unit**
	ALINA N BOUTAH	2443

CPC- SEARCHED		
Symbol	**Date**	**Examiner**
H04L 2209/56,76,80	2/9/2015	ANB
H04L 63/0272,0428	2/9/2015	ANB
H04L 67/04	2/9/2015	ANB
H04L 9/3226,3247	2/9/2015	ANB

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

US CLASSIFICATION SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
709	203,250	2/9/2015	ANB
713	150	2/9/2015	ANB
711	115	2/9/2015	ANB

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
PALM inventor and assignee search	10/17/2014	ANB
EAST search	10/17/2014	ANB
updated search on EAST	2/9/2015	ANB

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**
H04L	9/3226,3247	2/9/2015	ANB
H04L	67/04	2/9/2015	ANB
H04L	2209/56,76,80	2/9/2015	ANB
H04L	63/0272,0428	2/9/2015	ANB
709	203,217,219,220,249,250	2/9/2015	ANB

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**
713	150	2/9/2015	ANB
711	115	2/9/2015	ANB

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

Application Number	13960514
Filing Date	2013-08-06
First Named Inventor	Scott McNulty
Art Unit	2443
Examiner Name	BOUTAH, Alina A.
Attorney Docket Number	1004294.013US

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5960085		1999-09-28	de la Huerga	
	2	6547130		2003-04-15	Shen	
	3	7178724		2007-02-20	Tamagno et al.	
	4	7308584		2007-12-11	Himmel et al.	
	5	7549161		2009-06-16	Poo et al.	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020073340		2002-06-13	Mambakkam et al.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /ANB/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13960514
	Filing Date	2013-08-06
	First Named Inventor	Scott McNulty
	Art Unit	2443
	Examiner Name	BOUTAH, Alina A.
	Attorney Docket Number	1004294.013US

	2	20020194499		2002-12-19	Audebert et al.	
	3	20030005337		2003-01-02	Poo et al.	
	4	20030182456		2003-09-25	Lin et al.	
	5	20040044897		2004-03-04	Lim	
	6	20060294249		2006-12-28	Oshima et al.	
	7	20070038870		2007-02-15	Ciesinger	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1168137	EP		2002-01-02	Della Valle		☐

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

EFS Web 2.1.17

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /ANB/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13960514
	Filing Date	2013-08-06
	First Named Inventor	Scott McNulty
	Art Unit	2443
	Examiner Name	BOUTAH, Alina A.
	Attorney Docket Number	1004294.013US

	1		☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Alina Boutah/ (02/08/2015)	Date Considered	

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

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /ANB/

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)

85775 7590 02/13/2015
Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

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.

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/960,514	08/06/2013	Scott McNulty	1004294.013US	3560

TITLE OF INVENTION: Apparatus, Method and System for a Tunneling Client Access Point

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	05/13/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
BOUTAH, ALINA A	2443	709-203000

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 Locke Lord LLP
2
3

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

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

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

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

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

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 504827 (enclose an extra copy of this form).

Order No. 1004294.013US

5. **Change in Entity Status** (from status indicated above)
☐ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
☐ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
☐ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____ Date 5/13/15
Typed or printed name Robert K. Goethals Registration No. 36813

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

Electronic Patent Application Fee Transmittal

Application Number:	13960514
Filing Date:	06-Aug-2013
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Jacqueline Blanco
Attorney Docket Number:	1004294.013US

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	480	480

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

Electronic Acknowledgement Receipt

EFS ID:	22333943
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Jacqueline Blanco
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	13-MAY-2015
Filing Date:	06-AUG-2013
Time Stamp:	13:26:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$480
RAM confirmation Number	10207
Deposit Account	504827
Authorized User	GOETHALS, ROBERT
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 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	1004294-013US_IssueFee.pdf	78572 206331720e4287431a2fa5fec6ed429ff6dd4047	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30785 c8f83da3a63d986862441aea45556b3d7c131af8	no	2
Warnings:					
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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/960,514	06/16/2015	9059969	1004294.013US	3560

85775 7590 05/27/2015

Locke Lord LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

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 18 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):

Scott McNulty, Rowayton, CT;

PTO/SB/26a (02-14)
Approved for use through 7/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TERMINAL DISCLAIMER IN A PATENT OR PROCEEDING IN VIEW OF ANOTHER PATENT

Docket Number (Optional): 1004294.013US

Application/Control Number: 13/960,514
Filing Date: 08/06/2013
First Named Inventor: Scott McNulty
Title: APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT
Patent No.: 9,059,969

The patentee, IOEngine, LLC, owner of 100 percent interest in the instant patent hereby disclaims, except as provided below, the terminal part of the statutory term of the instant patent which would extend beyond the expiration date of the full statutory term of patent No. 8,539,047 (the "**reference** patent"), as the term of said **reference** patent is presently shortened by any terminal disclaimer. The patentee hereby agrees that the instant patent shall be enforceable only for and during such period that the instant patent and the **reference** patent are commonly owned. This agreement runs with the instant patent and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the patentee does not disclaim the terminal part of the instant patent that would extend to the expiration date of the full statutory term of the **reference** patent, "as the term of said **reference patent** is presently shortened by any terminal disclaimer," in the event that said **reference** patent 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 shortened by any terminal disclaimer.

I. Check either box 1, 2, or 3 below, as appropriate, if there is an assignment:

1. ☐ The current ownership was established by the filing of a statement under 37 CFR 3.73 during prosecution of the application that issued as the instant patent.

2. ☐ The instant patent was issued from an application filed on or after September 16, 2012, and the current patent owner was the applicant under 37 CFR 1.46.

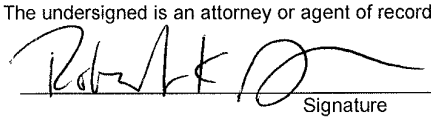
3. ☑ A statement under 37 CFR 3.73 is attached herewith. Form PTO/SB/96 or PTO/AIA/96, as appropriate, may be used.

II. Authorization for Terminal Disclaimer - Check either box 1 or 2 below, if appropriate:

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

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.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 36813



Signature

December 22, 2015
Date

Robert K. Goethals
Typed or printed name

(212) 415-8522
Telephone number

☑ The terminal disclaimer fee under 37 CFR 1.20(d) is included.

NOTE: Submit multiple forms if more than one signature is required, see below.*

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.

☐ *Total of _____ forms are submitted.

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

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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.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: IOEngine, LLC

Application No./Patent No.: 9,059,969 Filed/Issue Date: 6/16/2015

Titled: APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT

IOEngine, LLC, a limited liability company

(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 035751, Frame 0738, or for which a copy thereof is attached.

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

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

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

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

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

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

Signature _____ December 22. 2015

Date

Printed or Typed Name _____ IOEngine, LLC Chief Executive Officer

Title or Registration Number

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	13960514
Filing Date:	06-Aug-2013
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Anna Hill
Attorney Docket Number:	1004294.013US

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory or Terminal Disclaimer	2814	1	160	160
		Total in USD ($)		**160**

Electronic Acknowledgement Receipt

EFS ID:	24436902
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	22-DEC-2015
Filing Date:	06-AUG-2013
Time Stamp:	09:59:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$160
RAM confirmation Number	10095
Deposit Account	121781
Authorized User	GOETHALS, ROBERT
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 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 CFR 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	Terminal Disclaimer Filed	TerminalDisclaimer.PDF	153928 b4aad51f7c0df1549fd893242df491a917dda54c	no	2
Warnings:					
Information:					
2	Assignee showing of ownership per 37 CFR 3.73	37CFR3_73Statement.pdf	1924795 b5d8f6c18c875709104736d1487833929a04a8d3	no	3
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30536 d1481dd621d4021e557c7f29e5b70914beb3d37b	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2109259		

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.

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	13/960,514	MCNULTY, SCOTT	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 22 DEC 2015	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
SHANETTE BROWN

U.S. Patent and Trademark Office

PTO/SB/44 (09-07)
Approved for use through 01/31/2020. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 9,059,969

APPLICATION NO.: 13/960,514

ISSUE DATE : June 16, 2015

INVENTOR(S) : Scott MCNULTY

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In Claim 19, column 32, line 42, delete "second" and insert "first."

In Claim 20, column 32, line 48, delete "second" and insert "first."

MAILING ADDRESS OF SENDER (Please do not use **C**ustomer **N**umber below):

Locke Lord LLP
200 Vesey Street, 20th Floor
New York, New York 10281

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).
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	13960514
Filing Date:	06-Aug-2013
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Filer:	Robert Keaney Goethals/Anna Hill
Attorney Docket Number:	1004294.013US

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
CERTIFICATE OF CORRECTION	2811	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**150**

Electronic Acknowledgement Receipt

EFS ID:	31870315
Application Number:	13960514
International Application Number:	
Confirmation Number:	3560
Title of Invention:	Apparatus, Method and System for a Tunneling Client Access Point
First Named Inventor/Applicant Name:	Scott McNulty
Customer Number:	85775
Filer:	Robert Keaney Goethals/Anna Hill
Filer Authorized By:	Robert Keaney Goethals
Attorney Docket Number:	1004294.013US
Receipt Date:	23-FEB-2018
Filing Date:	06-AUG-2013
Time Stamp:	12:35:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$150
RAM confirmation Number	022318INTEFSW12373200
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	1004294_013US_RequestCertificateCorrection.pdf	102280 b3a619fb86ea1d1ac0d7f32e4e1496aa6c518762	no	2
Warnings:					
Information:					
2	Request for Certificate of Correction	Certificate_of_Correction_FormPTO1050.pdf	144859 5cba1fc3d3eb224aa0bba0ecde49f09adf712f05	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30429 a65cd73a2b5d35a98426a7a084e9c8199d4cb106	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	277568		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.	:	13/960,514
Patent No.	:	9,059,969
Inventor	:	Scott McNulty
Title	:	APPARATUS, METHOD AND SYSTEM FOR A TUNNELING CLIENT ACCESS POINT
Filing Date	:	August 6, 2013
Issue Date	:	June 16, 2015
Art Unit	:	2443
Examiner	:	Alina N. BOUTAH
Confirmation No.	:	3560
Docket No.	:	1004294.013US
Customer No.	:	85775

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT

Mail Stop: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Patent Assignee hereby requests that a Certificate of Correction be issued with respect to the above-referenced patent to correct the following clerical errors:

In Claim 19, at column 32, line 42, delete "second" and insert "first."

In Claim 20, at column 32, line 48, delete "second" and insert "first."

Transmitted herewith is a copy of a proposed Certificate of Correction on Form PTO/SB/44 (PTO-1050) effecting the correction of these errors.

These errors were not the fault of the Patent and Trademark Office. Therefore, please charge the requisite fee of $150.00 to Deposit Account No. 121781, Order No. 1004294.013US.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required by this paper, or credit any overpayment to Deposit Account No. 121781, Order No. 1004294-013US.

Respectfully submitted,
Locke Lord LLP

Dated: February 23, 2018 By: /s/ *Robert K. Goethals*
Robert K. Goethals
Registration No. 36,813

Correspondence Address:
Locke Lord LLP
Brookfield Place
200 Vesey Street
New York, NY 10281-2101
(212) 415-8522 Telephone
(212) 303-2754 Facsimile

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 9,059,969 B2
APPLICATION NO. : 13/960514
DATED : June 16, 2015
INVENTOR(S) : Scott McNulty

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

In Claim 19, Column 32, Line 42, delete “second” and insert --first.--

In Claim 20, Column 32, Line 48, delete “second” and insert --first.--

Signed and Sealed this
Third Day of April, 2018

Andrei Iancu
Director of the United States Patent and Trademark Office

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
18-452-UNA	3/23/2018	District of Delaware

PLAINTIFF	DEFENDANT
IOENGINE, LLC	PAYPAL HOLDINGS, INC.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,539,047	9/17/2013	IOENGINE, LLC
2	9,059,969	6/16/2015	IOENGINE, LLC
3	9,774,703	9/26/2017	IOENGINE, LLC
4			
5			

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy