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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/208,007	07/17/2012	8224794	08610004AA	1779

30743 7590 06/27/2012

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

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 397 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):

Theodore S. Rappaport, Austin, TX;

Notice of References Cited	Application/Control No. 12/208,007	Applicant(s)/Patent Under Reexamination RAPPAPORT, THEODORE S.	
	Examiner SRIRAMA CHANNAVAJJALA	Art Unit 2157	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,879,584	04-2005	Thro et al.	370/352
*	B	US-7,286,649	10-2007	Nelson et al.	379/71
*	C	US-6,032,132	02-2000	Nelson, Nickolas B.	705/34
*	D	US-2002/0123919	09-2002	Brockman et al.	705/7
*	E	US-2008/0049745	02-2008	Edwards et al.	370/389
*	F	US-2008/0065570	03-2008	Schultz, Justin F.	705/412
*	G	US-2002/0147726	10-2002	Yehia et al.	707/101
*	H	US-2003/0167175	09-2003	Salom, Silvio	705/1
*	I	US-2010/0142446	06-2010	Schlicht et al.	370/328
*	J	US-2007/0176745	08-2007	Gibson et al.	340/010.1
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	WO 2009114923	09-2009	PCT	Zabawskyj,Bohdan	
	O	WO 9524093	~~09-2005~~ 09/1995	PCT	Godon, Dale et al	
	P					
	Q					
	R					
	S					
	T					

Change(s) applied to document, /D.H.P./ 4/24/2012

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Infrastructure Audit for the campus center port, Prepared by: Tech knowledge consulting corporation March 2003, 13 pages
	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.

OK TO ENTER: /S.C./

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport — Confirmation No. 1779

Serial No. 12/208,007 — Group Art Unit 2157

Filed September 10, 2008 — Examiner Channavahala

For CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

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

AMENDMENT UNDER 37 C.F.R. §1.312

Sir:

A notice of allowance was mailed in the above-identified application on March 11, 2012. The issue fee has not yet been paid.

Prior to issuing the patent, please amend the application to correct an obvious clerical error to claim 20.

Listing of the Claims: begins on page 3

Remarks: begins on page 10

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/208,007	09/10/2008	Theodore S. Rappaport	08610004AA	1779

30743 7590 06/13/2012

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
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EXAMINER	
CHANNAVAJJALA, SRIRAMA T	
ART UNIT	PAPER NUMBER
2157	

MAIL DATE	DELIVERY MODE
06/13/2012	PAPER

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

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

Response to Rule 312 Communication	Application No.	Applicant(s)
	12/208,007	RAPPAPORT, THEODORE S.
	Examiner	Art Unit
	SRIRAMA CHANNAVAJJALA	2157

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

1. ☒ The amendment filed on *06 June 2012* under 37 CFR 1.312 has been considered, and has been:

   a) ☐ entered.

   b) ☒ entered as directed to matters of form not affecting the scope of the invention.

   c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
   Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

   d) ☐ disapproved. See explanation below.

   e) ☐ entered in part. See explanation below.

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport	Confirmation No. 1779
Serial No. 12/208,007	Group Art Unit 2157
Filed September 10, 2008	Examiner Channavahala

For CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

Commissioner for Patents
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Listing of the Claims: begins on page 3

Remarks: begins on page 10

REMARKS

Claim 20 is amended to include the word "or" at two locations. This satisfies antecedent basis requirements and corrects an obvious clerical error. Similarly, claims 5, 20, and 27 are amended to use "one or more" instead of "plurality" in order to satisfy antecedent basis issues within the same phrase (i.e., "one or more end users" is used at the end of the "records" phrase in claims 20 and 27; and "one or more telecommunications carriers" is used in base claim 1 from which claim 5 depends).

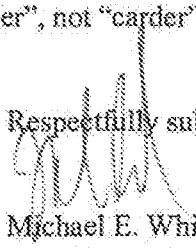
Claim 24 is amended to correct an obvious spelling error.

The amendment to claim 4 was entered in the case by amendment on October 19, 2011, and was erroneously not included in the last amendment. Because of its prior entry in the case, it presents no new issues.

The applicant requests entry of the amendment prior to issuance of the patent.

With regard to the Reasons for Allowance, the undersigned notes the Examiner's comments with appreciation. From a clerical standpoint, it is noted that the claims, as amended, have not been reproduced by the Examiner in the Notice of Allowance exactly as amended. For example, claim 1 does not use the word "original", and claim 27 does not use the word "plurality" or "means". In addition, claim 1 uses the term "carrier", not "carder".

Respectfully submitted,



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Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1. (previously presented) A clearinghouse system for communications networks, comprising:

one or more computers which interface with a database, said database including

records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas, and (iii) desired business terms for said infrastructure needs, and

records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets;

one or more electronic interfaces to said one or more computers which permit one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) available telecommunications assets or properties and locations thereof, (b) the owners or tenants of said available telecommunications assets or properties, (c) infrastructure needs of one or more telecommunications carriers, and (d) proposed business terms for fulfilling said infrastructure needs with said telecommunications assets or said property assets,

wherein notification is provided to either or both:

one or more of the owners or tenants of said available telecommunications assets or properties; and

the one or more telecommunications carriers;

when suitable available telecommunications assets or properties for said infrastructure needs of said one or more telecommunications carriers at one or more locations are identified.

2. (original) The clearinghouse system of claim 1 wherein said database includes public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations.

3. (original) The clearinghouse system of claim 1 wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, to selectively view or catalog information about said available telecommunications assets or properties and locations thereof, and said infrastructure needs of one or more telecommunications carriers for one or more locations.

4. (currently amended) The clearinghouse system of claim 1 wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a webserver, a wireless or portable computing or communications device, VoIP, or a digital recorder.

5. (currently amended) The clearinghouse system of claim 1 wherein at least one of said one or more electronic interfaces is connected to the world wide web, and wherein said records for one or more ~~a plurality of~~ telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler.

6. (original) The clearinghouse system of claim 1 further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers.

7. (original) The clearinghouse system of claim 1 further comprising a security application and billing application which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system.

8. (original) The clearinghouse system of claim 1 further comprising a communications application which permits secure negotiation and acceptance of business and legal terms between one or more telecommunications carriers and one or more end users for use of said one or more telecommunications assets or one or more property assets.

9. (original) The clearinghouse system of claim 8 wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage.

10. (original) The clearinghouse system of claim 1 wherein said database includes performance or quality of service information for specific locations.

11. (previously presented) The clearinghouse system of claim 10 wherein one of said one or more electronic interfaces provides automatic or manual updates of said performance or quality of service information from one or more mobile or fixed devices located in said specific locations.

12. (original) The clearinghouse system of claim 10 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations.

13. (original) The clearinghouse system of claim 10 wherein said performance or quality of service information includes multiple bands and multiple carriers.

14. (original) The clearinghouse system of claim 1 further comprising one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location.

15. (original) The clearinghouse system of claim 14 further comprising one or more base stations connected to said one or more electronic interfaces.

16. (original) The clearinghouse system of claim 14 wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces.

17. (previously presented) The clearinghouse system of claim 1 further comprising a computation application, which interfaces with at least one of said one or more computers, and which identifies optimum or prioritized locations for said infrastructure needs based on said records of said plurality of end users.

18. (previously presented) The clearinghouse system of claim 2 further comprising a computation application, which interfaces with at least one of said one or more computers, and which identifies optimum or prioritized locations for said infrastructure needs based on both said records of said plurality of end users and said public records.

19. (original) The clearinghouse system of claim 1 further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users.

20. (currently amended) A clearinghouse system for communications networks, comprising:

one or more computers which interface with a database, the database including performance or quality of service information for one or more specific locations, and one or more of

records for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations,

records for one or more ~~a plurality of~~ end users which identify telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations;

one or more electronic interfaces to said one or more computers which permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one or more specific locations to be automatically or manually updated into said database, and which permits at least one of said one or more telecommunications carriers or said one or more ~~plurality of~~ end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database; and

one or more applications operable with said one or more mobile or fixed devices or said one or more computers for obtaining and providing said performance or quality of service information to said one or more electronic interfaces.

21. (original) The clearinghouse system of claim 20 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations.

22. (original) The clearinghouse system of claim 20 wherein said performance or quality of service information includes multiple bands and multiple carriers.

23. (previously presented) The clearinghouse system of claim 20 further comprising means for sending instructions from one of said one or more electronic interfaces to one or more wireless devices for configuring or reconfiguring said one or more wireless devices based on a ranking of performance or specific requests of an end user.

24. (currently amended) The clearinghouse system of claim 20 further comprising means for sending a rank ordering of available telecommunications services from one of ~~or~~ said one or more electronic interfaces to one or more wireless devices.

25. (original) The clearinghouse system of claim 20 further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices, wherein monitored radio operating conditions are used to update performance or quality of service information in said database.

26. (previously presented) The clearinghouse system of claim 20 further comprising one or more wireless devices which are configured to provide said performance or quality of service information to one of said one or more of said electronic interfaces.

27. (currently amended) A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations, comprising:

a clearinghouse system for communications networks, said clearinghouse system including

one or more computers which interfaces with a database, said database including one or more of

performance or quality of service information for one or more specific locations,

records for one or more telecommunications carriers which identify infrastructure and location information for one or more specific locations,

records for one or more ~~a plurality of~~ end users which identify telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces to said one or more computers which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces permitting one or more of

performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically or manually updated into said database, and

at least one of said one or more telecommunications carriers or said one or more ~~plurality of~~ end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database;

wherein a geographic location of one or more mobile or fixed devices is identified; and

one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system configured to use said geographic location, said local ad servers providing localized content to said one or more mobile or fixed devices.

28. (original) The content providing system of claim 27 further comprising

one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system.

29. (original) The content providing system of claim 27 wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces.

30. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.

31. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices.

32. (previously presented) The content providing system 27 wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal.

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NOTICE OF ALLOWANCE AND FEE(S) DUE

30743 7590 03/09/2012

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
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RESTON, VA 20190

EXAMINER
CHANNAVAJJALA, SRIRAMA T

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 03/09/2012

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/208,007	09/10/2008	Theodore S. Rappaport	08610004AA	1779

TITLE OF INVENTION: CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	06/11/2012

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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

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

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

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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Alexandria, Virginia 22313-1450
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)

30743 7590 03/09/2012

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RESTON, VA 20190

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

Certificate of Mailing or Transmission

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/208,007	09/10/2008	Theodore S. Rappaport	08610004AA	1779

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APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$870	$300	$0	$1170	06/11/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHANNAVAJJALA, SRIRAMA T	2157	707-694000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

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

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

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

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

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

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

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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RESTON, VA 20190

EXAMINER	
CHANNAVAJJALA, SRIRAMA T	
ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 03/09/2012

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

The Patent Term Adjustment to date is 367 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 367 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

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

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.	Applicant(s)	
	12/208,007	RAPPAPORT, THEODORE S.	
	Examiner	Art Unit	
	SRIRAMA CHANNAVAJJALA	2157	

-- 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 *2/24/12*.
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 *1-32*.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157

DETAILED ACTION

1. Claims 1-32 are allowed in this application.

2. Examiner acknowledges applicant's amendment filed on 2/24/2012.

Drawings

3. The Drawings filed on 9/10/2008 are acceptable for examination purpose

Information Disclosure Statement

4. The information disclosure statement filed on 6/8/2010;4/19/2010;2/16/2010;12/2/2008;10/27/2008.is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy was enclosed with previous Office Action

Priority

5. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e) based on provisional application 60/971,175 filed on 9/10/2007;60/977,582 filed on 10/4/2007, 61/028,261 filed on 2/13/2008.

Double Patenting

In view of applicants filed "*terminal disclaimer*" approved on 3/5/2012, the double patent as set forth in the previous office action is hereby withdrawn.

Reasons for allowance

Claims 1-32 are allowed

The following is an examiner's statement of reasons for indication of allowable subject matter:

In view of applicant's remarks page 10-13 as filed 2/24/2012, and the prior art of record does not disclose, make obvious, or otherwise suggest the structure of the applicant's

"*one or more electronic interfaces to said one or more computers which permit one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) available telecommunications assets or properties and locations thereof, (b) the owners or tenants of said available telecommunications assets or properties, (c) infrastructure needs of one or more telecommunications carriers and (d) proposed or initial business terms for fulfilling said infrastructure needs and with said telecommunications assets or said property assets*

wherein notification is provided to either or both:

one or more of the owners or tenants of said available telecommunications assets or properties; and the one or more telecommunications carriers when suitable available telecommunications assets or properties for said infrastructure needs of said one or more telecommunications carriers at one or more locations are identified", in claim 1;

"*one or more electronic interfaces to said one or more computers which permit performance or quality of service information obtained from one or more mobile or fixed*

devices that are located in one of said one more specific locations to be automatically or manually updated into said database, and which permits at least one of said one or more plurality of telecommunications carders or said plurality of end users or one or more parties which are not telecommunications carders or end users to review, catalog or sort information in said database; and

one or more applications operable with said one or more mobile or fixed devices or said one more computers for obtaining and providing said performance or quality of service information to said one or more electronic interfaces", in claim 20;

"*at least one of said one or more plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database;*
wherein means a geographic location of one or more mobile or fixed devices is identified; and

one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system configured to use said geographic location said local ad servers providing localized content to said one or more mobile or fixed devices", in claim 27

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 2-19, 21-26,28-32, being definite, enabled by the specification, and further limiting to the independent claims are also allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim, Charles, can be reached on (571) 272-7421. The fax phone numbers for the organization where the 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)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157.

Notice of References Cited	Application/Control No. 12/208,007	Applicant(s)/Patent Under Reexamination RAPPAPORT, THEODORE S.	
	Examiner SRIRAMA CHANNAVAJJALA	Art Unit 2157	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,879,584	04-2005	Thro et al.	370/352
*	B	US-7,286,649	10-2007	Nelson et al.	379/71
*	C	US-6,032,132	02-2000	Nelson, Nickolas B.	705/34
*	D	US-2002/0123919	09-2002	Brockman et al.	705/7
*	E	US-2008/0049745	02-2008	Edwards et al.	370/389
*	F	US-2008/0065570	03-2008	Schultz, Justin F.	705/412
*	G	US-2002/0147726	10-2002	Yehia et al.	707/101
*	H	US-2003/0167175	09-2003	Salom, Silvio	705/1
*	I	US-2010/0142446	06-2010	Schlicht et al.	370/328
*	J	US-2007/0176745	08-2007	Gibson et al.	340/010.1
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	WO 2009114923	09-2009	PCT	Zabawskyj,Bohdan	
	O	WO 9524093	09-2005	PCT	Godon, Dale et al	
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Infrastructure Audit for the campus center port, Prepared by: Tech knowledge consulting corporation March 2003, 13 pages
	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.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE S.
	Examiner	**Art Unit**
	SRIRAMA CHANNAVAJJALA	2157

ORIGINAL		INTERNATIONAL CLASSIFICATION	
CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
707	694	G 0 6 F 17 / 00 (2006.0)	
CROSS REFERENCE(S)		G 0 6 Q 10 / 00 (2012.0)	
		G 0 6 Q 30 / 00 (2012.0)	
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)	H 0 4 M 11 / 00 (2006.0)	
707	688 758 805		
705	342 348		
455	406		

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	17	17												
2	2	18	18												
3	3	19	19												
4	4	20	20												
5	5	21	21												
6	6	22	22												
7	7	23	23												
8	8	24	24												
9	9	25	25												
10	10	26	26												
11	11	27	27												
12	12	28	28												
13	13	29	29												
14	14	30	30												
15	15	31	31												
16	16	32	32												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 32	
/SRIRAMA CHANNAVAJJALA/ Primary Examiner.Art Unit 2157 (Primary Examiner)	03/07/2012 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2 and 4

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	Art Unit
	SRIRAMA CHANNAVAJJALA	2157

SEARCHED

Class	Subclass	Date	Examiner
709	215-220	1/11/2011	sc
707	608-609,688,705748,825,827	1/11/2011	sc
705	14.33,14.1,14.11,39,26-27,64	1/11/2011	sc
455	406,408,417,445,560	1/11/2011	sc
379	1.01,9.04,32.01,88.09,114.08	1/11/2011	sc
707	609,688,694,758,805,922,944	3/2/2012	sc
455	405-406	3/2/2012	sc
340	4.42	3/2/2012	sc

SEARCH NOTES

Search Notes	Date	Examiner
Inventor searched	1/11/2011	sc
PLUS search	1/11/2011	sc
NPL & google search attached	1/11/2011	sc
WEST search attached	1/11/2011	sc
PLUS search	7/18/2011	sc
WEST search attached	7/18/2011	sc
Inventor searched	10/21/2011	sc
PLUS search	10/21/2011	sc
google search attached	10/23/2011	sc
WEST search attached	10/23/2011	sc
Inventor searched	3/2/2012	sc
PLUS search	3/2/2012	sc
Fast & Focus search attached	3/2/2012	sc
NPL search attached	3/2/2012	sc
google search attached	3/2/2012	sc
WEST search attached	3/2/2012	sc
WEST Interference search attached	3/2/2012	sc
discussed with WQAS	3/5/2012	sc

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner
707	609,688,694,758,805,922,944	3/2/2012	sc

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**
455	405-406	3/2/2012	sc
340	4.42	3/2/2012	sc

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE S.
	Examiner	**Art Unit**
	SRIRAMA CHANNAVAJJALA	2157

✓	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	01/11/2011	07/18/2011	10/23/2011	03/07/2012					
1	1	✓	✓	✓	=					
2	2	✓	✓	✓	=					
3	3	✓	✓	✓	=					
4	4	✓	✓	✓	=					
5	5	✓	✓	✓	=					
6	6	✓	✓	✓	=					
7	7	✓	✓	✓	=					
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30	30	✓	✓	✓	=					
31	31	✓	✓	✓	=					
32	32	✓	✓	✓	=					

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/208,007	RAPPAPORT, THEODORE S.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 3/05/12	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

3 td's
Jean Proctor

U.S. Patent and Trademark Office

PTO/SB/25 (08-11)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION	Docket Number (Optional) 08610004aa

In re Application of: Theodore S. Rappaport

Application No.: 12/208,007

Filed: September 10, 2008

For: Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network...

The owner*, Theodore S. Rappaport, 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 any patent granted on pending reference Application Number 12/815,165, filed June 14, 2010, as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

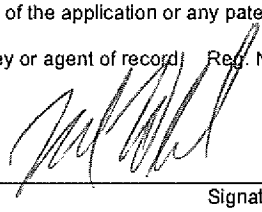
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that: any such patent: granted on the pending reference application: 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 filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

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

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

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 32,635



Signature — March 5, 2012 (Date)

Michael E. Whitham
Typed or printed name

703-787-9400
Telephone Number

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

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

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

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION	Docket Number (Optional) 08610004aa

In re Application of: Theodore S. Rappaport

Application No.: 12/208,007

Filed: September 10, 2008

For: Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network...

The owner*, Theodore S. Rappaport, 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 any patent granted on pending reference Application Number 12/815,076, filed June 14, 2010, as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

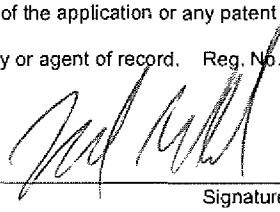
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that: any such patent: granted on the pending reference application: 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 filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

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

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

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 32,635



Signature — March 5, 2012 (Date)

Michael E. Whitham
Typed or printed name

703-787-9400
Telephone Number

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

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*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
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This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION	Docket Number (Optional) 08610004aa

In re Application of: Theodore S. Rappaport

Application No.: 12/208,007

Filed: September 10, 2008

For: Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network...

The owner*, Theodore S. Rappaport, 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 any patent granted on pending reference Application Number 12/814,974, filed June 14, 2010, as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

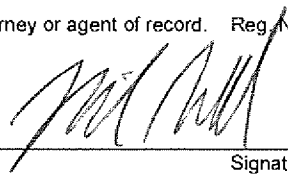
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent: granted on the pending **reference** application: 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 filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

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

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

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 32,635



Signature — March 5, 2012 (Date)

Michael E. Whitham
Typed or printed name

703-787-9400
Telephone Number

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/208,007	09/10/2008	Theodore S. Rappaport	08610004AA	1779

30743 7590 02/24/2012

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EXAMINER	
CHANNAVAJJALA, SRIRAMA T	
ART UNIT	PAPER NUMBER
2157	
MAIL DATE	DELIVERY MODE
02/24/2012	PAPER

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

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

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	12/208,007	RAPPAPORT, THEODORE S.	
	Examiner	Art Unit	
	SRIRAMA CHANNAVAJJALA	2157	

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

(1) *SRIRAMA CHANNAVAJJALA*. (3) *Theodore Rappaport*.

(2) *Michael E. Whitham, Reg No. 32,635*. (4)_____.

Date of Interview: *23 February 2012*.

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

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

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

Claim(s) discussed: *1-3,7,8,20 and 27*.

Identification of prior art discussed: *US Pat 6757543 & US Pat 6542588*.

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

Per applicant's proposed "draft amendment and remarks", discussed independent claim 1,20,27, also discussed dependent claim limitations 2-3, 7-8, further discussed prior art of references US Pat 6757543, fig 3 & US Pat 6542588, fig 1B. NO agreement reached. Applicant may consider filing response for further consideration .

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

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

☒ Attachment

/Srirama Channavajjala/ Primary Examiner, Art Unit 2157	

Summary of Record of Interview Requirements

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

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

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

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

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

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

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

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

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

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

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

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

Examiner to Check for Accuracy

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport — Confirmation No. 1779

Serial No. 12/208,007 — Group Art Unit 2157

Filed September 10, 2008 — Examiner Channavahala

For CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

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

PETITION FOR A ONE MONTH EXTENSION OF TIME AND AMENDMENT UNDER 37 C.F.R. §1.111

Sir:

Applicant hereby petitions for a one month extension of time to respond to the office action of October 27, 2011. The Commissioner is authorized to charge attorney's deposit account 50-2041 (Whitham, Curtis, Christofferson & Cook) for the extension fee and for any other fees required to gain entry and consideration of this amendment.

The undersigned and the applicant thank the Examiner for the Interview which took place on February 23, 2012. This amendment makes the substance of the meeting of record in the application.

In response to the office action mailed October 27, 2011, the applicant requests reconsideration and requests entry of the following amendment.

Listing of the Claims: begins on page 3

Remarks: begins on page 10

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1. (currently amended) A clearinghouse system for communications networks, comprising:

one or more computers which interface with a database, said database including

records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas, and (iii) desired business terms for said infrastructure needs, and

records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets;

one or more electronic interfaces to said one or more computers which permit one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) available telecommunications assets or properties and locations thereof, (b) the owners or tenants of said available telecommunications assets or properties, (c) infrastructure needs of one or more telecommunications carriers ~~for one or more locations~~, and (d) proposed ~~or initial~~ business terms for fulfilling said infrastructure needs ~~and~~ with said telecommunications assets or said property assets,

wherein notification is provided to either or both:

one or more of the owners or tenants of said available telecommunications assets or properties; and

the one or more telecommunications carriers;

when suitable available telecommunications assets or properties for said infrastructure needs of said one or more telecommunications carriers at one or more locations are identified.

2. (original) The clearinghouse system of claim 1 wherein said database includes public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations.

3. (original) The clearinghouse system of claim 1 wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, to selectively view or catalog information about said available telecommunications assets or properties and locations thereof, and said infrastructure needs of one or more telecommunications carriers for one or more locations.

4. (original) The clearinghouse system of claim 1 wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a webserver, VoIP, or a digital recorder.

5. (currently amended) The clearinghouse system of claim 1 wherein at least one of said one or more electronic interfaces is connected to the world wide web, and wherein said records for one or more ~~a plurality of~~ telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler.

6. (original) The clearinghouse system of claim 1 further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers.

7. (original) The clearinghouse system of claim 1 further comprising a security application and billing application which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system.

8. (original) The clearinghouse system of claim 1 further comprising a communications application which permits secure negotiation and acceptance of business and legal terms between one or more telecommunications carriers and one or more end users for use of said one or more telecommunications assets or one or more property assets.

9. (original) The clearinghouse system of claim 8 wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage.

10. (original) The clearinghouse system of claim 1 wherein said database includes performance or quality of service information for specific locations.

11. (previously presented) The clearinghouse system of claim 10 wherein one of said one or more electronic interfaces provides automatic or manual updates of said performance or quality of service information from one or more mobile or fixed devices located in said specific locations.

12. (original) The clearinghouse system of claim 10 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations.

13. (original) The clearinghouse system of claim 10 wherein said performance or quality of service information includes multiple bands and multiple carriers.

14. (original) The clearinghouse system of claim 1 further comprising

one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location.

15. (original) The clearinghouse system of claim 14 further comprising

one or more base stations connected to said one or more electronic interfaces.

16. (original) The clearinghouse system of claim 14 wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces.

17. (previously presented) The clearinghouse system of claim 1 further comprising a computation application, which interfaces with at least one of said one or more computers, and which identifies optimum or prioritized locations for said infrastructure needs based on said records of said plurality of end users.

18. (previously presented) The clearinghouse system of claim 2 further comprising a computation application, which interfaces with at least one of said one or more computers, and which identifies optimum or prioritized locations for said infrastructure needs based on both said records of said plurality of end users and said public records.

19. (original) The clearinghouse system of claim 1 further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users.

20. (currently amended) A clearinghouse system for communications networks, comprising:

one or more computers which <u>interface</u> ~~interfaces~~ with a database, the database including performance or quality of service information for one or more specific locations, and one or more of

records for one or more ~~a plurality of~~ telecommunications carriers which identify infrastructure and location information for one or more specific locations,

records for a plurality of end users which identify telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; ~~and~~

one or more electronic interfaces to said one or more computers which permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically or manually updated into said database, and which permits at least one of said one or more ~~plurality of~~ telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database; and

one or more applications operable with said one or more mobile or fixed devices or said one more computers for obtaining and providing said performance or quality of service information to said one or more electronic interfaces.

21. (original) The clearinghouse system of claim 20 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations.

22. (original) The clearinghouse system of claim 20 wherein said performance or quality of service information includes multiple bands and multiple carriers.

23. (currently amended) The clearinghouse system of claim 20 further comprising means for sending instructions from one of said one or more electronic interfaces

to one or more ~~mobile~~ wireless devices for configuring or reconfiguring ~~of~~ said one or more wireless ~~electronic~~ devices based on a ranking of performance or specific requests of an end user.

24. (currently amended) The clearinghouse system of claim 20 further comprising means for sending a rank ordering of available telecommunications services from one or said one or more electronic interfaces to one or more ~~mobile~~ wireless devices.

25. (original) The clearinghouse system of claim 20 further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices, wherein monitored radio operating conditions are used to update performance or quality of service information in said database.

26. (currently amended) The clearinghouse system of claim 20 further comprising ~~an updating application which permits~~ one or more wireless devices which are configured to provide said ~~to update~~ performance or quality of service information ~~in said database by reporting of observations of wireless performance and quality~~ to one of said one or more of said electronic interfaces.

27. (currently amended) A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations, comprising:

a clearinghouse system for communications networks, said clearinghouse system including

one or more computers which interfaces with a database, said database including one or more of

performance or quality of service information for one or more specific locations,

records for one or more ~~a plurality of~~ telecommunications carriers which identify infrastructure and location information for one or more specific locations,

records for a plurality of end users which identify telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces to said one or more computers which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces permitting one or more of

performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically or manually updated into said database, and

at least one of said one or more ~~plurality of~~ telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database;

wherein ~~means for identifying~~ a geographic location of one or more mobile or fixed devices is identified; and

one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system configured to use said geographic location, said local ad servers providing localized content to said one or more mobile or fixed devices ~~in a specific location~~.

28. (original) The content providing system of claim 27 further comprising

one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system.

29. (original) The content providing system of claim 27 wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces.

30. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.

31. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices.

32. (previously presented) The content providing system 27 wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal.

REMARKS

As the Examiner will recognize, none of USSN 12/814,974, 12/815,076, or 12/815,165 have passed to grant and each of USSN 12/814,974, 12/815,076, and 12/815,165 were filed after the present application. Therefore, a terminal disclaimer is not required at this point in the prosecution.

Claims 1, 20, 26, and 27 have been amended. Claim 1 now requires a notification to an end user and a telecommunications carrier as shown in Figure 4 (and is discussed in the patent specification). Claim 20 now includes features of claim 26. Figure 10 shows the performance and quality of information being provided to and stored in the clearinghouse system, and these operations are discussed throughout the patent specification. Claim 26 has been amended to correct for antecedent basis. Claims 5, 23, 24, and 27 have been amended for purposes of clarity.

The undersigned notes with appreciation the withdrawal of the rejections lodged under 35 U.S.C. 101 and 112.

Claims 1-32 remain rejected as being obvious over U.S. Patent 6,757,543 to Moran in view of U.S. Patent 6,542,588 to Mashinsky. This rejection is traversed in view of the remarks below.

Moran and Mashinsky were discussed in detail in the previous amendment.

The Examiner appears to have overlooked that the claimed invention has specific requirements that enable telecom carriers and individuals (end users) to, among other things provide, share, catalog, or review information pertaining to infrastructure needs of the carrier and property assets of the end users. Claim 1 specifically requires the database to include "proposed or initial business terms for the infrastructure needs and said telecommunications assets or said property assets". Neither Moran nor Mashinsky include a database which includes this type of record. Claim 20 specifically requires that the database include, in addition to records of one or more telecom carriers and a plurality of end users, "public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said

geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations". Neither Moran nor Mashinsky include a database which includes records of multiple carriers and multiple users together with public records. Claim 27 requires "records for one or more telecommunications carriers...records for a plurality of end users...public records...and that electronic interfaces permit performance or quality of service information to be obtained and reviewed" , and claim 27 also requires a means for identifying the geographic location of mobile or fixed devices, and one or more local ad servers which provide content to the mobile or fixed devices. As noted above, Moran and Mashinsky do not include a database having records of a plurality of users together with records of a plurality of carriers and public records. Further, Moran and Mashinsky do not have such a database having three types of records together with a means for identifying geographic locations and a local ad servers for providing localized content.

The deficiency of Moran and Mashinsky is not surprising as only the claimed invention is a "clearinghouse" system which is designed to share information and enable transaction which might help enhance the communication spectrum and permit users more open access to the communication spectrum.

Moran is directed to wireless data performance monitoring which uses specializes monitoring probes for the collection of data which can be used to aggregate performance reports and alerts (see Abstract). Notably, at no point does Moran contemplate transactions or performance reporting between end users and carriers. That is, there is no database which would provide potential business terms which might enable a user to negotiate with a carrier to provide access to land for installation of an antenna. There is no database which would include records of several users, several telecom carriers, and public records, which might be used to enable an end user, a telecom representative, or someone else to, for example, determine whether a transaction might be possible to enhance the communication spectrum or take some other action. Also, as discussed in the last response, Moran not only doesn't use end user data, it does not teach an electronic interface accessible to the end user and does not provide prioritized or ranked

information to an end user or an end user device that would enhance an end users telecommunications experience. It appears Mashinsky has been relied upon because it discusses "cost" and "service parameter" data being used in a rate table database. This teaching of Mashinsky adds nothing to what is shown in Moran. Rather, all that is envisioned in Mashinsky is a system where, purportedly, "efficient routes which meet the requester's requirements" can be identified so that sales of communication or connection time can be brokered. (see Abstract) Mashinsky basically is focused on providing a way for someone to get wireline long distance communications from a first country to a second country where, for example, this might be done with the highest quality phone line in the fastest time (at a correspondingly higher price) or with a quality and timeliness which is more economical. Mashinsky never contemplates or teaches if or how his rate billing system could be applied to mobile telephone systems, which have completely different approaches to billing (e.g., unlimited minutes or certain minutes of voice usage per month, or cafeteria plans that allow a maximum amount of free data traffic sessions). Mashinsky never considers the sharing of spectrum, nor does Mashinsky contemplate the specific difficulties associated with wireless communications, which is very site-specific and dependent upon location of infrastructure and particular users, as well as interference from other spectrum users. Mashinsky does NOT enable in any way a transaction between an end user and a telecom involving telecom or property assets (no business terms are stored in a database as required in claim 1; no public records, such as a map or GIS application, which would govern such matters are stored in a database, as is required in claims 20 and 27). While, as the Examiner has observed, Mashinsky shows a business rules database 95 in Figure 1b, this is for allowing for optimizing routing information at competitive prices/performance levels and has nothing to do with allowing telecommunications or property assets to be acquired or rented. Further, Mashinsky has no teaching regarding the location-specific performance of wireless network performance, and does not address the availability of usable spectrum or specific wireless carrier performance as a mobile user travels over space.

Moreover, to suggest that it would be obvious to incorporate telecom network management associated with such business rules into controlling network utilization (see page 28 of the office action) overlooks that such a combination does not, in fact, produce or make obvious the "claimed" invention which requires such things as records of a plurality of users and one or more telecom carriers and public records (such as maps) to be reviewed and sorted together, and business terms to be presented for review. As the Examiner should recognize, use of phone lines at a variable market prices has nothing to do with buying, selling, or renting telecom assets or property assets or aspects of the claimed invention.

For at least the fundamental reasons noted above, none of the claims would be obvious to one of ordinary skill in the art.

Furthermore, claim 1 requires a notification to be provided to end users when there is a match. Thus, the clearinghouse is providing end users and telecommunications carriers with information on a regular or automated basis with notifications. This feature is not present in Moran or Mashinsky. Claim 20 now requires updating of performance information. Thus, the clearinghouse provides a database to both end users and telecommunications carriers with up to date performance information which can be factored into various analyses. This feature is not present in Moran or Mashinsky. Claim 27 requires identification of geographic location for mobile or fixed devices so that those devices can receive localized content from ad servers. This feature is not present in Moran or Mashinsky.

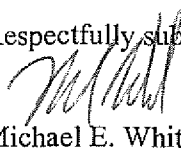
In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1-32 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any

fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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EXAMINER	
CHANNAVAJJALA, SRIRAMA T	
ART UNIT	PAPER NUMBER
2157	

MAIL DATE	DELIVERY MODE
10/27/2011	PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	12/208,007	RAPPAPORT, THEODORE R.	
	Examiner	Art Unit	
	SRIRAMA CHANNAVAJJALA	2157	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *19 October 2011*.

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) *1-32* 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) *1-32* is/are rejected.

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

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

Application Papers

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

11)☐ The drawing(s) filed on _____ 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).

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

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

DETAILED ACTION

Response to RCE-1

1. Claims 1-32 are pending in this application.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2011 has been entered

3. Examiner acknowledges applicant's filed amendment under 37 CFR 1.111 on 5/19/2011.

Drawings

4. The Drawings filed on 9/10/2008 are acceptable for examination purpose

Information Disclosure Statement

5. The information disclosure statement filed on 6/8/2010;4/19/2010;2/16/2010;12/2/2008;10/27/2008.is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy was enclosed with previous Office Action

Priority

6. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e) based on provisional application 60/971,175 filed on 9/10/2007; 60/977,582 filed on 10/4/2007, 61/028,261 filed on 2/13/2008.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical,~ but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g.,/n re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998);/n re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993);/n re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Omum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982);/n re Vogel 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and /n re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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

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

8. Claim 1,20,27 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1,7,21,27,33 of US Application No. 12/814,974 is now US Pub. No. 2010/0299274; Claims 1,17,27,39,50,60 of US Application # 12/815,076 is now US Pub. No. 2010/0250268; claims 1,8,20,31,43,56,69 of US Application # 12/815,165 is now US Pub. No. 2010/0250269. Although the conflicting claims are not identical, they are not patentably distinct from each other because of following reasons:

Claims 1,7,21,27,33 of US Application No. 12/814,974 is now US Pub. No. 2010/0299274; Claims 1,17,27,39,50,60 of US Application # 12/815,076 is now US Pub. No. 2010/0250268; claims 1,8,20,31,43,56,69 of US Application # 12/815,165 is now US Pub. No. 2010/0250269 contain(s) every element of Claim 1,20,27 of the instant application and thus anticipate the claim(s) of the instant application. Claims of the instant application therefore are not patently distinct from the earlier patent claims and as such are unpatentable over obvious-type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by the earlier claim.

A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is

anticipated by a 35 patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION F£)R REHEARING EN BANC (DECIDED: May 30, 2001).

"Claim 12 and Claim ! 3 are generic to the species of invention covered by claim 3 of the patent. Thus, the generic invention is "anticipated" by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775,227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) 4. This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. In re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761,767 (CCPA 1982); Schneller, 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 12 and 13 were properly rejected under the doctrine of obviousness-type double patenting." (In re Goodman (CA FC) 29 USPQ2d 2010 (12/3/1993).

35 USC § 101

9. In view of applicant's amendment and remarks at page 10-13, the rejection under 35 USC 101 as set forth in the previous office action is hereby withdrawn.

35 USC § 112

10. In view of applicant's amendment and remarks at page 13-14, the rejection under 35 USC 112 as set forth in the previous office action is hereby withdrawn.

Claim Rejections - 35 USC § 103

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

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

12. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moran et al. [hereafter Moran], US Patent No. 6757543 published on Jun 29,2004 in view of Mashinsky, US Patent No. 6542588 published on Apr 1,2003.

14. As to Claim 1, Moran teaches a system which including " A clearinghouse system for communications networks, comprising" [fig 1]

one or more computers [element 32A,32B, col 6, line 55-57] which interface with

a database including [fig 1, element 26]

"records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers [fig 1, element 48,50,52], telecommunications carriers corresponds to Moran's AT&T network; Verizon network, and Sprint network as detailed in fig 1; "in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, " [col 4, line 1-11], types of equipment corresponds to wireless enabled devices such as Palm Pilot, Handspring Visor devices, Pocket PCs, BlackBerry, RIM devices or Research I Motion devices and like (ii) location information including one or more of geographical areas [col 4, line 29-33, fig 8], geographical areas corresponds to Moran's fig 8;, and (iii) and

"records of a plurality of end users [col 7, line 30-38] which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets [col 11, line 56-65, col 12, line 2-12], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network (ii) property assets owned or controlled by said end users including geographic location [col 4, line 29-33, col 5, line 62-63], and (iii) " preferences for use of said telecommunications assets or said property assets" [col 3, line 32-35, col 5, line 32-37, fig 1] telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipment, vehicles, buildings and like;

one or more electronic interfaces to said one or more computers [fig 1] which

permit one or more telecommunications carriers and one or more end users to selectively view or catalog information [col 6, line 37-47,col 7, line 30-38] about (a) available telecommunications assets or properties and locations thereof, " [col 3, line 32-35, col 5, line 32-37, col 7, line 8-17, fig 1-2] (b) the owners or tenants of said available telecommunications assets or properties [col 3, line 27-35], (c) infrastructure needs of one or more telecommunications carriers for one or more locations, [fig 8, col 5, line 62-63] and (d) for said infrastructure needs and said telecommunications assets or said property assets [col 3, line 27-35, col 5, line 32-50, col 11, line 56-59].

It is however, noted that Moran doesn't specifically teach "desired business terms", although Moran specifically teaches generating performance and monitoring reports [fig 1], further also supports WAP enabled devices used in "trade especially in the markets tracking stock and like [col 12, line 62-67]. On the other hand, Mashinsky disclosed " desired business terms [fig 1B,col 5, line 61-67, col 6, line 1-5], Mashinsky specifically teaches "business-rules database" for example as detailed in fig 1B related to telecommunication field.

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically

directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4“ Mashinsky: Abstract, fig 1A-1B].

Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating “business-rules” particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

15. As to Claim 2, Moran disclosed “wherein said database includes public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, [fig 8, col 14, line 53-64] local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations [col 15, line 1-14].

16. As to Claim 3, Moran disclosed “wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, [fig 1,fig 4, , col 5, line 32-37],to selectively view or catalog information about said available telecommunications assets or properties and locations thereof,[col 5, line

40-49] and said infrastructure needs of one or more telecommunications carriers for one or more locations [col 5, line 51-63].

17. As to Claim 4, Moran disclosed "wherein said one or more electronic interfaces includes one or more of an Internet interface,[fig 1, col 6, line 55-57 a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface [fig 3], a facsimile, voicemail, a web server, VoIP, a wireless or portable computing or communications device or a digital recorder [fig 1 and fig 3].

18. As to Claim 5, Moran disclosed " wherein at least one of said one or more electronic interfaces is connected to the world wide web [col 5, line 9-14], and wherein said records for a plurality of telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler [col 11, line 1-6, line 54-62].

19. As to Claim 6, Moran disclosed " further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers" [col 13, line 17-24, col 14, line 66-67, col 15, line 1-8].

20. As to Claim 7, Moran disclosed " further comprising a security application , which permits charging said one or more telecommunications carriers or said one or more end

users at selectable rates for use of said clearinghouse system [col 6, line 33-47]. On the other hand, Mashinsky disclosed "billing application" [fig 11B,col 18, line 31-39].

21. As to Claim 8, Moran disclosed " further comprising a communications application which permits secure and one or more end users for use of said one or more telecommunications assets or one or more property assets [fig 1, fig 4, col 5, line 37-49, line62-63]. On the other hand, Mashinsky disclosed "negotiation and acceptance of business and legal terms between one or more telecommunications carriers" [Abstract, fig 1A-1B, fig 3A-3B, col 7, line 43-65].

22. As to Claim 9, Moran disclosed "wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage" [col 11, line 54-59, col 12, line 2-6].

23. As to Claim 10 , Moran disclosed " wherein said database includes performance or quality of service information for specific locations" [col 6, line 55-64, line 65-67, col 7, line 1-7].

24. As to Claim 11, Moran disclosed "wherein one of said one or more electronic interfaces provides automatic performance or quality of service information from one or more mobile or fixed devices located in said specific locations" [col 13, line 52-58, col 14, line 53-65]. On the other hand, Mashinsky disclosed provides automatic or

manual updates of said performance or quality of service information col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

25. As to Claim 12, Moran disclosed " wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations" [col 6, line 55-64, line 65-67, col 7, line 1-7, fig 1, fig 3-4].

26. As to Claim 13, Moran disclosed " wherein said performance or quality of service information includes multiple bands and multiple carriers" [fig 4, col 7, line 66-67, col 8, line 1-7].

27. As to Claim 14, Moran disclosed "one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location" [fig 1,col 6, line 34-47, fig 3-4].

28. As to Claim 15, Moran disclosed "one or more base stations connected to said one or more electronic interfaces" [fig 1, fig 3, col 4, line 1-25].

29. As to Claim 16, Moran disclosed " wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic

interfaces" [fig 1, fig 3, col 3, line 19-23, col 4, line 1-25], Moran specifically teaches various performance data particularly generating reports and graphs as detailed in col 3, line 19-23

30. As to Claim 17-18, Moran disclosed " further comprising a computation application which interfaces with at least one of said one or more computers [col 6, line 55-61] which identifies optimum or prioritized locations for said infrastructure needs based on said records of said plurality of end users" [col 3, line 24-35, line 58-67, col 4, line 26-33].

31. As to Claim 19, Mashinsky disclosed " further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users" [fig 1A-1B, fig 3A-B, col 11, line 31-63].

32. As to Claim 20, 11, Moran teaches a system which including " A clearinghouse system for communications networks, comprising: [fig 1]

one or more computers which interfaces with a database [element 32A,32B, col 6, line 55-57, fig 1] the database including performance or quality of service information for one or more specific locations, [fig 1, element 26, Abstract, col 4, line 61-67, col 5, line 1-8, col 7, line 30-39], database corresponds to Moran's database, further performance information corresponds to Moran's performing monitoring functions periodically as detailed in col 5, line 1-8;]

one or more of records for a plurality of telecommunications carriers which identify infrastructure [fig 1, element 48,50,52,], telecommunications carriers corresponds to Moran's AT&T network; Verizon network, and Sprint network as detailed in fig 1; "and location information for one or more specific locations" [fig 8,col 7, 58-65], Moran specifically teaches not only geographical location[s] where telecommunication carries or various wireless devices performing certain tasks, but also identifies specific locations for example as detailed in fig 7-8];

records for a plurality of end users [col 7, line 30-38] which identify telecommunications assets or property assets owned or controlled by said one or more end users, [col 11, line 56-65, col 12, line 2-12, col 3, line 32-35, col 5, line 32-37, fig 1], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network and , further it is noted that Moran strongly teaches telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipment, vehicles, buildings and like;

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, [fig 8, col 14, line 53-64] , zoning information for said geographic locations, local ordinances for said geographic locations, [fig 8, col 14, line 53-64] contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; [col 15, line 1-14].; and

"one or more electronic interfaces to said one or more computers [fig 1] which

permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations" [fig 1,fig 4,, fig 7-8, col 10, 23-46, col 14, line 53-65], Moran specifically teaches generating performance reports particularly related to carrier services provided to various wireless devices; "and which permits at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.[fig 1,fig 4, col 5, line 32-37, line 51-63]. It is however, noted that Moran does not specifically disclose "automatically or manually updated into said database", although Moran specifically teaches not only database stores various performance related information related , but also generates "reports as detailed inn fig 1, . On the other hand, Mashinsky disclosed "automatically or manual updated into said database" [col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4" Mashinsky: Abstract, fig 1A-1B].

Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating "business-rules" particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database periodically updated information accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

33. As to Claim 21, Moran disclosed " wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations" fig 1, fig 7-8, fig. 6, element 212]..

34. As to Claim 22, Mashinsky disclosed " wherein said performance or quality of service information includes multiple bands and multiple carriers. [col 7, line 43-51]

35. As to Claim 23-24, Moran disclosed " further comprising means for sending instructions from one of said one or more electronic interfaces to one or more mobile wireless devices for configuring or reconfiguring of said one or more electronic devices based on a ranking of performance or specific requests of an end user" [fig 1,col 4, line 1-25].

36. As to Claim 25, Moran disclosed " further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices [fig 1, fig 4], wherein monitored radio operating conditions are used, quality of service information [col 5, line 20-29]. On the other hand, Mashinsky disclosed "to update performance or quality of service information in said database. col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

37. As to Claim 26, Moran disclosed " further comprising an updating application which permits one or more wireless devices to update performance or quality of service information in said database by reporting of observations of wireless performance and quality to one of said one or more of said electronic interfaces [fig 1, fig 5, col 10, line 50-57].

38. As to Claim 27, Moran teaches a system which including " A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations ,a clearinghouse system for communications networks, [fig 1, fig 4] said clearinghouse system including a database [fig 1] including one or more computers which interfaces with a database, said database including one or more of performance or quality of service information for one or more specific locations [fig 1, element 26, Abstract, col 4, line 61-67, col 5, line 1-8, col 7, line 30-39, fig 8], database corresponds to Moran's database, further performance information corresponds to Moran's performing monitoring functions periodically as detailed in

col 5, line 1-8;]

records for a plurality of telecommunications carriers which identify infrastructure [fig 1, element 48,50,52,], and location information for one or more specific locations[fig 8,col 7, 58-65], Moran specifically teaches not only geographical location[s] where telecommunication carries or various wireless devices performing certain tasks, but also identifies specific locations for example as detailed in fig 7-8];

records for a plurality of end users [col 7, line 30-38] which identifies telecommunications assets or property assets owned or controlled by said one or more end users, [col 11, line 56-65, col 12, line 2-12, col 3, line 32-35, col 5, line 32-37, fig 1], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network and , further it is noted that Moran strongly teaches telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, [fig 8, col 14, line 53-64] , zoning information for said geographic locations, local ordinances for said geographic locations, [fig 8, col 14, line 53-64] contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; [col 15, line 1-14].; and

one or more electronic interfaces to said one or more computers [col 6, line 55-58] which permit one or more mobile or fixed devices to be connected to said

clearinghouse system, said one or more electronic interfaces [fig 1,fig 4,, fig 7-8, col 10, 23-46, col 14, line 53-65], Moran specifically teaches generating performance reports particularly related to carrier services provided to various wireless devices ; "permitting one or more of performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations .[fig 1,fig 4, col 5, line 32-37, line 51-63].

at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.[fig 1,fig 4, col 5, line 32-37, line 51-63];

"means for identifying a geographic location of one or more mobile or fixed devices" [fig 4, fig 7-8]; and

"one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system, said local ad servers providing localized content to said one or more mobile or fixed devices in a specific location" [fig 3-4, col 9, line 21-27, line 29-38].

It is however, noted that Moran does not specifically disclose "automatically or manually updated into said database", although Moran specifically teaches not only database stores various performance related information related , but also generates "reports as detailed inn fig 1. On the other hand, Mashinsky disclosed "automatically or manual updated into said database" [col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4" Mashinsky: Abstract, fig 1A-1B].

Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating "business-rules" particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database periodically updated information accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

39. As to Claim 28, Moran disclosed "one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system" [fig 3-4, col 10, line 50-57].

40. As to Claim 29, Moran disclosed " wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through

said one or more electronic interfaces" [fig 1, abstract, col 13, line 59-67, col 14, line 1-8].

41. As to Claim 30, Moran disclosed " wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.[fig 2,fig 4, col 7, line 8-25].

42. As to Claim 31, Moran disclosed " wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices." [col 7, line 44-65].

43. As to Claim 32, Moran disclosed " wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal" [col 7, line 66-67, col 8, line 1-18].

Response to Arguments

44. Applicant's arguments page 10-20 filed 10/19/2011 with respect to claims 1-32 have been fully considered but they are not persuasive, for examiner's response, see discussion below:

a) Examiner acknowledges applicant's remarks page 10, regarding "double patent" rejection.

b) At page 14, claim 1, applicant argues "Moran never teaches the ue of a clearinghouse, or the use of generic cell phones, or the use of conventional customers in the ordinary course of use"

As to the above argument [b], examiner disagree with the applicant because, Moran specifically teaches database connected in a web environment particularly web user interface that allows bi-directional communication access [col 3, line 46-47, fig 1], furthermore, Moran strongly supports "wireless cellular phone for example see Abstract, fig 1, element 36,38,40 provided by different providers as detailed in fig 1 reads on "generic cell phones, ..."

c) At page 15, claim 1, applicant argues "Moran on the other hand, is completely unaware and uninterested in the particular locations of towers, cell sites, and radio infrastructure....

As to the above argument, examiner disagree with the applicant because, Moran strongly supports wireless services across geographic locations specifically identified in the fig 8, furthermore, Moran also strongly supports multiple telecommunication carriers is part of the defining wireless services such as AT&T, Verizon,Sprint and like provides basic required equipment, towers and services is integral part telecommunications carriers of Moran's reference. [fig 1]

d) At page 16, claim 1 applicant argues Moran does not use standard, regular cellphones of ordinary use, and further does not use ordinary cellphone users, but instead he requires a special link between his test phones and a computer….

As to the above argument [d], examiner disagree with the applicant because, Moran strongly supports wireless communication infrastructure, particularly providing multiple telecommunication carrier networks providing wireless services to the customers particularly using cellphone or mobile phones as detailed in fig 1.

e) At page 16, claim 1, applicant argues "Moran never teaches end users as contemplated by our current invention, which include members of the general public as well as their generic mobile phones or internet equipment"

f) At page 17, claim 1, applicant argues "Moran does not teach the ability to use standardized cellphones with web-based applications or interfaces to report observations in the course of ordinary cellphone use….

As to the above argument [e-f], Moran specifically directed to using "mobile phones" in a wireless telecommunication environment" typically multiple telecommunication providers such as AT&T, Verizon, and Sprint are commonly known to the general public, furthermore, Moran also supports IP phone fig 1, element 46. And Internet access subscription service [col 11, line 56-58].

g) At page 17, claim 1, applicant argues Moran does not teach a database that includes records of infrastructure needs for one or more telecommunications carriers and does not teach a database that includes records…….

As to the above argument [g], Moran strongly teaches "database "usage with respect to maintaining data corresponding to messages stored including time, location, phone numbers and creating relation between phone number of each device and service provider for example as detailed in col 7, line 30-38.

h) At page 17, claim 1, applicant arguers Moran and Mashinsky are wholly unrelated to the claimed invention which is drawn to a clearinghouse system for communications networks

i) At page 17, claim 1, page 19, claim 20, 27, applicant argues Neither Moran nor Mashinsky meet the requirements that the interfaces to the computer permit reviewing of proposed business terms for the needs and the telecommunications assets.

j) At page 19-20, claim 27, applicant argues no combination of Moran and Mashinsky would make claim 27 and its dependent claims obvious to one of ordinary skill in the art.

In response to Appellant's argument [h-j], Examiner notes the following:

Section 103 forbids issuance of a patent when "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."
KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007) (hereinafter "KSR").

In KSR, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art", id. at 415, and discussed circumstances in which a patent might be determined to be obvious. Id. at 415-16 (citing Graham v. John Deere Co., 383 U.S. 1, 12 (1966)). The Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." Id. at 416. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." Id. at 417.

The Federal Circuit recently recognized that "[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." Leapfrog Enters., Inc.

v. Fisher-Price, Inc., 485 F.3d 1157, 1161 (Fed. Cir. 2007) (citing KSR, 550 U.S. at 416). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." Id. at 1162 (citing KSR, 550 U.S. at 418).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091,231 USPQ 375 (Fed. Cir. 1986). This rejection is in combination of Bakalash et al. in view of Franz et al..

Further, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Moran is directed to wireless services monitoring and performances, particularly, supporting remote and local monitoring and generating performance reports [Abstract]. Moran also specifically teaches telecommunication information being stored in a database connected in a network environment for example as detailed in fig 1, col 3, line 24-36 reads on the instant claim 1 limitation "database including records for one or more telecommunications carriers....." because Moran strongly supports multiple telecommunications carriers for example AT&T network, Verizon network, US Sprint

and like [Moran: fig 1, element 48,50,52], further it is also noted that Moran supports various wireless enabled devices for example Palm Pilot, Handspring Visor devices, Pocket PCs, BlackBerry, RIM devices and like, therefore, types of equipment corresponds to Moran's col 4, line 1-11 reads on the instant claim limitation "types of equipment and performance ……equipment". It is also noted that Moran strongly teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network for example as detailed in col 11, line 56-65, col 12, line 2-12] reads on the instant claim limitation "(i) telecommunications assets owned …….assets; Moran also strongly teaches various telecommunication assets such as telecommunication network equipment and wireless and wired devices connected including multiple cellular antenna, buildings, equipment, vehicles and like is integral part of telecommunication infrastructure [Moran: col 3, line 32-35, col 5, line 32-37, fig 1], further wireless network infrastructure covering geographical regions establishing cross-connectivity for example as detailed in col 5, line 51-63]

In this case, prior art of reference Mashinsky is directed to global communications management, more specifically telecommunication sales and market information and supporting communication routes monitoring network traffic [Abstract], Mashinsky also specifically teaches maintaining telecommunication related information a database for example defining identifiers, geographic route, security, market prince and like for example as detailed in fig 15, col 21, line 22-50, therefore, Mashinsky clearly directed to telecommunication connection[s], providing various services defining

market price, quality level security level and geographic route [col 21, line 51-67, col 22, line 15-29, fig 15-16]

It is however, noted that Moran doesn't specifically teach "desired business terms", although Moran specifically teaches generating performance and monitoring reports [fig 1], further also supports WAP enabled devices used in "trade especially in the markets tracking stock and like [col 12, line 62-67]. On the other hand, Mashinsky disclosed " desired business terms [fig 1B,col 5, line 61-67, col 6, line 1-5], Mashinsky specifically teaches "business-rules database" for example as detailed in fig 1B related to telecommunication field.

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4" Mashinsky: Abstract, fig 1A-1B].

Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating "business-rules" particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database

accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

k) At page 19, claim 20, applicant argues "electronic interfaces to the one or more computers permit performance or quality of service information from one or more mobile or fixed devices that are located in the specific location to be automatically or manually updated into the database either in real time or after storage…….

As to the above argument [k], it is noted that Moran specifically teaches database structure that supports various data records related to various services particularly messages sending and receiving, access to the services in much of the real time data stored in databases [Moran: col 7, line 8-39, col 13, line 52-58, col 14, line 53-65]. On the other hand, Mashinsky disclosed provides automatic or manual updates of said performance or quality of service information col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

Examiner applies above arguments to claims 2-19, 21-26, 28-32 depend from claims 1, 20, 27.

Therefore, Applicant's remarks are deemed not to be persuasive, and claims 1-32 stand rejected under 35 USC 103(a) as being unpatentable over Moran et al in view of Mashinsky

Conclusion

The prior art made of record

a. US Patent No. 6757543

b. US Patent No. 6542588

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the Claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Ebb whose telephone number is (571) 272-3574 for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim, Charles, can be reached on (571) 272-7421. The fax phone numbers for the organization where the 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)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	**Art Unit**
	SRIRAMA CHANNAVAJJALA	2157

✓	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	01/11/2011	07/18/2011	10/23/2011						
	1	✓	✓	✓						
	2	✓	✓	✓						
	3	✓	✓	✓						
	4	✓	✓	✓						
	5	✓	✓	✓						
	6	✓	✓	✓						
	7	✓	✓	✓						
	8	✓	✓	✓						
	9	✓	✓	✓						
	10	✓	✓	✓						
	11	✓	✓	✓						
	12	✓	✓	✓						
	13	✓	✓	✓						
	14	✓	✓	✓						
	15	✓	✓	✓						
	16	✓	✓	✓						
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	25	✓	✓	✓						
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	27	✓	✓	✓						
	28	✓	✓	✓						
	29	✓	✓	✓						
	30	✓	✓	✓						
	31	✓	✓	✓						
	32	✓	✓	✓						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	Art Unit
	SRIRAMA CHANNAVAJJALA	2157

SEARCHED			
Class	Subclass	Date	Examiner
709	215-220	1/11/2011	sc
707	608-609,688,705748,825,827	1/11/2011	sc
705	14.33,14.1,14.11,39,26-27,64	1/11/2011	sc
455	406,408,417,445,560	1/11/2011	sc
379	1.01,9.04,32.01,88.09,114.08	1/11/2011	sc

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor searched	1/11/2011	sc
PLUS search	1/11/2011	sc
NPL & google search attached	1/11/2011	sc
WEST search attached	1/11/2011	sc
PLUS search	7/18/2011	sc
WEST search attached	7/18/2011	sc
Inventor searched	10/21/2011	sc
PLUS search	10/21/2011	sc
google search attached	10/23/2011	sc
WEST search attached	10/23/2011	sc

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

PTO/SB/30 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Request For Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	12/208,007
Filing Date	September 10, 2008
First Named Inventor	Rappaport
Art Unit	2157
Examiner Name	Channavahala
Attorney Docket Number	08610004aa

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
   i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
   ii. ☐ Other _____

b. ☒ Enclosed
   i. ☒ Amendment/Reply
   ii. ☐ Affidavit(s)/Declaration(s)
   iii. ☐ Information Disclosure Statement (IDS)
   iv. ☐ Other _____

2. Miscellaneous _____

a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

b. ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

a. ☒ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments to Deposit Account No. 50-2041 .
   i. ☒ RCE fee required under 37 CFR 1.17(e)
   ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)
   iii. ☒ Other deficiencies

b. ☐ Check in the amount of $ _____ enclosed

c. ☐ Payment by credit card (Form PTO-2038 enclosed)

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.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	August 29, 2011
Name (Print / Type)	Michael E. Whitham	Registration No.	32,635

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature			
Name (Print / Type)		Date	

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport	Confirmation No. 1779
Serial No. 12/208,007	Group Art Unit 2157
Filed September 10, 2008	Examiner Channavahala

For CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

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

AMENDMENT UNDER 37 C.F.R. §1.114

Sir:

This amendment is filed in conjunction with a request for continued examination (RCE). The Commissioner is authorized to charge attorney's deposit account 50-2041 (Whitham, Curtis, Christofferson & Cook) for the RCE fee and for any other fees required to gain entry and consideration of this amendment.

In response to the office action mailed July 26, 2011, the applicant requests reconsideration and requests entry of the following amendment.

Amendments to the Specification: begin on page 2

Listing of the Claims: begins on page 3

Remarks: begins on page 10

Amendments to the Specification

Please amend the paragraph bridging pages 40 and 41 (paragraph [0100] of the printed publication) as follows:

The network performance or quality of service information as a function of location may be downloaded to the wireless device from the Clearinghouse either before a user of the device travels to a location, or during the travel, itself, as illustrated in FIG. 9. While FIG. 9 shows a wireless connection, it should be noted that clearinghouse information may be provided to the mobile ~~mbile~~ device 910 using wired means, as well. FIG. 9 is substantially similar to FIG. 8, and shows the flow of information from the Clearinghouse, and consequently the Clearinghouse database 920 to the wireless device 910 through the Internet 930 and Tower 925. As shown in FIG. 9, recent snapshots or data values of quality as a function of location, as obtained from the Clearinghouse, may be stored in the memory of a mobile device 910, and updated at a rate determined by either the Clearinghouse, the end user, or the wireless carrier providing end user service. When in the field with a planned trip, the user can get downloaded information after handshake by the mobile (wireless) device 910 being able to retrieve from the Clearinghouse 920 (in an automated fashion or with a user interfacing program ~~interval~~) the local "state" of the RF environment he or she is in or traveling to which may include the services that are available, carriers, locations of towers, etc., so that the phone can better use power and allocate spectrum better. This handshake may be provided over the air in real time or pseudo real time, or may take place earlier when the phone is connected or idle at home in a wired or wireless home network, or docked in its charger, etc.

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1. (currently amended) A clearinghouse system for communications networks, comprising:

one or more computers which interface with a database, said database including

records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas, and (iii) desired business terms for said infrastructure needs, and

records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets;

one or more electronic interfaces to said one or more computers which permit one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) available telecommunications assets or properties and locations thereof, (b) the owners or tenants of said available telecommunications assets or properties, (c) infrastructure needs of one or more telecommunications carriers for one or more locations, and (d) proposed or initial business terms for said infrastructure needs and said telecommunications assets or said property assets.

2. (original) The clearinghouse system of claim 1 wherein said database includes

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said

geographic locations, and information about carriers serving said geographic locations.

3. (original) The clearinghouse system of claim 1 wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, to selectively view or catalog information about said available telecommunications assets or properties and locations thereof, and said infrastructure needs of one or more telecommunications carriers for one or more locations.

4. (currently amended) The clearinghouse system of claim 1 wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a webserver, VoIP, a wireless or portable computing or communications device, or a digital recorder.

5. (original) The clearinghouse system of claim 1 wherein at least one of said one or more electronic interfaces is connected to the world wide web, and wherein said records for a plurality of telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler.

6. (original) The clearinghouse system of claim 1 further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers.

7. (original) The clearinghouse system of claim 1 further comprising a security application and billing application which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system.

8. (original) The clearinghouse system of claim 1 further comprising a communications application which permits secure negotiation and acceptance of

business and legal terms between one or more telecommunications carriers and one or more end users for use of said one or more telecommunications assets or one or more property assets.

9. (original) The clearinghouse system of claim 8 wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage.

10. (original) The clearinghouse system of claim 1 wherein said database includes performance or quality of service information for specific locations.

11. (currently amended) The clearinghouse system of claim 10 wherein one of said one or more electronic interfaces provides automatic or manual updates of said performance or quality of service information from one or more mobile or fixed devices located in said specific locations.

12. (original) The clearinghouse system of claim 10 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations.

13. (original) The clearinghouse system of claim 10 wherein said performance or quality of service information includes multiple bands and multiple carriers.

14. (original) The clearinghouse system of claim 1 further comprising

one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location.

15. (original) The clearinghouse system of claim 14 further comprising

one or more base stations connected to said one or more electronic interfaces.

16. (original) The clearinghouse system of claim 14 wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces.

17. (currently amended) The clearinghouse system of claim 1 further comprising a computation application, which interfaces with at least one of said one or more computers, and which identifies optimum or prioritized locations for said infrastructure needs based on said records of said plurality of end users.

18. (currently amended) The clearinghouse system of claim 2 further comprising a computation application, which interfaces with at least one of said one or more computers, and which identifies optimum or prioritized locations for said infrastructure needs based on both said records of said plurality of end users and said public records.

19. (original) The clearinghouse system of claim 1 further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users.

20. (currently amended) A clearinghouse system for communications networks, comprising:

one or more computers which interfaces with a database, the database including performance or quality of service information for one or more specific locations, and one or more of

records for a plurality of telecommunications carriers which identify infrastructure and location information for one or more specific locations,

records for a plurality of end users which identify telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said

geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces to said one or more computers which permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically or manually updated into said database, and which permits at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.

21. (original) The clearinghouse system of claim 20 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations.

22. (original) The clearinghouse system of claim 20 wherein said performance or quality of service information includes multiple bands and multiple carriers.

23. (original) The clearinghouse system of claim 20 further comprising means for sending instructions from one of said one or more electronic interfaces to one or more mobile wireless devices for configuring or reconfiguring of said one or more electronic devices based on a ranking of performance or specific requests of an end user.

24. (original) The clearinghouse system of claim 20 further comprising means for sending a rank ordering of available telecommunications services from one or said one or more electronic interfaces to one or more mobile wireless devices.

25. (original) The clearinghouse system of claim 20 further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices, wherein monitored radio operating conditions are used to update performance or quality of service information in said database.

26. (original) The clearinghouse system of claim 20 further comprising an updating application which permits one or more wireless devices to update performance or quality of service information in said database by reporting of observations of wireless performance and quality to one of said one or more of said electronic interfaces.

27. (currently amended) A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations, comprising:

a clearinghouse system for communications networks, said clearinghouse system including

one or more computers which interfaces with a database, said database including one or more of

performance or quality of service information for one or more specific locations,

records for a plurality of telecommunications carriers which identify infrastructure and location information for one or more specific locations,

records for a plurality of end users which identify telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces to said one or more computers which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces permitting one or more of

performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically or manually updated into said database, and

at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database;

means for identifying a geographic location of one or more mobile or fixed devices; and

one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system, said local ad servers providing localized content to said one or more mobile or fixed devices in a specific location.

28. (original) The content providing system of claim 27 further comprising

one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system.

29. (original) The content providing system of claim 27 wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces.

30. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.

31. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices.

32. (previously presented) The content providing system 27 wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal.

REMARKS

A typographica and grammatical error in the specification have been corrected. Further, the specification has been corrected for purposes of clarity.

Claims 1, 4, 11, 17, 18, 20, and 27 have been amended. Pages 23 and 24 of the application provide support for broadening claim 4 to include wireless or portable computing or communications devices. Page 30 of the application provides support for broadening of dependent claims 17 and 18 to include both optimum and prioritized locations. The last paragraph on page 27, the last paragraph on page 36, the last paragraph on page 38 and pages 42-45 of the application, for example, provide support for broadening dependent claim 11 and independent claims 20 and 27 to include both automatic as well as manual updates by a user; Claims 1-32 remain in the application.

Claims 1, 20, and 27 were rejected for non-statutory obviousness-type double patenting over a) claims in U.S. Patent Application 12/814,974, b) claims in U.S. Patent Application 12/815,165; and c) claims in U.S. Patent Application 12/815,076. At the outset, it will be recognized by the Examiner that each of these applications was filed after the present application, and claim priority to the present application. Further, none of the applications have matured to a notice of allowance or a patent grant, therefore this rejection can only be a provisional rejection. In the event any of the aforementioned applications mature to a patent grant prior to the present application, the applicant will file a terminal disclaimer to obviate the rejection.

Claims 1-32 were rejected as being as being drawn to non-statutory subject matter. This rejection is traversed.

As will be recognized by the Examiner, an embodiment of the invention is a computerized system which allows telecommunications carriers and end users to come together and identify potential assets which would be available to meet infrastructure needs on mutually agreeable business terms. The application is not aware of any similar system that existed at the time of the invention. Thus, telecommunications carriers are not able to readily identify owners or controllers of various assets that might want to license the assets to the carriers, and end users

have no ready mechanism to inform telecommunications carriers about potential assets that they own or control which might be of interest to the telecommunications carriers.

The system is operated on one or more computers. For example, Figure 1 shows the system which includes a CPU 30 with a variety of interfaces to the CPU (see, e.g., the email server 24, the web server 18, the phone banks or VoIP webserver 20, and telephone connections 22). See also Figures 5, 6, 8, and 9 which show the interfaces with a database which stores, catalogs, and makes available the information needed to identify candidates for meeting the infrastructure needs. Figures 7-9 show, as an example, the ability to access the computers to provide and receive information using a mobile telephone communicating by transmissions from towers to the internet to the computers of the clearinghouse system. Also, the patent application shows interfaces on Figure 1 and describes interfaces broadly on pages 20, 23, 24-26, 35,and 41-43 as including telephonic, text, voice/telephone, internet communication, web interfaces, voice recognition, VoIP, touch tone phone, wireless or wired phones, email, personal computers, cellphones, PDAs, tablet computers, VoIP phone, mouse or other computer input device, a user application handshaking with the Clearinghouse or accessing the web using low level formatting not readable by a regular user, mobile device, user interfacing programs running on wireless devices, personal computers, an application on the web or via a wireless device, a user interface program, a web application, wired or wireless home network, a charger docking station, a web server that hosts the clearinghouse communicating using wireless or wired means, file or record uploads and downloads, and so on. Interfaces are also defined elsewhere in the patent application and would be recognized by those of skill in the art. As explained on page 38 et seq., a user's phone 710 (or other device such as a computer or Dongle or wearable sensor devices) could report observations to the Clearinghouse in an automated or manual manner. Measurements of performance or quality observations can be made and stored for uploading to the Clearinghouse either in real time or non-real time either directly over the air or over the Internet, either at the specific location or at a later location, on the same or different network, either automatically or

manually, and could be transmitted as they are being made. In addition, the user's phone 710 could also interface with the Clearinghouse to, for example, query performance information. The above listing is not meant as any limitation. Rather, one of ordinary skill in the art at the time the invention was made would readily recognize a wide variety of computer configurations based on the patent disclosure.

To address the Examiner's concern about specific hardware being included in the claims, the claims have been amended to recite the one or more computers which control operation of the database and that there are one or more electronic interfaces to the one or more computers. Support for this can be found in Figures 1, 5 and 6, which show the CPU 30, and in the first paragraph on page 20 of the application where it is stated "This invention uses a computer, also known as a central processing unit, or CPU, which may be a single computer, a web server, a cluster of web servers, or some other configuration of computing equipment, whether in series or in parallel or distributed that is able to obtain information through telephonic, text, voice/telephone, internet communication, or other methods known now or in the future". By example, with reference to Figures 1, 6, and 7 of the application and to claims 1 and 4 (as well as other claims) it can be seen that the electronic interface could include a telephone (e.g. mobile device 710 using an application on the web or on the device) or other devices (speech, handwriting or fingerprint identification device, an email interface, a fax, etc.) communicating over wired or wireless means through a web server, web browser, and supporting applications, etc. as well as the other interface examples given above and in the patent application. By example, with reference to Figures 1, 6, 7, 8, and 9 of the application and with reference to claim 20 it can be seen that the one or more electronic interfaces (e.g., those described in the application and listed above) to the one or more computers (e.g., 30, 710, 711, on board computer (not shown) as described on page 39 of the application, etc.) allow for automatic or manual updating of the database (as is described on page 39 et seq.) with quality of service or performance information obtained from mobile or fixed devices wherever cell phone user's might be. This enables the Clearinghouse to easily identify which towers, carriers, or frequencies are working well and which

are not, which white spaces and frequency bands or carriers might be used for high speed internet service, location specific coverage, preferred carriers, etc. This may be accomplished with an intelligent telephone (Iphone, Android, etc.) (mobile device 710) equipped with a software program and suitable locationing equipment such as a GPS or other location sensing component or methods (see Figures 1 and 7-9 and supporting text on pp. 38 – 45). By example and with reference to Figures 1, 6 and 7, and with reference to claim 27, it can be seen that the claim requires one or more computers (e.g., 30, 710, 711, onboard computer (see page 39)) and a means for identifying a geographic location (e.g., GPS 714 and/or other methods described in the application such as shown in Figures 3, 4 and 7, pages 26 and 27 (click on a map on a webpage or application, using the carrier's own data and parsing/processing, etc.), pages 43-46, and elsewhere in the application). Those of skill in the art will be able to read the application and know that the above list is not exhaustive.

In view of the amendment, the claims fully comply with the requirements of 35 U.S.C. 101.

Claim 27 was rejected under 35 U.S.C. 112, sixth paragraph. This rejection is traversed. Claim 27, unlike claims 1 and 20, specifies a "means for identifying a geographic location..." With reference to Figure 1 of the application, the Examiner will note the fourth box on the right hand side referring to GIS, Google Earth, etc., which is connected to the CPU. This is also illustrated on the right of Figure 6. Also, Figure 7 shows a GPS 714, and Figure 3, the top of page 26 (click on map on a webpage or application), and pages 43-46 describe other locationing systems for mobile or fixed devices, where the location of a device can be noted, tagged, and/or inputted to the Clearinghouse. It is worth noting that as discussed on page 49, the knowledge of the locations of specific infrastructure (e.g. base stations, WLAN access points, internet portals, etc.) that is inputted and maintained by the Clearinghouse also provides a means for identifying the location of certain infrastructure. These data are found in the carrier's records 212 (See Figure 2) where, as taught on the bottom of page 26 and top of 27 (e.g. "[i]t is clear that carriers 10 could alternatively enter their current infrastructure locations using the carrier records..."). Figure 4 and the text of the application

teach processing techniques that can identify the locations of infrastructure. This is further elucidated on pages 51 and 52, where the local ad server is able to exploit knowledge of the location of the edge infrastructure maintained in the Clearinghouse, thereby removing the requirement of providing precise locationing for every single user in a localized area, since it is understood that some users in close proximity to the particular edge infrastructure would be able to communicate wirelessly with that infrastructure). As claim 27 has been specifically amended to refer to the one or more computers which control the database, and because the Figures clearly show different means for identifying geographic locations of mobile and fixed devices and infrastructure, and these means being connected to the CPU, the claim is in compliance with the requirements of 35 U.S.C. 112, sixth paragraph.

Claims 1-32 were rejected as being obvious over U.S. Patent 6,757,543 to Moran in view of U.S. Patent 6,542,588 to Mashinsky. This rejection is traversed.

Moran and Mashinsky were discussed in detail in the previous response. Moran is a patent focused on networking performance testing. Moran employs specialized remote monitoring probes that report information to a central monitoring station that provides comparisons and time stamping of preset messages (see column 3, lines 23, et seq.). Moran's probes also communicate to other monitoring probes in a specific service area (column 5, lines 4-14). Moran relies on specific pre-generated, standardized messages that are sent by certain specialized probes (*not* end users, but specialized probes under the control of the central monitoring station and dedicated computer). These pre-programmed messages are compared for latency by a dedicated central monitoring station or other special monitoring probes that are aware, ahead of time, of the specific messages and their timestamp. Moran never teaches the use of a clearinghouse, or the use of generic cell phones, or the use of conventional customers in the ordinary course of use.

In wireless communications, finding the proper locations of base stations is of paramount importance to provide service coverage and capacity, and obtaining new antenna sites, tower sites and locations for infrastructure is an ongoing and expensive problems for wireless carriers. The Examiner appears to

miss an important point of the invention when he incorrectly asserts in his July 26, 2011 action (Point 15) that Moran's Figure 8 and column 14, lines 53-64 and column 15, line 1-14 are related to geographical locations. The Examiner has relied on a simple map of the US, and descriptions of city names in Moran, and has used these gross examples in relation to the claimed invention. The claimed invention has specific requirements directed to and focuses, in part, on providing a novel approach to gaining knowledge of the specific locations for infrastructure that exists or that can be acquired, as needed to provide service coverage in a growing cellular system (for example, to find a possible cell site that can cover a particular a city block, a rural dead zone that lacks coverage, or in a congested wireless network area next to a shopping mall). Moran, on the other hand, is completely unaware and uninterested in the particular locations of towers, cell sites, and radio infrastructure. Instead, Moran measures an existing cellular system, without regard or awareness for where specific towers or edge infrastructure are, and uses specialized monitoring probes to be cued to send specific, standardized messages or carefully preset scripted sessions– see columns 4:61 -5:4; columns 5:19-5:28, and columns 12:59 – 13:51, for example. This is completely different than using an ordinary cellphone that would make observations manually or automatically in the ordinary course of use.

The Examiner also is mistaken in his point 14, where he asserts that Moran's Figure 1, elements 48, 50, and 52 represent records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers. The Examiner has identified operations centers in Moran, but Moran gives no teaching whatsoever that 48, 50 and 52 have anything at all to do with the specific locations or records of wireless infrastructure as shown in the present application. The Examiner appears to have missed the novelty of the claimed invention that allows a clearinghouse to collect and process the infrastructure records (see our Figures 1 – 6, for example) between one or more parties. This is never contemplated or taught by Moran, and could certainly not be interpreted or deduced by one of ordinary skill from the teaching of Moran.

Also, the Examiner has missed a vital point when he cites Moran, column 4, lines 1-11. At this passage, the Examiner should see that Moran specifically

requires all of his cellphone devices be *linked to computer 32.* That is, Moran does not use standard, regular cellphones of ordinary use, and further does not use ordinary cellphone users, but instead he requires a special link between his test phones and a computer 32, that applies the generation of specially contrived messages and specific time-stamping. That is, Moran does not use standard end-users or end-user phones. Instead, he uses specialized phones that serve as probes and which are dedicated to working with the specialized central monitoring station through a XML connection 30 (see Figure 1).

Furthermore, Moran's central monitoring system has a very limited and dedicated function of working directly with computer 32 and the special probe phones to assign time stamps and to process specific measurements by the probes – this is not at all similar to our invention, where our clearinghouse and databases are accessed and made available to a number of parties over a wide range of interfaces for data collection, data processing, and use. No one of ordinary skill could equate the centralized monitoring system of Moran with the clearinghouse and database described in our invention.

The Examiner is also mistaken in his assertion that Moran at column 7, line 30-38 relates to "records of a plurality of end-users" as is claimed in the claimed invention. The phones in Moran are not representative of end users and cannot, in fact, be used by end users as they are constrained to being connected to computer 32 and linked to provide specific messaging and time stamping operations through the XML interface to the centralized monitoring system. Moran never teaches end users as contemplated by our current invention, which include members of the general public as well as their generic mobile phones or internet equipment.

The Examiner incorrectly confuses concepts and teaching of the claimed invention with what is shown in Moran by asserting that col. 3, line 32-35, col. 5. line 32- 37 and Figure 1 of Moran correspond to "preferences for use of said telecommunications assets". The Examiner is merely citing places in Moran where infrastructure is mentioned, but completely misses or is ignoring the point that Moran does not teach or deal at all with how the carrier goes about acquiring or determining the proper location or acquisition of those assets.

The Examiner's arguments in the July 26, 2011 office action misconstrue the teaching and novelty of the claimed invention, and appear to have been raised simply by finding English words which are similar to words used in the claimed invention, but which when read by one of ordinary skill in the art would have no basis or teaching in relation to the claimed invention. Moreover, it should be recognized that the above comments represent but a small sampling of why the applicant believes the Examiner's rejections are in error.

In all cases, the Examiner should appreciate that Moran requires the use and identification of standardized or scripted messages that are sent, as well as the time stamp for when the canned or scripted messages were sent and received by the specialized probe system. The Examiner should appreciate that Moran teaches a dedicated messaging system that, on cue, generates and probes a network with specific messages and which requires time-stamping of all standardized messages and scripts with a dedicated central monitoring station (12 in Figures 1 and 12). Thus Moran's system is a dedicated system of special phones that requires coordination and comparison of the sent messages or scripts with a dedicated central monitoring station that controls the special probes (e.g. see columns 4:61 – 5:19; 6:47-7:7; 7:65-8:19; 12:26-12:35 of Moran, as well as Figure 1, for example).

Among other things, it should be clear from above that Moran does *not* teach the ability to use standardized cellphones with web-based applications or interfaces to report observations in the course of ordinary cellphone use, and further does *not* teach the concept of providing such observations in an open environment usable by many parties.

Furthermore, Moran does *not* teach a database that includes records of infrastructure needs for one or more telecommunications carriers, and does *not* teach a database that includes records of a plurality of end users which identifies either telecommunication assets owned by end users, property assets owned or controlled by end users, or desired business terms.

Mashinsky describes a rate-table database that purportedly allows for efficient routing of international telephone calls. In short, Moran and Mashinsky

are wholly unrelated to the claimed invention which is drawn to a clearinghouse system for communications networks.

With reference to claim 1, it can be seen that the interfaces to the computer(s) permit one or more telecommunications carriers and one or more end users to selectively view or catalog information about

(a) available telecommunications assets or properties and locations thereof,

(b) the owners or tenants of said available telecommunications assets or properties,

(c) infrastructure needs of one or more telecommunications carriers for one or more locations, **AND** (emphasis added)

(d) proposed or initial business terms for said infrastructure needs and said telecommunications assets or said property assets.

That is, the claimed subject matter is specifically drawn to a system must allow on the one hand infrastructure needs of the telecommunications carriers (see item "c") to be cataloged and selectively viewed, and on the other hand owner/tenant information paired with available assets and properties to be cataloged and selectively viewed. In the previous office action, the Examiner has wholly overlooked the requirement of telecommunications carriers and end users being able to selectively view and catalog infrastructure needs of the telecommunications carriers. If you don't have the ability to recognize needs, you don't have the ability to provide assets that meet those needs---in short, you do not have a Clearinghouse. Neither Moran nor Mashinsky meet this requirement. Further, claim 1 requires that the interfaces to the computer permit reviewing of proposed business terms for the needs and the telecommunications assets. Thus, the system allows assets to be identified on a best cost basis to meet specific telecommunications needs. If you don't have the ability to identify prospective or actual business terms to meet certain needs and/or the ability to identify prospective or actual business terms to make assets available, you don't really have an effective Clearinghouse, as every lead for every need or asset would need to be followed individually.

With particular reference to claim 20, it can be seen that the one or more electronic interfaces to the one or more computers permit performance or quality

of service information from one or more mobile or fixed devices that are located in the specific location to be automatically or manually updated into the database either in real time or after storage and later transmission by a wide range of methods taught in the application. As noted above and discussed in detail in the application on pages 38-45 of the application, this provides a service quality reporting feature in, for example, a mobile telephone (see Figure 7), whereby a person (or a person's phone) merely needs to observe their experienced cellphone performance or quality of service, and this information will be reported (either automatically, or manually by the person) *without* special monitoring probes, and *without* comparison of specific, standardized messages with timestamps for comparison between the specialized probes and dedicated central monitoring station (as taught by Moran and shown in Figures 1 and 5, item 14,:8:18-8:19, 9:20-9:27,(for example). Thus claim 20 specifies and enables consolidating and providing the availability of infrastructure and coverage information on an automated or manual basis to a variety of parties. Neither Moran nor Mashinsky provide this feature.

Piecing together Moran and Mashinsky, as was done in the previous action, ignores the requirement permitting infrastructure needs to be identified (as required in claim 1) and ignores the self reporting and the consolidation of data for multiple parties requirement of claim 20. Thus, the rejection should be withdrawn for at least these reasons alone. Furthermore, as neither Moran nor Mashinsky solve a problem as solved by the claimed invention, the rejection should be withdrawn. That is, no combination of Moran and Mashinsky describes or suggests a system whereby both the infrastructure needs and the advantages of situational awareness, or the available assets and owner/tenant information are made available to a number of parties. Further, neither reference provides prospective or actual business terms, as is required in claim 1, or provides self reporting on performance and quality of service information with the consolidation of data for multiple parties as required in 20 (it being recognized that the dependent claims also require these features).

Claim 27 differs from claim 1 and from claim 20 in that it requires, in addition to a computer or computers operating a database which includes

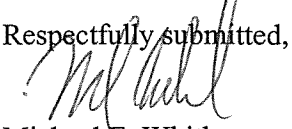
infrastructure needs and asset information (discussed in detail above), (1) means for identifying a geographic location of the one or more fixed or mobile devices, and (2) one or more local ad servers that provide localized content to the mobile or fixed devices. That is, the Clearinghouse has a degree of situational awareness whereby, for example, end users that are reviewing records in the database may be provided, for example, with location specific advertising or alerts. Moran, which is drawn to diagnostic evaluation of the network, does not provide this feature. Mashinsky which is drawn to routing phone calls, also does not provide this feature. Thus, no combination of Moran and Mashinsky would make claim 27 and its dependent claims obvious to one of ordinary skill in the art.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1-32 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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

Office Action Summary	Application No.	Applicant(s)	
	12/208,007	RAPPAPORT, THEODORE R.	
	Examiner	Art Unit	
	SRIRAMA CHANNAVAJJALA	2157	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *19 May 2011*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

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

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

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

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

Application Papers

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

10)☒ The drawing(s) filed on *10 September 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

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

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

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

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

DETAILED ACTION

Response to Amendment

1. Claims 1-32 are pending in this application.

2. Examiner acknowledges applicant's filed amendment under 37 CFR 1.111 on 5/19/2011.

Drawings

3. The Drawings filed on 9/10/2008 are acceptable for examination purpose

Information Disclosure Statement

4. The information disclosure statement filed on 6/8/2010;4/19/2010;2/16/2010;12/2/2008;10/27/2008.is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy was enclosed with previous Office Action

Priority

5. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e) based on provisional application 60/971,175 filed on 9/10/2007;60/977,582 filed on 10/4/2007, 61/028,261 filed on 2/13/2008.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-

type double patenting rejection is appropriate where the conflicting claims are not identical,~ but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g.,/n re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998);/n re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993);/n re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Omum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982);/n re Vogel 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and /n re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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

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

7. Claim 1,20,27 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1,7,21,27,33 of US Application No. 12/814,974 is now US Pub. No. 2010/0299274; Claims 1,17,27,39,50,60 of US Application # 12/815,076 is now US Pub. No. 2010/0250268; claims 1,8,20,31,43,56,69 of US Application # 12/815,165 is now US Pub. No. 2010/0250269. Although the

conflicting claims are not identical, they are not patentably distinct from each other because of following reasons:

Claims 1,7,21,27,33 of US Application No. 12/814,974 is now US Pub. No. 2010/0299274; Claims 1,17,27,39,50,60 of US Application # 12/815,076 is now US Pub. No. 2010/0250268; claims 1,8,20,31,43,56,69 of US Application # 12/815,165 is now US Pub. No. 2010/0250269 contain(s) every element of Claim 1,20,27 of the instant application and thus anticipate the claim(s) of the instant application. Claims of the instant application therefore are not patently distinct from the earlier patent claims and as such are unpatentable over obvious-type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by the earlier claim.

A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a 35 patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION F£)R REHEARING EN BANC (DECIDED: May 30, 2001).

"Claim 12 and Claim ! 3 are generic to the species of invention covered by claim 3 of the patent. Thus, the generic invention is "anticipated" by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775,227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) 4. This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. In re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761,767 (CCPA 1982); Schneller, 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 12 and 13 were properly rejected under the doctrine of obviousness-type double patenting." (In re Goodman (CA FC) 29 USPQ2d 2010 (12/3/1993).

Claim Rejections - 35 USC § 101

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

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

8. ***Claims 1-32, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter***.

9. Regarding Claims 1,20,27 recite a “system” without the proper “hardware” or memory to perform the steps. In particular, in a system claim there must be a hardware component such as a processor or memory that the software routines or modules are stored in or run on.

A claimed process is eligible for patent protection under 35 U.S.C. § 101 if:

"(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a

> different state or thing. See Benson, 409 U.S. at 70 ('Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.'); Diehr, 450 U.S. at 192 (holding that use of mathematical formula in process 'transforming or reducing an article to a different state or thing' constitutes patent-eligible subject matter); see also Flook, 437 U.S. at 589 n.9 ('An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing' '); Cochrane v. Deener, 94 U.S. 780, 788 (1876) ('A process is...an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.').7 A claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article." (In re Bilski, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008))

Also noted in Bilski is the statement, "Process claim that recites fundamental principle, and that otherwise fails 'machine-or-transformation' test for whether such claim is drawn to patentable subject matter under 35 U.S.C. §101, is not rendered patent eligible by mere field-of-use limitations; another corollary to machine-or-transformation test is that recitation of specific machine or particular transformation of specific article does not transform unpatentable principle into patentable process if recited machine or transformation constitutes mere 'insignificant post- solution activity.'" (In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008)) Examples of insignificant post-solution activity include data gathering and outputting. Furthermore, the machine or transformation must impose meaningful limits on the scope of the method claims in order to pass the machine-or-transformation test. Please refer to the USPTO's "Guidance for Examining Process Claims in view of In re Bilsk memorandum dated January 7, 2009, http://www.uspto..gov/web/offices/pac/dapp/opla/documents/bilski_guidance_memo.pdf

Claim Rejections - 35 USC § 112

10. At page 60, claim 27, applicant appear to be invoking 112, sixth paragraph "means for" type language, but it is unclear what "structures" are being used to perform the functions. No particular structures are identified in the specification that would perform the function. The claim limitation merely directed to "means for identifying a geographic location…device"", while other limitations "do not" have "means for" language. One of skill in the art would not be apprised of what structures are intended to be encompassed by the claims, nor would it be clear what the structures are intended to accomplish. It is unclear whether claim 27 is directed to functional or non-functional descriptive language.

Claim Rejections - 35 USC § 103

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

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

12. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moran et al. [hereafter Moran], US Patent No. 6757543 published on Jun 29,2004 in view of Mashinsky, US Patent No. 6542588 published on Apr 1,2003.

14. As to Claim 1, Moran teaches a system which including " A clearinghouse system for communications networks, comprising" [fig 1]

a database including [fig 1, element 26]

"records for one or more telecommunications carriers which identify infrastructure needs for one or more telecommunications carriers [fig 1, element 48,50,52], telecommunications carriers corresponds to Moran's AT&T network; Verizon network, and Sprint network as detailed in fig 1; "in terms of one or more of (i) types of equipment

and performance characteristics for said types of equipment, " [col 4, line 1-11], types of equipment corresponds to wireless enabled devices such as Palm Pilot, Handspring Visor devices, Pocket PCs, BlackBerry, RIM devices or Research I Motion devices and like (ii) location information including one or more of geographical areas [col 4, line 29-33, fig 8], geographical areas corresponds to Moran's fig 8;, and (iii) and

"records of a plurality of end users [col 7, line 30-38] which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets [col 11, line 56-65, col 12, line 2-12], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network (ii) property assets owned or controlled by said end users including geographic location [col 4, line 29-33, col 5, line 62-63], and (iii) " preferences for use of said telecommunications assets or said property assets" [col 3, line 32-35, col 5, line 32-37, fig 1] telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

one or more electronic interfaces which permit one or more telecommunications carriers and one or more end users to selectively view or catalog information [col 6, line 37-47,col 7, line 30-38] about (a) available telecommunications assets or properties and locations thereof, " [col 3, line 32-35, col 5, line 32-37, col 7, line 8-17, fig 1-2] (b) the owners or tenants of said available telecommunications assets or properties [col 3, line 27-35], (c) infrastructure needs of one or more telecommunications carriers for one or

more locations, [fig 8, col 5, line 62-63] and (d) for said infrastructure needs and said telecommunications assets or said property assets [col 3, line 27-35, col 5, line 32-50, col 11, line 56-59].

It is however, noted that Moran doesn't specifically teach "desired business terms", although Moran specifically teaches generating performance and monitoring reports [fig 1], further also supports WAP enabled devices used in "trade especially in the markets tracking stock and like [col 12, line 62-67]. On the other hand, Mashinsky disclosed " desired business terms [fig 1B,col 5, line 61-67, col 6, line 1-5], Mashinsky specifically teaches "business-rules database" for example as detailed in fig 1B related to telecommunication field.

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran,Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4" Mashinsky: Abstract, fig 1A-1B]. Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of

incorporating “business-rules” particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

15. As to Claim 2, Moran disclosed “wherein said database includes public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, [fig 8, col 14, line 53-64] local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations [col 15, line 1-14]..

16. As to Claim 3, Moran disclosed “wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, [fig 1,fig 4, , col 5, line 32-37],to selectively view or catalog information about said available telecommunications assets or properties and locations thereof,[col 5, line 40-49] and said infrastructure needs of one or more telecommunications carriers for one or more locations [col 5, line 51-63].

17. As to Claim 4, Moran disclosed “wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or

fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a web server, VoIP, or a digital recorder.

18. As to Claim 5, Moran disclosed " wherein at least one of said one or more electronic interfaces is connected to the world wide web [col 5, line 9-14], and wherein said records for a plurality of telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler [col 11, line 1-6, line 54-62].

19. As to Claim 6, Moran disclosed " further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers" [col 13, line 17-24, col 14, line 66-67, col 15, line 1-8].

20. As to Claim 7, Moran disclosed " further comprising a security application , which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system [col 6, line 33-47].
On the other hand, Mashinsky disclosed "billing application" [fig 11B,col 18, line 31-39].

21. As to Claim 8, Moran disclosed " further comprising a communications application which permits secure and one or more end users for use of said one or more telecommunications assets or one or more property assets [fig 1, fig 4, col 5, line 37-49, line62-63]. On the other hand, Mashinsky disclosed "negotiation and acceptance of

business and legal terms between one or more telecommunications carriers" [Abstract, fig 1A-1B, fig 3A-3B, col 7, line 43-65].

22. As to Claim 9, Moran disclosed " wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage" [col 11, line 54-59, col 12, line 2-6].

23. As to Claim 10-11, Moran disclosed " wherein said database includes performance or quality of service information for specific locations" [col 6, line 55-64, line 65-67, col 7, line 1-7].

24. As to Claim 12, Moran disclosed " wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations" [col 6, line 55-64, line 65-67, col 7, line 1-7, fig fig 1, fig 3-4].

25. As to Claim 13, Moran disclosed " wherein said performance or quality of service information includes multiple bands and multiple carriers" [fig 4, col 7, line 66-67, col 8, line 1-7].

26. As to Claim 14, Moran disclosed "one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to

one or more mobile or fixed devices in a specific location" [fig 1,col 6, line 34-47], fig 3-4].

27. As to Claim 15, Moran disclosed "one or more base stations connected to said one or more electronic interfaces" [fig 1,fig 3,col 4, line 1-25].

28. As to Claim 16, Moran disclosed " wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces" [fig 1, fig 3, col 3, line 19-23, col 4, line 1-25], Moran specifically teaches various performance data particularly generating reports and graphs as detailed in col 3, line 19-23

29. As to Claim 17-18, Moran disclosed " further comprising a computation application which identifies optimum locations for said infrastructure needs based on said records of said plurality of end users" [col 3, line 24-35, line 58-67, col 4, line 26-33].

30. As to Claim 19, Mashinsky disclosed " further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users" [fig 1A-1B, fig 3A-B, col 11, line 31-63].

31. As to Claim 20, Moran teaches a system which including " A clearinghouse system for communications networks, comprising: [fig 1]

a database including performance or quality of service information for one or more specific locations, [fig 1, element 26, Abstract, col 4, line 61-67, col 5, line 1-8, col 7, line 30-39], database corresponds to Moran's database, further performance information corresponds to Moran's performing monitoring functions periodically as detailed in col 5, line 1-8;]

one or more of records for a plurality of telecommunications carriers which identify infrastructure [fig 1, element 48,50,52,], telecommunications carriers corresponds to Moran's AT&T network; Verizon network, and Sprint network as detailed in fig 1; "and location information for one or more specific locations" [fig 8,col 7, 58-65], Moran specifically teaches not only geographical location[s] where telecommunication carries or various wireless devices performing certain tasks, but also identifies specific locations for example as detailed in fig 7-8];

records for a plurality of end users [col 7, line 30-38] which identify telecommunications assets or property assets owned or controlled by said one or more end users, [col 11, line 56-65, col 12, line 2-12, col 3, line 32-35, col 5, line 32-37, fig 1], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network and , further it is noted that Moran strongly teaches telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, [fig 8, col 14, line 53-64] , zoning information for said geographic locations, local ordinances for said geographic locations, [fig 8, col 14, line 53-64] contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; [col 15, line 1-14].; and

"one or more electronic interfaces which permit performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations" [fig 1,fig 4,, fig 7-8, col 10, 23-46, col 14, line 53-65], Moran specifically teaches generating performance reports particularly related to carrier services provided to various wireless devices; "and which permits at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.[fig 1,fig 4, col 5, line 32-37, line 51-63]. It is however, noted that Moran does not specifically disclose "automatically updated into said database", although Moran specifically teaches not only database stores various performance related information related , but also generates "reports as detailed inn fig 1. On the other hand, Mashinsky disclosed "automatically updated into said database" [col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management

particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4“ Mashinsky: Abstract, fig 1A-1B]. Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating “business-rules” particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database periodically updated information accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

32. As to Claim 21, Moran disclosed “ wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations” fig 1, fig 7-8, fig. 6, element 212]..

33. As to Claim 22, Mashinsky disclosed “ wherein said performance or quality of service information includes multiple bands and multiple carriers. [col 7, line 43-51]

34. As to Claim 23-24, Moran disclosed " further comprising means for sending instructions from one of said one or more electronic interfaces to one or more mobile wireless devices for configuring or reconfiguring of said one or more electronic devices based on a ranking of performance or specific requests of an end user" [fig 1,col 4, line 1-25].

35. As to Claim 25, Moran disclosed " further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices [fig 1, fig 4], wherein monitored radio operating conditions are used, quality of service information [col 5, line 20-29]. On the other hand, Mashinsky disclosed "to update performance or quality of service information in said database. col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

36. As to Claim 26, Moran disclosed " further comprising an updating application which permits one or more wireless devices to update performance or quality of service information in said database by reporting of observations of wireless performance and quality to one of said one or more of said electronic interfaces [fig 1, fig fig 5, col 10, line 50-57]..

37. As to Claim 27, Moran teaches a system which including " A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations ,a clearinghouse system for communications networks, [fig 1, fig 4]

said clearinghouse system including a database including one or more of performance or quality of service information for one or more specific locations[fig 1, element 26, Abstract, col 4, line 61-67, col 5, line 1-8, col 7, line 30-39, fig 8], database corresponds to Moran's database, further performance information corresponds to Moran's performing monitoring functions periodically as detailed in col 5, line 1-8;]

records for a plurality of telecommunications carriers which identify infrastructure [fig 1, element 48,50,52,], and location information for one or more specific locations[fig 8,col 7, 58-65], Moran specifically teaches not only geographical location[s] where telecommunication carries or various wireless devices performing certain tasks, but also identifies specific locations for example as detailed in fig 7-8];

records for a plurality of end users [col 7, line 30-38] which identifies telecommunications assets or property assets owned or controlled by said one or more end users, [col 11, line 56-65, col 12, line 2-12, col 3, line 32-35, col 5, line 32-37, fig 1], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network and , further it is noted that Moran strongly teaches telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, [fig 8, col 14, line 53-64] , zoning information for said geographic locations, local ordinances for said geographic locations, [fig 8, col 14, line 53-64] contact information for government officials for said

geographic locations, and information about carriers serving said geographic locations; [col 15, line 1-14].; and

one or more electronic interfaces which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces [fig 1,fig 4,, fig 7-8, col 10, 23-46, col 14, line 53-65], Moran specifically teaches generating performance reports particularly related to carrier services provided to various wireless devices ; “permitting one or more of performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations .[fig 1,fig 4, col 5, line 32-37, line 51-63].

at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.[fig 1,fig 4, col 5, line 32-37, line 51-63];

“means for identifying a geographic location of one or more mobile or fixed devices” [fig 4, fig 7-8]; and

“one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system, said local ad servers providing localized content to said one or more mobile or fixed devices in a specific location” [fig 3-4, col 9, line 21-27, line 29-38].

It is however, noted that Moran does not specifically disclose “automatically updated into said database”, although Moran specifically teaches not only database

stores various performance related information related , but also generates “reports as detailed inn fig 1. On the other hand, Mashinsky disclosed “automatically updated into said database” [col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

It would have been obvious to one of the ordinary skill in the art at the time of applicant’s invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4“ Mashinsky: Abstract, fig 1A-1B]. Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant’s invention to substitute one method for the other to achieve the predictable results of incorporating “business-rules” particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database periodically updated information accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

38. As to Claim 28, Moran disclosed “one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system” [fig 3-4, col 10, line 50-57].

39. As to Claim 29, Moran disclosed " wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces" [fig 1, abstract, col 13, line 59-67, col 14, line 1-8].

40. As to Claim 30, Moran disclosed " wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.[fig 2,fig 4, col 7, line 8-25].

As to Claim 31, Moran disclosed " wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices." [col 7, line 44-65].

41. As to Claim 32, Moran disclosed " wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal" [col 7, line 66-67, col 8, line 1-18].

Response to Arguments

42. Applicant's arguments filed 5/19/2011 with respect to claims 1-32 have been fully considered but they are not persuasive, for examiner's response, see discussion below:

a) Examiner acknowledges applicant's remarks page 9, regarding "double patent" rejection.

b) Examiner acknowledges applicant's remarks page 9-10, regarding 35 USC 101 rejections, however, applicant failed to include hardware component such as a processor or memory in the "system" claims 1,20,27 that the software routines or modules are stored in or run on in the .

c) Examiner acknowledges applicant's remarks page 10 regarding 35 USC 112 6th paragraph, further examiner noted claim 27 [page 8] only one limitation directed to "means for", while other claim 27 limitation[s] are not directed to "means for" "Where means plus function language is used to define the characteristics of a machine or manufacture invention", such language must be interpreted to read on only the structures or materials disclosed in the specification and "equivalents thereof" that correspond to the recited function. Two en banc decisions of the Federal Circuit have made clear that the USPTO is to interpret means plus function language according to 35 U.S.C. § 112, sixth paragraph. In re Donaldson, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994) (en banc); In re Alappat, 33 F.3d 1526, 1540, 31 USPQ2d 1545, 1554 (Fed. Cir. 1994) (en banc).

If applicant wishes to have the claim 27 limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to amend the claim 27 and comply within the meaning of 35 USC 112 sixth paragraph, showing clear support from the specification See MPEP 2170

No new matter should be added

d) At page 11, claims 1-32, applicant argues:

Mashinsky has nothing to do with the claimed invention which focuses on the following areas: infrastructure (e.g. for the wireless communications industry, infrastructure includes cell tower locations and coverage, base stations, microcells, femtocells, or repeater locations and their coverage/performance), business terms for various infrastructure needs of various carriers, intermediaries, third parties, or end-users, advertising or content provisioning for the carriers, intermediaries, third parties, users, citizens or other parties (intermediaries) while using information about the infrastructure and its location and coverage/performance, and the ability for citizens or other parties to own and rent their own property out to carriers, or to lease, buy or house the infrastructure for use by one or more carriers and one or more user.

Furthermore, Mashinsky has nothing to do with providing a clearinghouse of information that would allow for wireless customers to be provided service from various service providers as a function of instantaneous or known/predicted performance, radio coverage, wireless interference characteristics, spectrum usage, or particular customer-specified quality or priorities/preferences, or locations of the cellphone customer. For

example, the present application describes, among other things, an open database so that available spectrum and coverage could be found anywhere on the globe based on the knowledge of the location of infrastructure, wireless coverage/performance in a geographical region, and the location and characteristics of a mobile user. The claimed invention could be used, for example, in the recently released 700 MHz "white space" band and could be used in the evolving field of cognitive radios, also known as Software Defined Radios (SDRs). Mashinsky, on the other hand, did not address any of these areas and does not teach anything related to the present invention.

e) At page 11-12, claims 1-32, applicant argues “Moran patent is focused on networking performance test and measurement from a diagnostic viewpoint, and the invention focuses on the ability for a company to offer to carriers the ability to determine network performance using a number of special "test" wireless devices (e.g. "probes") that can be used to perform in-situ drive tests within a cellular network. Moran's patent requires dedicated "probes" or phones (which are not ordinary customer cettphones, but special "probe" cellphones) to generate and monitor traffic in order to diagnose troubles or trouble spots within their network. Moran teaches this many places in the patent (e.g. see column 2, lines 7-l5, column 4, line 45 to column 15, line 27; column 7, line 65 to column 8, line 19; column 8, line 20 to column 9, line 27, Figure l3 (where a large box is labeled "Diagnostic Tests"); and column 14, lines:22-43 and 53-66, to point out just a few examples).

It should be clear that the Moran invention has nothing to do with the claimed

invention, which, as noted above, focuses on the following areas: infrastructure (e.g. for the wireless communications industry, infrastructure includes cell tower locations and coverage, base stations, microcells, femtocells, or repeater locations and their coverage/performance), business terms for various infrastructure needs of various carriers, intermediaries, third parties, or end-users, advertising or content provisioning for the carriers, intermediaries, third parties, users, citizens or other parties (intermediaries) while using information about the infrastructure and its location and coverage/performance, and the ability for citizens or other parties to own and rent their own property out to carriers, or to lease, buy or house the infrastructure for use by one or more carriers and one or more user. Furthermore, Moran has nothing to do with providing a clearinghouse of information that would allow for wireless customers to be provided service from various service providers as a function of instantaneous or known or predicted radio coverage, wireless interference characteristics, spectrum usage, customer-specified quality or priorities/preferences, or particular locations of the cell phone customer.

f) At page 13-14, claims 1-32, applicant argues " As neither Mashinsky nor Moran include the salient features of the invention, no combination would make the claimed invention obvious to one of ordinary skill in the art. That is, no combination of Mashinsky and Moran teaches a clearinghouse system having a database with records for one or more telecommunications carrier infrastructure in terms of one or more of (i) _types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas~, and (iii) desired business

terms for said infrastructure needs. Furthermore, no combination of Mashinsky and Moran teaches or suggests a database with records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property' assets owned or controlled by said end users including geographic. !location and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets.

In response to Appellant's argument [d-f], Examiner notes the following:

Section 103 forbids issuance of a patent when "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."
KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007) (hereinafter "KSR").

In KSR, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art", id. at 415, and discussed circumstances in which a patent might be determined to be obvious. Id. at 415-16 (citing Graham v. John Deere Co., 383 U.S. 1, 12 (1966)). The Court reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." Id. at 416. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to

their established functions." Id. at 417.

The Federal Circuit recently recognized that "[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." Leapfrog Enters., Inc. v. Fisher-Price, Inc., 485 F.3d 1157, 1161 (Fed. Cir. 2007) (citing KSR, 550 U.S. at 416). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." Id. at 1162 (citing KSR, 550 U.S. at 418).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091,231 USPQ 375 (Fed. Cir. 1986). This rejection is in combination of Bakalash et al. in view of Franz et al..

Further, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Moran is directed to wireless services monitoring and performances, particularly, supporting remote and local monitoring and generating performance reports

[Abstract]. Moran also specifically teaches telecommunication information being stored in a database connected in a network environment for example as detailed in fig 1, col 3, line 24-36 reads on the instant claim 1 limitation "database including records for one or more telecommunications carriers....." because Moran strongly supports multiple telecommunications carriers for example AT&T network, Verizon network, US Sprint and like [Moran: fig 1, element 48,50,52], further it is also noted that Moran supports various wireless enabled devices for example Palm Pilot, Handspring Visor devices, Pocket PCs, BlackBerry, RIM devices and like, therefore, types of equipment corresponds to Moran's col 4, line 1-11 reads on the instant claim limitation "types of equipment and performance ……equipment". It is also noted that Moran strongly teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network for example as detailed in col 11, line 56-65, col 12, line 2-12] reads on the instant claim limitation "(i) telecommunications assets owned …….assets; Moran also strongly teaches various telecommunication assets such as telecommunication network equipment and wireless and wired devices connected including multiple cellular antenna, buildings, equipments, vehicles and like is integral part of telecommunication infrastructure [Moran: col 3, line 32-35, col 5, line 32-37, fig 1], further wireless network infrastructure covering geographical regions establishing cross-connectivity for example as detailed in col 5, line 51-63]

In this case, prior art of reference Mashinsky is directed to global communications management, more specifically telecommunication sales and market

information and supporting communication routes monitoring network traffic [Abstract], Mashinsky also specifically teaches maintaining telecommunication related information a database for example defining identifiers, geographic route, security, market prince and like for example as detailed in fig 15, col 21, line 22-50, therefore, Mashinsky clearly directed to telecommunication connection[s], providing various services defining market price, quality level security level and geographic route [col 21, line 51-67, col 22, line 15-29, fig 15-16]

It is however, noted that Moran doesn't specifically teach "desired business terms", although Moran specifically teaches generating performance and monitoring reports [fig 1], further also supports WAP enabled devices used in "trade especially in the markets tracking stock and like [col 12, line 62-67]. On the other hand, Mashinsky disclosed " desired business terms [fig 1B,col 5, line 61-67, col 6, line 1-5], Mashinsky specifically teaches "business-rules database" for example as detailed in fig 1B related to telecommunication field.

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4" Mashinsky: Abstract, fig 1A-1B].

Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating "business-rules" particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

Examiner applies above arguments to claims 2-19, 21-26, 28-32 depend from claims 1, 20, 27.

Therefore, Applicant's remarks are deemed not to be persuasive, and claims 1-32 stand rejected under 35 USC 103(a) as being unpatentable over Moran et al in view of Mashinsky

Conclusion

The prior art made of record

a. US Patent No. 6757543

b. US Patent No. 6542588

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the Claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Ebb whose telephone number is (571) 272-3574 for faster service.

43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim, Charles, can be reached on (571) 272-7421. The fax phone numbers for the organization where the 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)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	**Art Unit**
	SRIRAMA CHANNAVAJJALA	2157

✓	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	01/11/2011	07/18/2011							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
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	25	✓	✓							
	26	✓	✓							
	27	✓	✓							
	28	✓	✓							
	29	✓	✓							
	30	✓	✓							
	31	✓	✓							
	32	✓	✓							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	Art Unit
	SRIRAMA CHANNAVAJJALA	2157

SEARCHED			
Class	Subclass	Date	Examiner
709	215-220	1/11/2011	sc
707	608-609,688,705748,825,827	1/11/2011	sc
705	14.33,14.1,14.11,39,26-27,64	1/11/2011	sc
455	406,408,417,445,560	1/11/2011	sc
379	1.01,9.04,32.01,88.09,114.08	1/11/2011	sc

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor searched	1/11/2011	sc
PLUS search	1/11/2011	sc
NPL & google search attached	1/11/2011	sc
WEST search attached	1/11/2011	sc
PLUS search	7/18/2011	sc
WEST search attached	7/18/2011	sc

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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BIB DATA SHEET

CONFIRMATION NO. 1779

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/208,007	09/10/2008	707	2157	08610004AA

APPLICANTS
Theodore R. Rappaport, Austin, TX;

**** CONTINUING DATA ***************************
This appln claims benefit of 60/971,175 09/10/2007
and claims benefit of 60/977,582 10/04/2007
and claims benefit of 61/028,261 02/13/2008

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
09/18/2008

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /SRIRAMA T CHANNAVAJJALA/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		TX	15	32	3

ADDRESS

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190
UNITED STATES

TITLE

Clearinghouse system, method, and process for inventorying and acquiring infrastructure, monitoring and controlling network performance for enhancement, and providing localized content in communication networks

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport	Confirmation No. 1779
Serial No. 12/208,007	Group Art Unit 2157
Filed September 10, 2008	Examiner Channavahala

For CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

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

PETITION FOR AN EXTENSION OF TIME AND AMENDMENT UNDER 37 C.F.R. §1.111

Sir:

Applicant hereby petitions for a one month extension of time to respond to the office action mailed January 19, 2011. The Commissioner is authorized to charge attorney's deposit account 50-2041 (Whitham, Curtis, Christofferson & Cook) for the extension of time fee and for any other fee required to gain entry and consideration of this amendment.

In response to the office action mailed January 19, 2011, the applicant requests reconsideration and requests entry of the following amendment.

Listing of the Claims: begins on page 2

Remarks: begins on page 9

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1. (currently amended) A clearinghouse system for communications networks, comprising:

a database including

records for one or more telecommunications carriers which identify ~~identifies~~ infrastructure needs for one or more telecommunications carriers in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas, and (iii) desired business terms for said infrastructure needs, and

records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets;

one or more electronic interfaces which permit ~~permits~~ one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) available telecommunications assets or properties and locations thereof, (b) the owners or tenants of said available telecommunications assets or properties, (c) infrastructure needs of one or more telecommunications carriers for one or more locations, and (d) proposed or initial business terms for said infrastructure needs and said telecommunications assets or said property assets.

2. (original) The clearinghouse system of claim 1 wherein said database includes

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said

geographic locations, and information about carriers serving said geographic locations.

3. (original) The clearinghouse system of claim 1 wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, to selectively view or catalog information about said available telecommunications assets or properties and locations thereof, and said infrastructure needs of one or more telecommunications carriers for one or more locations.

4. (original) The clearinghouse system of claim 1 wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a webserver, VoIP, or a digital recorder.

5. (original) The clearinghouse system of claim 1 wherein at least one of said one or more electronic interfaces is connected to the world wide web, and wherein said records for a plurality of telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler.

6. (original) The clearinghouse system of claim 1 further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers.

7. (original) The clearinghouse system of claim 1 further comprising a security application and billing application which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system.

8. (original) The clearinghouse system of claim 1 further comprising a communications application which permits secure negotiation and acceptance of business and legal terms between one or more telecommunications carriers and

one or more end users for use of said one or more telecommunications assets or one or more property assets.

9. (original) The clearinghouse system of claim 8 wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage.

10. (original) The clearinghouse system of claim 1 wherein said database includes performance or quality of service information for specific locations.

11. (original) The clearinghouse system of claim 10 wherein one of said one or more electronic interfaces provides automatic updates of said performance or quality of service information from one or more mobile or fixed devices located in said specific locations.

12. (original) The clearinghouse system of claim 10 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations.

13. (original) The clearinghouse system of claim 10 wherein said performance or quality of service information includes multiple bands and multiple carriers.

14. (original) The clearinghouse system of claim 1 further comprising

one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location.

15. (original) The clearinghouse system of claim 14 further comprising

one or more base stations connected to said one or more electronic interfaces.

16. (original) The clearinghouse system of claim 14 wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces.

17. (original) The clearinghouse system of claim 1 further comprising a computation application which identifies optimum locations for said infrastructure needs based on said records of said plurality of end users.

18. (original) The clearinghouse system of claim 2 further comprising a computation application which identifies optimum locations for said infrastructure needs based on both said records of said plurality of end users and said public records.

19. (original) The clearinghouse system of claim 1 further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users.

20. (currently amended) A clearinghouse system for communications networks, comprising:

a database including performance or quality of service information for one or more specific locations, and

one or more of

records for a plurality of telecommunications carriers which identify~~identifies~~ infrastructure and location information for one or more specific locations,

records for a plurality of end users which identify ~~identifies~~ telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said

geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces which permit ~~permits~~ performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically updated into said database, and which permits at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.

21. (original) The clearinghouse system of claim 20 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations.

22. (original) The clearinghouse system of claim 20 wherein said performance or quality of service information includes multiple bands and multiple carriers.

23. (original) The clearinghouse system of claim 20 further comprising means for sending instructions from one of said one or more electronic interfaces to one or more mobile wireless devices for configuring or reconfiguring of said one or more electronic devices based on a ranking of performance or specific requests of an end user.

24. (original) The clearinghouse system of claim 20 further comprising means for sending a rank ordering of available telecommunications services from one or said one or more electronic interfaces to one or more mobile wireless devices.

25. (original) The clearinghouse system of claim 20 further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices, wherein monitored radio operating conditions are used to update performance or quality of service information in said database.

26. (original) The clearinghouse system of claim 20 further comprising an updating application which permits one or more wireless devices to update performance or quality of service information in said database by reporting of observations of wireless performance and quality to one of said one or more of said electronic interfaces.

27. (currently amended) A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations, comprising:

a clearinghouse system for communications networks, said clearinghouse system including

a database including one or more of

performance or quality of service information for one or more specific locations,

records for a plurality of telecommunications carriers which identify~~identifies~~ infrastructure and location information for one or more specific locations,

records for a plurality of end users which identify ~~identifies~~ telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces permitting one or more of

performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically updated into said database, and

at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database;

means for identifying a geographic location of one or more mobile or fixed devices; and

one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system, said local ad servers providing localized content to said one or more mobile or fixed devices in a specific location.

28. (original) The content providing system of claim 27 further comprising

one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system.

29. (original) The content providing system of claim 27 wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces.

30. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.

31. (original) The content providing system of claim 27 wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices.

32. (currently amended) The content providing system 27 wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal.

REMARKS

Claim 1, 20 and 27 has been amended to correct grammar. Claim 32 has been amended to include a period. Claims 1-32 remain in the application.

Claims 1, 20, and 27 were rejected for non-statutory obviousness-type double patenting over a) claims in U.S. Patent Application 12/814,974, and b) claims in U.S. Patent Application 12/815,165. As neither application has matured to a patent grant, this rejection should have been made as a provisional rejection. In the event either application matures to a patent grant prior to the present application, the applicant will file a terminal disclaimer to obviate the rejection.

Claims 1-32 were rejected as being as being drawn to non-statutory subject matter. This rejection is traversed.

As the Examiner will note, none of the claims are "process" claims. They are system claims. They require hardware components such as a database and electronic interfaces (claims 1, 20 and 27). Examples of interfaces include an internet interface; a speech, handwriting or fingerprint recognition device; an electronic mail interface; a facsimile; voicemail; and a webserver, VoIP or digital recorder, etc. (claim 4). Some of the claims require servers (claim 14) and base stations (claims 15 and 27) and mobile or fixed devices (claims 21 and 32). Since the claims are not directed to a process, recitation of the statutory requirements for a claimed process is not on point. Furthermore, as will be recognized by the Examiner the *Bilski* case was directed to process claims and is not on point for the claims at issue in this application. Moreover, the U.S. Supreme Court on Writ of Certiorari in *Bilsky et al. v. Kappos*, 130 S. Ct. 3218, 561 US __, 177 L. Ed. 2d 792 (2010). On review, the U.S. Supreme Court expressly overruled the CAFC's "machine-or-transformation" test in *In re Bilsky*. Mr. Justice Kennedy stated (at page 7 of the slip decision) the following:

"Section 100(b) provides that '[t]he term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.' The Court is unaware of any 'ordinary, contemporary, common meaning,"' Diehr [*Diamond v. Diehr*, 450 U.S. 175

(1981)], at 182, of the definitional terms 'process, art or method' that would require these terms to be tied to a machine or to transform an article."
Mr. Justice Kennedy went on to say (at page 10 of the slip decision) the following:

"Section 101 similarly precludes the broad contention that the term 'process' categorically excludes business methods. The term 'method,' which is within §100(b)'s definition of 'process,' at least as a textual matter and before consulting other limitations in the Patent Act and this Court's precedents, may include at least some methods of doing business."

Thus, from the foregoing, it should be clear that the rejection of claims 1 to 32 under 35 U.S.C. §101 is not supported by the current state of the law. Withdrawal of the rejection is therefore respectfully requested.

Claim 28 was rejected under 35 U.S.C. 112, sixth paragraph. This rejection is traversed. At the outset, it is believed the Examiner was referring to claim 27, not 28, as claim 27 refers to "means for identifying a geographic location..." Furthermore, with reference to Figure 1 of the application it can be seen that one example of this means is a CPU 30 connected to GIS, Google Earth, etc.; Figure 7 shows an example of a GPS device in a telephone; and Figures 8 and 9 show examples of locationing with towers and telephones. These and any other structures equivalent to those described in the application or drawings clearly define the claim term.

Claims 1-32 were rejected as being obvious over U.S. Patent 6,757,543 to Moranj in view of U.S. Patent 6,542,588 to Mashinsky. This rejection is traversed.

Mashinsky provides a rate-table database that allows the efficient routing of international phone calls. Mashinsky offers market price information of long distance calls to prospective sellers and buyers of connection time. In column 2, lines 24 et seq., Mashinsky purportedly allows service providers to submit information to a central server node, including cost and service parameter data needed for efficient routing between two places. Mashinsky deals only with landline or international calling, and notes how different landline calls, such as fax

tones, may be carried over digital lines, whereas other types of landline calls may be routed over telephone lines (see column 8, lines 55-68 of Mashinsky).

In short, Mashinsky has nothing to do with the claimed invention which focuses on the following areas: infrastructure (e.g. for the wireless communications industry, infrastructure includes cell tower locations and coverage, base stations, microcells, femtocells, or repeater locations and their coverage/performance), business terms for various infrastructure needs of various carriers, intermediaries, third parties, or end-users, advertising or content provisioning for the carriers, intermediaries, third parties, users, citizens or other parties (intermediaries) while using information about the infrastructure and its location and coverage/performance, and the ability for citizens or other parties to own and rent their own property out to carriers, or to lease, buy or house the infrastructure for use by one or more carriers and one or more user.

Furthermore, Mashinsky has nothing to do with providing a clearinghouse of information that would allow for wireless customers to be provided service from various service providers as a function of instantaneous or known/predicted performance, radio coverage, wireless interference characteristics, spectrum usage, or particular customer-specified quality or priorities/preferences, or locations of the cellphone customer. For example, the present application describes, among other things, an open database so that available spectrum and coverage could be found anywhere on the globe based on the knowledge of the location of infrastructure, wireless coverage/performance in a geographical region, and the location and characteristics of a mobile user. The claimed invention could be used, for example, in the recently released 700 MHz "white space" band and could be used in the evolving field of cognitive radios, also known as Software Defined Radios (SDRs). Mashinsky, on the other hand, did not address any of these areas and does not teach anything related to the present invention.

Moran deals with the use of monitoring probes to determine service area performance for wireless carriers, and provides a method for allowing wireless carriers to determine performance metrics for its wireless network. Moran includes the use of WAP-enabled cell phones, and other devices that can send

SMS texts, emails, scripts to simulate a stock trade, etc. to determine wireless Internet access service performance, and typical, average, or statistical distributions of traffic latency of one or more cellular networks. Moran requires dedicated probes to exercise the network and allows printouts of graphs and tables of performance to be provided for various wireless carriers (See Abstract, and column 1, line 65 to column 2, line 15, Figures 9 – 11, and columns 8, line 20 to column 14, line 65, for example). In fact, Keynote Systems, the listed owner of the Moran patent, appears on Google as of May 19, 2011, as a "Provider of on-demand test and measurement products for mobile communications and internet performance."

It should be clear that the Moran patent is focused on networking performance test and measurement from a diagnostic viewpoint, and the invention focuses on the ability for a company to offer to carriers the ability to determine network performance using a number of special "test" wireless devices (e.g. "probes") that can be used to perform in-situ drive tests within a cellular network. Moran's patent requires dedicated "probes" or phones (which are not ordinary customer cellphones, but special "probe" cellphones) to generate and monitor traffic in order to diagnose troubles or trouble spots within their network. Moran teaches this many places in the patent (e.g. see column 2, lines 7-15, column 4, line 45 to column 15, line 27; column 7, line 65 to column 8, line 19; column 8, line 20 to column 9, line 27, Figure 13 (where a large box is labeled "Diagnostic Tests"); and column 14, lines:22-43 and 53-66, to point out just a few examples).

It should be clear that the Moran invention has nothing to do with the claimed invention, which, as noted above, focuses on the following areas: infrastructure (e.g. for the wireless communications industry, infrastructure includes cell tower locations and coverage, base stations, microcells, femtocells, or repeater locations and their coverage/performance), business terms for various infrastructure needs of various carriers, intermediaries, third parties, or end-users, advertising or content provisioning for the carriers, intermediaries, third parties, users, citizens or other parties (intermediaries) while using information about the infrastructure and its location and coverage/performance, and the ability for citizens or other parties to own and rent their own property out to carriers, or to

lease, buy or house the infrastructure for use by one or more carriers and one or more user. Furthermore, Moran has nothing to do with providing a clearinghouse of information that would allow for wireless customers to be provided service from various service providers as a function of instantaneous or known or predicted radio coverage, wireless interference characteristics, spectrum usage, customer-specified quality or priorities/preferences, or particular locations of the cell phone customer.

Instead, Moran provides specific network performance data to individual carriers, based on the use of very specific cell phones (provided by Keynote Systems or another testing service, e.g. see for example, column 4, lines 46-60 and the GPS-1600 phone manufactured by Qualcomm, see, column 7, lines 20-25) and with the use of custom monitoring devices or probes (see, for example, column 1, lines 65 to column 2, line 15, column 3, lines 32-34 for "each monitoring probe 14", Figure 4, and column 5, line 64 to column 7, line 7 where it is clear that the invention must provide its own probes).

The present invention is quite different. For example, the claimed invention teaches the new concept of end-users and intermediaries having the ability to rent or own properties or infrastructure, offers a novel business approach to an unmet problem of infrastructure access, and further teaches novel approaches to location-based advertising. Furthermore, the present application teaches, among other things, an open database so that available spectrum and coverage could be found in many places, and perhaps even anywhere on the globe, based on the knowledge of the location of infrastructure, wireless coverage/performance in a geographical region, and the location and characteristics of mobile users (e.g. customers). The claimed invention could be used, for example, in the recently released 700 MHz "white space" band and could be used in the evolving field of cognitive radios, also known as Software Defined Radios (SDRs) in order to provide individual cell phone users proper information for determining the most appropriate carrier to use at any time or at any place. Moran, on the other hand, did not address any of these areas, as the Moran invention requires the use of specifically configured probes (e.g. cell phones that are specifically dedicated to the function of traffic generation or

performance measurement) and dedicated timestamps and other specialized processing for obtaining diagnostic information for carriers (See Fig. 6 of Moran and accompanying text), specifically for the production of tabular reports and graphs to wireless carriers. Thus, it is clear that Moran discloses a gross diagnostic tool for network performance. Moran does not rely on the locations of telecommunications infrastructure or the use of citizens or third parties who wish to acquire or rent/lease/own infrastructure, or the use of standard customers who use their phones in normal daily use, but instead, Moran relies on having customized test phones and the ability to time stamp its own custom test messages (see column 13, lines 7-29 for an example where a scripted session and particular sequence of messages must be used, and see column 13, lines 30-43, where a scripted stock trade is performed). It is further evident that Moran focuses on diagnostic network measurement, and does not contemplate the present invention, as seen by its reference to in-situ drive testing (see, for example, column 14, lines 9-44, and claims 6 and 7 of Moran).

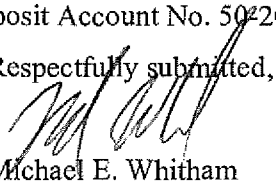
As neither Mashinsky nor Moran include the salient features of the invention, no combination would make the claimed invention obvious to one of ordinary skill in the art. That is, no combination of Mashinsky and Moran teaches a clearinghouse system having a database with records for one or more telecommunications carrier infrastructure in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas, and (iii) desired business terms for said infrastructure needs. Furthermore, no combination of Mashinsky and Moran teaches or suggests a database with records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1-32 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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ART UNIT	PAPER NUMBER
2157	

MAIL DATE	DELIVERY MODE
01/19/2011	PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	12/208,007	RAPPAPORT, THEODORE R.	
	Examiner	Art Unit	
	SRIRAMA CHANNAVAJJALA	2157	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *10 September 2008*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

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

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

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

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

Application Papers

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

10)☒ The drawing(s) filed on *10 September 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

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

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

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

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

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :6/8/2010;4/19/2010;2/16/2010;12/02/2008;10/27/2008.

DETAILED ACTION

1. Claims 1-32 are pending in this application.

Drawings

2. The Drawings filed on 9/10/2008 are acceptable for examination purpose

Information Disclosure Statement

3. The information disclosure statement filed on 6/8/2010;4/19/2010;2/16/2010;12/2/2008;10/27/2008.is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy is enclosed with this Office Action

Priority

4. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 119(e) based on provisional application 60/971,175 filed on 9/10/2007;60/977,582 filed on 10/4/2007, 61/028,261 filed on 2/13/2008.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical,~ but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or

would have been obvious over, the reference claim(s). See, e.g.,/n re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998);/n re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993);/n re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Omum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982);/n re Vogel 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and /n re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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

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

6. Claim 1,20,27 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1,7,21,27,33 of US Application No. 12/814,974 is now US Pub. No. 2010/0299274; Claims 1,17,27,39,50,60 of US Application # 12/815,076 is now US Pub. No. 2010/0250268; claims 1,8,20,31,43,56,69 of US Application # 12/815,165 is now US Pub. No. 2010/0250269. Although the conflicting claims are not identical, they are not patentably distinct from each other because of following reasons:

Claims 1,7,21,27,33 of US Application No. 12/814,974 is now US Pub. No. 2010/0299274; Claims 1,17,27,39,50,60 of US Application # 12/815,076 is now US Pub. No. 2010/0250268; claims 1,8,20,31,43,56,69 of US Application # 12/815,165 is now US Pub. No. 2010/0250269 contain(s) every element of Claim 1,20,27 of the instant application and thus anticipate the claim(s) of the instant application. Claims of the instant application therefore are not patently distinct from the earlier patent claims and as such are unpatentable over obvious-type double patenting. A later patent/application claim is not patentably distinct from an earlier claim if the later claim is anticipated by the earlier claim.

A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a 35 patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION F£)R REHEARING EN BANC (DECIDED: May 30, 2001).

"Claim 12 and Claim ! 3 are generic to the species of invention covered by claim 3 of the patent. Thus, the generic invention is "anticipated" by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775,227 USPQ 773

(Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) 4. This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. In re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761,767 (CCPA 1982); Schneller, 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 12 and 13 were properly rejected under the doctrine of obviousness-type double patenting." (In re Goodman (CA FC) 29 USPQ2d 2010 (12/3/1993).

Claim Rejections - 35 USC § 101

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

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

7. ***Claims 1-32, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter***.

8. Regarding Claims 1,20,27 recite a “system” without the proper “hardware” or memory to perform the steps. In particular, in a system claim there must be a hardware component such as a processor or memory that the software routines or modules are stored in or run on.

A claimed process is eligible for patent protection under 35 U.S.C. § 101 if:

> "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. See Benson, 409 U.S. at 70 ('Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.'); Diehr, 450 U.S. at 192 (holding that use of mathematical formula in process 'transforming or reducing an article to a different state or thing' constitutes patent-eligible subject matter); see also Flook, 437 U.S. at 589 n.9 ('An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing' ');

> Cochrane v. Deener, 94 U.S. 780, 788 (1876) ('A process is...an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.').7 A claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article." (In re Bilski, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008))

Also noted in Bilski is the statement, "Process claim that recites fundamental principle, and that otherwise fails 'machine-or-transformation' test for whether such claim is drawn to patentable subject matter under 35 U.S.C. §101, is not rendered patent eligible by mere field-of-use limitations; another corollary to machine-or-transformation test is that recitation of specific machine or particular transformation of specific article does not transform unpatentable principle into patentable process if recited machine or transformation constitutes mere 'insignificant post- solution activity.'" (In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008)) Examples of insignificant post-solution activity include data gathering and outputting. Furthermore, the machine or transformation must impose meaningful limits on the scope of the method claims in order to pass the machine-or-transformation test. Please refer to the USPTO's "Guidance for Examining Process Claims in view of In re Bilsk memorandum dated January 7, 2009, http://www.uspto..gov/web/offices/pac/dapp/opla/documents/bilski_guidance_memo.pdf

Claim Rejections - 35 USC § 112

9. At page 60, claim 28, applicant appear to be invoking 112, sixth paragraph “means for” type language, but it is unclear what “structures” are being used to perform the functions. No particular structures are identified in the specification that would

perform the function. The claim limitation merely directed to “means for identifying a geographic location…device””, while other limitations "do not" have "means for" language. One of skill in the art would not be apprised of what structures are intended to be encompassed by the claims, nor would it be clear what the structures are intended to accomplish. It is unclear whether claim 27 is directed to functional or non-functional descriptive language.

Claim Rejections - 35 USC § 103

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

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

11. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moran et al. [hereafter Moran], US Patent No. 6757543 published on Jun 29,2004 in view of Mashinsky, US Patent No. 6542588 published on Apr 1,2003.

13. As to Claim 1, Moran teaches a system which including " A clearinghouse system for communications networks, comprising" [fig 1]

a database including [fig 1, element 26]

"records for one or more telecommunications carriers which identifies infrastructure needs for one or more telecommunications carriers [fig 1, element 48,50,52,], telecommunications carriers corresponds to Moran's AT&T network; Verizon network, and Sprinit network as detailed in fig 1; "in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, " [col 4, line 1-11], types f equipment corresponds to wireless enabled devices such as Palm Pilot, Handspring Visor devices, Pocket PCs, BlackBerry, RIM devices or Research I Motion devices and like (ii) location information including one or more of geographical areas [col 4, line 29-33, fig 8], geographical areas corresponds to Moran's fig 8;, and (iii) and

"records of a plurality of end users [col 7, line 30-38] which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets [col 11, line 56-65, col 12, line 2-12], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network (ii) property assets owned or controlled by said end users including geographic location

[col 4, line 29-33, col 5, line 62-63], and (iii) " preferences for use of said telecommunications assets or said property assets" [col 3, line 32-35, col 5, line 32-37, fig 1] telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

one or more electronic interfaces which permits one or more telecommunications carriers and one or more end users to selectively view or catalog information [col 6, line 37-47,col 7, line 30-38] about (a) available telecommunications assets or properties and locations thereof, " [col 3, line 32-35, col 5, line 32-37, col 7, line 8-17, fig 1-2] (b) the owners or tenants of said available telecommunications assets or properties [col 3, line 27-35], (c) infrastructure needs of one or more telecommunications carriers for one or more locations, [fig 8, col 5, line 62-63] and (d) for said infrastructure needs and said telecommunications assets or said property assets [col 3, line 27-35, col 5, line 32-50, col 11, line 56-59]. It is however, noted that Moran doesn't specifically teach "desired business terms", although Moran specifically teaches generating performance and monitoring reports [fig 1], further also supports WAP enabled devices used in "trade especially in the markets tracking stock and like [col 12, line 62-67]. On the other hand, Mashinsky disclosed " desired business terms [fig 1B,col 5, line 61-67, col 6, line 1-5], Mashinsky specifically teaches "business-rules database" for example as detailed in fig 1B related to telecommunication field.

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran,Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4" Mashinsky: Abstract, fig 1A-1B]. Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating "business-rules" particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

14. As to Claim 2, Moran disclosed "wherein said database includes public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, [fig 8, col 14, line 53-64] local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations [col 15, line 1-14]..

15. As to Claim 3, Moran disclosed “wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, [fig 1,fig 4, , col 5, line 32-37],to selectively view or catalog information about said available telecommunications assets or properties and locations thereof,[col 5, line 40-49] and said infrastructure needs of one or more telecommunications carriers for one or more locations [col 5, line 51-63].

16. As to Claim 4, Moran disclosed “wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a web server, VoIP, or a digital recorder.

17. As to Claim 5, Moran disclosed “ wherein at least one of said one or more electronic interfaces is connected to the world wide web [col 5, line 9-14], and wherein said records for a plurality of telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler [col 11, line 1-6, line 54-62].

18. As to Claim 6, Moran disclosed “ further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers” [col 13, line 17-24, col 14, line 66-67, col 15, line 1-8].

19. As to Claim 7, Moran disclosed " further comprising a security application , which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system [col 6, line 33-47]. On the other hand, Mashinsky disclosed "billing application" [fig 11B,col 18, line 31-39].

20. As to Claim 8, Moran disclosed " further comprising a communications application which permits secure and one or more end users for use of said one or more telecommunications assets or one or more property assets [fig 1, fig 4, col 5, line 37-49, line62-63]. On the other hand, Mashinsky disclosed "negotiation and acceptance of business and legal terms between one or more telecommunications carriers" [Abstract, fig 1A-1B, fig 3A-3B, col 7, line 43-65].

21. As to Claim 9, Moran disclosed " wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage" [col 11, line 54-59, col 12, line 2-6]..

22. As to Claim 10-11, Moran disclosed " wherein said database includes performance or quality of service information for specific locations" [col 6, line 55-64, line 65-67, col 7, line 1-7].

23. As to Claim 12, Moran disclosed " wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land

devices that is located in or will be located in said specific locations" [col 6, line 55-64, line 65-67, col 7, line 1-7, fig fig 1, fig 3-4].

24. As to Claim 13, Moran disclosed " wherein said performance or quality of service information includes multiple bands and multiple carriers" [fig 4, col 7, line 66-67, col 8, line 1-7].

25. As to Claim 14, Moran disclosed "one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location" [fig 1,col 6, line 34-47], fig 3-4].

26. As to Claim 15, Moran disclosed "one or more base stations connected to said one or more electronic interfaces" [fig 1,fig 3,col 4, line 1-25].

27. As to Claim 16, Moran disclosed " wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces" [fig 1, fig 3, col 3, line 19-23, col 4, line 1-25], Moran specifically teaches various performance data particularly generating reports and graphs as detailed in col 3, line 19-23

28. As to Claim 17-18, Moran disclosed " further comprising a computation application which identifies optimum locations for said infrastructure needs based on said records of said plurality of end users" [col 3, line 24-35, line 58-67, col 4, line 26-33]..

29. As to Claim 19, Mashinsky disclosed " further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users" [fig 1A-1B,fig 3A-B, col 11, line 31-63]..

30. As to Claim 20, Moran teaches a system which including " A clearinghouse system for communications networks, comprising: [fig 1]

a database including performance or quality of service information for one or more specific locations, [fig 1, element 26, Abstract, col 4, line 61-67, col 5, line 1-8, col 7, line 30-39], database corresponds to Moran's database, further performance information corresponds to Moran's performing monitoring functions periodically as detailed in col 5, line 1-8;]

one or more of records for a plurality of telecommunications carriers which identifies infrastructure [fig 1, element 48,50,52,], telecommunications carriers corresponds to Moran's AT&T network; Verizon network, and Sprinit network as detailed in fig 1; "and location information for one or more specific locations" [fig 8,col 7, 58-65], Moran specifically teaches not only geographical location[s] where

telecommunication carries or various wireless devices performing certain tasks, but also identifies specific locations for example as detailed in fig 7-8];

records for a plurality of end users [col 7, line 30-38] which identifies telecommunications assets or property assets owned or controlled by said one or more end users, [col 11, line 56-65, col 12, line 2-12, col 3, line 32-35, col 5, line 32-37, fig 1], Moran specifically teaches telecommunications assets such as "cellular tower" typically operated at one of the service provider's network and , further it is noted that Moran strongly teaches telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, [fig 8, col 14, line 53-64] , zoning information for said geographic locations, local ordinances for said geographic locations, [fig 8, col 14, line 53-64] contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; [col 15, line 1-14].; and

"one or more electronic interfaces which permits performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations" [fig 1,fig 4,, fig 7-8, col 10, 23-46, col 14, line 53-65], Moran specifically teaches generating performance reports particularly related to carrier services provided to various wireless devices; "and which permits at least one of said plurality of telecommunications carriers or said plurality of end users or one or

more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.[fig 1,fig 4, col 5, line 32-37, line 51-63]. It is however, noted that Moran does not specifically disclose “automatically updated into said database”, although Moran specifically teaches not only database stores various performance related information related , but also generates “reports as detailed inn fig 1. On the other hand, Mashinsky disclosed “automatically updated into said database” [col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

It would have been obvious to one of the ordinary skill in the art at the time of applicant’s invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4“ Mashinsky: Abstract, fig 1A-1B]. Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant’s invention to substitute one method for the other to achieve the predictable results of incorporating “business-rules” particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database periodically

updated information accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

31. As to Claim 21, Moran disclosed " wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations" fig 1, fig 7-8, fgi 6, element 212]..

32. As to Claim 22, Mashinsky disclosed " wherein said performance or quality of service information includes multiple bands and multiple carriers. [col 7, line 43-51]

33. As to Claim 23-24, Moran disclosed " further comprising means for sending instructions from one of said one or more electronic interfaces to one or more mobile wireless devices for configuring or reconfiguring of said one or more electronic devices based on a ranking of performance or specific requests of an end user" [fig 1,col 4, line 1-25].

34. As to Claim 25, Moran disclosed " further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices [fig 1, fig 4], wherein monitored radio operating conditions are used, quality of service information [col 5, line 20-29]. On the other hand, Mashinsky disclosed "to update

performance or quality of service information in said database. col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

35. As to Claim 26, Moran disclosed " further comprising an updating application which permits one or more wireless devices to update performance or quality of service information in said database by reporting of observations of wireless performance and quality to one of said one or more of said electronic interfaces [fig 1, fig fig 5, col 10, line 50-57]..

36. As to Claim 27, Moran teaches a system which including " A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations ,a clearinghouse system for communications networks, [fig 1, fig 4] said clearinghouse system including a database including one or more of performance or quality of service information for one or more specific locations[fig 1, element 26, Abstract, col 4, line 61-67, col 5, line 1-8, col 7, line 30-39, fig 8], database corresponds to Moran's database, further performance information corresponds to Moran's performing monitoring functions periodically as detailed in col 5, line 1-8;]

records for a plurality of telecommunications carriers which identifies infrastructure [fig 1, element 48,50,52,], and location information for one or more specific locations[fig 8,col 7, 58-65], Moran specifically teaches not only geographical location[s] where telecommunication carries or various wireless devices performing certain tasks, but also identifies specific locations for example as detailed in fig 7-8];

records for a plurality of end users [col 7, line 30-38] which identifies telecommunications assets or property assets owned or controlled by said one or more end users, [col 11, line 56-65, col 12, line 2-12, col 3, line 32-35, col 5, line 32-37, fig 1], Moran specifically teaches telecommunications assets such as “cellular tower” typically operated at one of the service provider’s network and , further it is noted that Moran strongly teaches telecommunications assets or property assets corresponds to multiple cellular antenna is part of telecommunications infrastructure including equipments, vehicles, buildings and like;

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, [fig 8, col 14, line 53-64] , zoning information for said geographic locations, local ordinances for said geographic locations, [fig 8, col 14, line 53-64] contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; [col 15, line 1-14].; and

one or more electronic interfaces which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces [fig 1,fig 4,, fig 7-8, col 10, 23-46, col 14, line 53-65], Moran specifically teaches generating performance reports particularly related to carrier services provided to various wireless devices ; “permitting one or more of performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations .[fig 1,fig 4, col 5, line 32-37, line 51-63].

at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.[fig 1,fig 4, col 5, line 32-37, line 51-63];

“means for identifying a geographic location of one or more mobile or fixed devices” [fig 4, fig 7-8]; and

“one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system, said local ad servers providing localized content to said one or more mobile or fixed devices in a specific location” [fig 3-4, col 9, line 21-27, line 29-38].

It is however, noted that Moran does not specifically disclose “automatically updated into said database”, although Moran specifically teaches not only database stores various performance related information related , but also generates “reports as detailed inn fig 1. On the other hand, Mashinsky disclosed “automatically updated into said database” [col 5, line 35-39, line 52-58,line 61-64, fig 5, col 13, line 3-22].

It would have been obvious to one of the ordinary skill in the art at the time of applicant’s invention to incorporate global telecommunication network management particularly associated with business rules in controlling network utilization, traffic volumes of Mashinsky into wireless data performance monitoring system particularly multi carrier performances of Moran et al. because both Moran, Mashinsky specifically directed to "telecommunication network" environment and they both are from the same field of endeavor [Moran: Abstract, fig 1, fig 4“ Mashinsky: Abstract, fig 1A-1B].

Because both Moran, Mashinsky specifically teach global telecommunication network particularly multiple carriers remotely operating in various geographical regions , it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to substitute one method for the other to achieve the predictable results of incorporating "business-rules" particularly identifying specific geographic location and/or route, quality, market price and other information stored in a database periodically updated information accessible by the telecommunication servers, thereby improving overall quality and reliability of the global telecommunication network system.

37. As to Claim 28, Moran disclosed "one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system" [fig 3-4, col 10, line 50-57].

38. As to Claim 29, Moran disclosed " wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces" [fig 1, abstract, col 13, line 59-67, col 14, line 1-8].

39. As to Claim 30, Moran disclosed " wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.[fig 2,fig 4, col 7, line 8-25].

As to Claim 31, Moran disclosed " wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices." [col 7, line 44-65].

40. As to Claim 32, Moran disclosed " wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal" [col 7, line 66-67, col 8, line 1-18].

Conclusion

The prior art made of record

a. US Patent No. 6757543

b. US Patent No. 6542588

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the Claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Ebb whose telephone number is (571) 272-3574 for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim, Charles, can be reached on (571) 272-7421. The fax phone numbers for the organization where the 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)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2157.

Notice of References Cited	Application/Control No. 12/208,007	Applicant(s)/Patent Under Reexamination RAPPAPORT, THEODORE R.	
	Examiner SRIRAMA CHANNAVAJJALA	Art Unit 2157	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,757,543	06-2004	Moran et al.	455/456.1
*	B	US-6,542,588	04-2003	Mashinsky, Alexander	379/114.02
*	C	US-2005/0216421	09-2005	Barry et al.	705/064
*	D	US-2004/0230563	11-2004	Mahon et al.	707/001
*	E	US-6,405,028	06-2002	DePaola et al.	455/406
*	F	US-6,061,558	05-2000	Kennedy et al.	455/411
*	G	US-6,628,934	09-2003	Rosenberg et al.	455/411
*	H	US-7,246,045	07-2007	Rappaport et al.	703/2
*	I	US-7,286,971	10-2007	Rappaport et al.	703/2
*	J	US-7,096,160	08-2006	Skidmore et al.	702/186
	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	Christoph Lindemann et al. " Adaptive performance management for universal mobile telecommunications system networks",Computer Networks 38 (2002) 477–496
	V	
	W	
	X	

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	**Art Unit**
	SRIRAMA CHANNAVAJJALA	2157

✓	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	01/11/2011								
	1	✓								
	2	✓								
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	31	✓								
	32	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12208007	RAPPAPORT, THEODORE R.
	Examiner	Art Unit
	SRIRAMA CHANNAVAJJALA	2157

SEARCHED

Class	Subclass	Date	Examiner
709	215-220	1/11/2011	sc
707	608-609,688,705748,825,827	1/11/2011	sc
705	14.33,14.1,14.11,39,26-27,64	1/11/2011	sc
455	406,408,417,445,560	1/11/2011	sc
379	1.01,9.04,32.01,88.09,114.08	1/11/2011	sc

SEARCH NOTES

Search Notes	Date	Examiner
Inventor searched	1/11/2011	sc
PLUS search	1/11/2011	sc
NPL & google search attached	1/11/2011	sc
WEST search attached	1/11/2011	sc

INTERFERENCE SEARCH

Class	Subclass	Date	Examiner

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BIB DATA SHEET

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12/208,007	09/10/2008	707	2157	08610004AA

APPLICANTS
Theodore R. Rappaport, Austin, TX;

**** CONTINUING DATA ***************************
This appln claims benefit of 60/971,175 09/10/2007
and claims benefit of 60/977,582 10/04/2007
and claims benefit of 61/028,261 02/13/2008

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

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
09/18/2008

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		TX	15	32	3
Verified and Acknowledged	/SRIRAMA T CHANNAVAJJALA/ Examiner's Signature	Initials				

ADDRESS

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190
UNITED STATES

TITLE

Clearinghouse system, method, and process for inventorying and acquiring infrastructure, monitoring and controlling network performance for enhancement, and providing localized content in communication networks

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

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Rappaport	
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09/10/2008	3633

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		US 2003/0134648 A1	07/17/2003	Reed et al			
		US 2004/0236547 A1	11/25/2004	Rappaport et al			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

		PCT INTERNATIONAL SEARCH REPORT ISSUED 11/18/08. PCT/US08//75847

EXAMINER	/Srirama Channavajjala/	DATE CONSIDERED	01/11/2011

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

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Rappaport

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09/10/2008	3633

12208007 - GAU: 2157

U.S. PATENT DOCUMENTS

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U.S. PATENT APPLICATION PUBLICATIONS

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FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

			Request for Proposals Planning, Data Gathering Database development, and Website creation. Plattsburg State University of New York. 02/16/2010 pp.1-9. http://www.cbnconnect.org/pdf/RFP-Wireless-Clearinghouse.pdf

EXAMINER	/Srirama Channavajjala/	DATE CONSIDERED	01/11/2011

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APPLICANT(S): Rappaport

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09/10/2008	3633

U.S. PATENT DOCUMENTS

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U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2009/0313113	12/2009	Dye et al			
		2009/0313318	12/2009	Dye et al			

FOREIGN PATENT DOCUMENTS

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Rappaport	
FILING DATE	GROUP ART UNIT
09/10/2008	3633

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,317,599	11/2001	Rappaport et al			
		6,442,507	08/2002	Skidmore et al			
		6,493,679	12/2002	Rappaport et al			
		6,499,006	12/2002	Rappaport et al			
		6,625,454	09/2003	Rappaport el al			

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,721,769	04/2004	Rappaport et al			
		6,850,946	02/2005	Rappaport et al			
		6,876,951	04/2005	Skidmore et al			
		6,971,063	11/2005	Rappaport et al			
		6,973,622	12/2005	Rappaport et al			

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		7,019,753	03/2006	Rappaport et al			
		7,035,642	04/2006	Rappaport et al			
		7,055,107	05/2006	Rappaport et al			
		7,085,697	08/2006	Rappaport et al			
		7,096,160	08/2006	Skidmore et al			

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	/Srirama Channavajjala/	DATE CONSIDERED	01/18/2011

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.C./

Receipt date: 06/08/2010

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.	APPLICATION NO.
08610004AA	12/208,007
Rappaport	
FILING	GROUP ART
09/10/2008	3633

12208007 - GAU: 2157

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		7,096,173	08/2006	Rappaport			
		7,155,228	12/2006	Rappaport			
		7,164,883	01/2007	Rappaport			
		7,171,208	01/2007	Rappaport			
		7,243,054	07/2007	Rappaport			

U.S. PATENT APPLICATION PUBLICATIONS

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FOREIGN PATENT DOCUMENTS

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EXAMINER	DATE CONSIDERED
/Srirama Channavajjala/	01/18/2011

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INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.	APPLICATION NO.
08610004AA	12/208,007
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FILING	GROUP ART
09/10/2008	3633

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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		6,788,766	09/2004	Logan			
		6,937,869	08/2005	Rayburn			

U.S. PATENT APPLICATION PUBLICATIONS

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EXAMINER	DATE CONSIDERED
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Receipt date: 10/27/2008

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number - GAU: 2157
0861004AA	12/208,007
Applicant(s)	
Rappaport	
Filing Date	**Group Art Unit**
09/10/2008	3633

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		US 2008/0232574 A1	09/25/2008	Baluja et al			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

EXAMINER	/Srirama Channavajjala/	DATE CONSIDERED	01/11/2011

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /S.C./

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Rappaport	Confirmation No. 1779
Serial No. 12/208,007	Group Art Unit 3633
Filed September 10, 2008	Examiner (not assigned)

For CLEARINGHOUSE SYSTEM, METHOD, AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

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

SUBMISSION OF SUPPLEMENTAL DECLARATION 37 C.F.R. 1.67

Sir:

Attached hereto is a supplemental declaration which corrects the name of the applicant to Theodore S. Rappaport. In the original declaration papers, the name of the applicant was incorrectly typed as Theodore R. Rappaport.

The Commissioner is authorized to charge attorney's deposit account 50-2041 (Whitham, Curtis, Christofferson & Cook) for any fees required to enter this supplemental declaration and correct the name of the applicant to be Theodore S. Rappaport.

Respectfully submitted,

Michael E. Whitham
Reg. No. 32,635

Whitham, Curtis, Christofferson & Cook, P.C.
11491 Sunset Hills Road, Suite 340
Reston, VA 20190
Tel. (703) 787-9400
Fax. (703) 787-7557

Customer No.: 30743

Express Mail Label No. Page 1 of

Docket No.
0861000aaa

Declaration and Power of Attorney For Patent Application

English Language Declaration

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

the specification of which

(check one)

☐ is attached hereto.

☒ was filed on September 10, 2008 as United States Application No. or PCT International Application Number 12/208,007

and was amended on _____ (if applicable)

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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

Prior Foreign Application(s)			Priority Claimed
(Number)	(Country)	(Day/Month/Year Filed)	☐
(Number)	(Country)	(Day/Month/Year Filed)	☐
(Number)	(Country)	(Day/Month/Year Filed)	☐

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

60/971,175	September 18, 2007
(Application Serial No.)	(Filing Date)
60/977,582	October 4, 2007
(Application Serial No.)	(Filing Date)
61/028,261	February 13, 2008
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 386(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

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

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Michael E. Whitham	**Reg. No. 32,635**
Marshall M. Curtis	**Reg. No. 33,138**
Clyde R Christofferson	**Reg. No. 34,138**
C. Lamont Whitham	**Reg. No. 22,424**

Send Correspondence to: **ASSOCIATE THIS APPLICATION WITH CUSTOMER NO. 30743**

Direct Telephone Calls to: *(name and telephone number)*
Michael E. Whitham 707-787-9400

Full name of sole or first inventor **Theodore S. Rappaport**
Sole or first inventor's signature Date 6/25/2010
Residence **Austin, Texas**
Citizenship **USA**
Post Office Address **615 Hearn Street, Austin, TX 78703**

Full name of second inventor, if any
Second inventor's signature Date
Residence
Citizenship
Post Office Address

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.	APPLICATION NO.
08610004AA	12/208,007
APPLICANT(S)	
Rappaport	
FILING DATE	GROUP ART UNIT
09/10/2008	3633

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,317,599	11/2001	Rappaport et al			
		6,442,507	08/2002	Skidmore et al			
		6,493,679	12/2002	Rappaport et al			
		6,499,006	12/2002	Rappaport et al			
		6,625,454	09/2003	Rappaport el al			

U.S. PATENT APPLICATION PUBLICATIONS

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FOREIGN PATENT DOCUMENTS

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Rappaport	
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09/10/2008	3633

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		6,721,769	04/2004	Rappaport et al			
		6,850,946	02/2005	Rappaport et al			
		6,876,951	04/2005	Skidmore et al			
		6,971,063	11/2005	Rappaport et al			
		6,973,622	12/2005	Rappaport et al			

U.S. PATENT APPLICATION PUBLICATIONS

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		7,055,107	05/2006	Rappaport et al			
		7,085,697	08/2006	Rappaport et al			
		7,096,160	08/2006	Skidmore et al			

U.S. PATENT APPLICATION PUBLICATIONS

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		7,155,228	12/2006	Rappaport			
		7,164,883	01/2007	Rappaport			
		7,171,208	01/2007	Rappaport			
		7,243,054	07/2007	Rappaport			

U.S. PATENT APPLICATION PUBLICATIONS

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FOREIGN PATENT DOCUMENTS

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09/10/2008	3633

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
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		6,788,766	09/2004	Logan			
		6,937,869	08/2005	Rayburn			

U.S. PATENT APPLICATION PUBLICATIONS

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FOREIGN PATENT DOCUMENTS

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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 08610004AA

In Re Application Of:

Rappaport

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
12/208,007	09/10/2008	n/a	30743	3633	1779

Title: **Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network Performance for Enhancement, and Providing Localized Content in Communication Networks**

Address to:

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

37 CFR 1.97(b)

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

37 CFR 1.97(c)

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

   ☐ the statement specified in 37 CFR 1.97(e);

   OR

   ☐ the fee set forth in 37 CFR 1.17(p).

P10A/REV05

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 08610004AA

In Re Application of:
Rappaport

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
12/208,007	09/10/2008	n/a	30743	3633	1779

Title: Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network Performance for Enhancement, and Providing Localized Content in Communication Networks

Payment of Fee
(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

☐ A check in the amount of is attached.
☒ The Director is hereby authorized to charge and credit Deposit Account No. 50-2041 as described below.
- ☐ Charge the amount of
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.

☐ Payment by credit card. Form PTO-2038 is attached.

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.

Certificate of Transmission by Facsimile*

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (Fa

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Typed or Printed Name of Person Mailing Certificate

*This certificate may only be used if paying by deposit account.

Signature

Dated: 06/05/10

Michael E. Whitham
Reg. No. 32,635
Whitham, Curtis, Christofferson & Cook, PC
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190
703-787-9400

cc:

P10A/REV05

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.	APPLICATION NO.
08610004AA	12/208,007
APPLICANT(S)	
Rappaport	
FILING DATE	GROUP ART UNIT
09/10/2008	3633

U.S. PATENT DOCUMENTS

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U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2009/0313113	12/2009	Dye et al			
		2009/0313318	12/2009	Dye et al			

FOREIGN PATENT DOCUMENTS

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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 08610004AA

In Re Application Of:
Rappaport

Application No.	Filing Date	Examiner	Customer No	Group Art Unit	Confirmation No.
12/208,007	09/10/2008	n/a	30743	3633	1779

Title:
CLEARINGHOUSE SYSTEM, METHOD AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

Address to:
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In Re Application of:
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☐ A check in the amount of is attached.
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(Date)

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Certificate of Mailing by First Class Mail

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(Date)

Signature of Person Mailing Correspondence

Typed or Printed Name of Person Mailing Certificate

***This certificate may only be used if paying by deposit account.**

Signature

Dated: 04/19/10

Michael E. Whitham
Reg. No. 32,635
Whitham, Curtis, Christofferson & Cook, PC
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190
703-787-9400

cc:

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

ATTY DOCKET NO.	APPLICATION NO.
08610004AA	12/208,007
APPLICANT(S)	
Rappaport	
FILING DATE	GROUP ART UNIT
09/10/2008	3633

U.S. PATENT DOCUMENTS

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U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

			Request for Proposals Planning, Data Gathering Database development, and Website creation. Plattsburg State University of New York. 02/16/2010 pp.1-9. http://www.cbnconnect.org/pdf/RFP-Wireless-Clearinghouse.pdf

EXAMINER	DATE CONSIDERED

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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 08610004AA

In Re Application Of:

Rappaport

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
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P.O. Box 1450
Alexandria, VA 22313-1450

37 CFR 1.97(b)

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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 08610004AA

In Re Application of:
Rappaport

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
12/208,007	09/10/2008	n/a	30743	3633	1779

Title:
CLEARINGHOUSE SYSTEM, METHOD AND PROCESS FOR INVENTORYING AND ACQUIRING INFRASTRUCTURE, MONITORING AND CONTROLLING NETWORK PERFORMANCE FOR ENHANCEMENT, AND PROVIDING LOCALIZED CONTENT IN COMMUNICATION NETWORKS

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Dated: 02/10/10

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Michael E. Whitham
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/208,007	09/10/2008	Theodore R. Rappaport	08610004AA

CONFIRMATION NO. 1779

30743
WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

PUBLICATION NOTICE

OC00000034966612

Title: Clearinghouse system, method, and process for inventorying and acquiring infrastructure, monitoring and controlling network performance for enhancement, and providing localized content in communication networks

Publication No.US-2009-0070379-A1
Publication Date:03/12/2009

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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.

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Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
12/208,007	09/10/2008	n/a	30743	3633	1779

Title: **Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network Performance for Enhancement, and Providing Localized Content in Communication Networks**

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08610004AA	12/208,007
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U.S. PATENT DOCUMENTS

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U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		US 2003/0134648 A1	07/17/2003	Reed et al			
		US 2004/0236547 A1	11/25/2004	Rappaport et al			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

		PCT INTERNATIONAL SEARCH REPORT ISSUED 11/18/08. PCT/US08//75847

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Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
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0861004AA	12/208,007
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09/10/2008	3633

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		US 2008/0232574 A1	09/25/2008	Baluja et al			

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Clearinghouse system, method, and process for inventorying and acquiring infrastructure, monitoring and controlling network performance for enhancement, and providing localized content in communication networks

Cross-Reference to Related Applications

This application claims priority to U.S. Provisional Patent Application 60/971,175 filed on September 10, 2007, U.S. Provisional Patent Application 60/977,582 filed on October 4, 2007, and U.S. Provisional Patent Application 61/028,261 filed on February 13, 2008, and the complete contents of each of these applications is herein incorporated by reference.

Background

Many companies own or lease towers, and have expertise in the positioning (sighting), leasing, designing and/or building of towers and other equipment that are used in providing or installing telecommunications networks. American Tower, Crown Castle, InnerWireless and America Connect, are examples of companies that own, lease, use, or construct towers or distributed antenna systems in and around towers or buildings to enable wireless communications services to be distributed by various users, including without limitation either their own company or their customers, such as AT&T Wireless, Vodaphone, Sprint, or public or private radio system operators. These companies have proprietary techniques, and their own staff which is generally quite large and includes lawyers, engineers, sales people, and accountants, to conduct some or all of the following businesses: charge rent for towers and or antenna systems, charge for tower/antenna maintenance or tower location services, provide engineering or physical plant maintenance for towers, or antennas, and other associated equipment, install equipment, provide wireless service for telecom carriers, argue zoning ordinances and request variances for tower or equipment installations, negotiate leases of rooftops or tower sites, and other related products and services pertaining to towers, antennas, and wireless infrastructure in general, in order to maintain and grow a business.

The aforementioned companies often use maps and population projections, along with topographical or geographical features, and radio frequency (RF) software simulators, in order to determine where to place towers or antennas for effective coverage of a service region, how high the tower should be, where a distributed antenna system (DAS) should be placed, what types of antennas are best suited for a particular need, and other technical, esthetic, physical, legal, or economic details regarding how towers and/or antennas will effectively support radio communications through its coverage regions and through its building database and tower database. These firms also generally use lawyers to review and assess zoning ordinances involved with the erection of towers or equipment, and to negotiate site leases or purchases.

US patents 6,317,599; 6,442,507; 6,493,679; 6,499,006; 6,625,454; 6,721,769; 6,850,946; 6,876,951; 6,971,063; 6,973,622; 7,019,753; 7,035,642; 7,055,107; 7,085,697; 7,096,160; 7,096,173; 7,155,228; 7,164,883; 7,171,208; 7,243,054; and 7,246,045, as well as patents and publications of such organizations as American Tower, Spectrasite (which merged with American Tower, Crown Castle International, Galaxy Engineering, InCode (bought by Verasign), and InnerWireless deal with technical issues that must be engineered for specific applications in the telecommunications business. These solutions are not aimed at or directly useable by ordinary end-user customers or ordinary landowners, homeowners, farmers, church parishioners, public service organizations, local governments, or building tenants who are generally not at all familiar with the technical details of telecommunications engineering, radio frequency planning, zoning restrictions, lease negotiations for tower sites, neighborhood covenants, or network management and operations. Further, the prior art does not at all contemplate the future, open-spectrum world of wireless, where carriers will likely be required by law to share their end users (e.g. subscribers) with other carriers or services, in a way that is similar to the Carterphone ruling and MCI rulings in the US that required AT&T to provide open access of equipment to its telephone (landline) infrastructure, and which is now adopted globally in the landline world.

Other companies, such as power utility and television cable companies, also have a need for accessing, designing, acquiring, or leasing towers, and using towers, light poles, rooftops, and other structures such as parts cabinets, remote power supplies,

storage facilities for vehicles, and the like, for supporting the provisioning of their services. These carriers also have a need of being able to access the location of towers and other equipment, such as utility boxes and cabling, for maintenance purposes, and need to be able to access the physical locations of their equipment and cabling runs, for the purpose of installing or modifying, or upgrading equipment associated with its distribution of services. These companies pay staff and consultants large amounts of money to acquire real estate or to determine possible solutions to these problems.

In the specific case of tower companies, they typically lease or sell access to their towers to carriers, often with complicated lease arrangements, and at times may also sell their towers in undesirable or less useful locations. Typically, these leases and sales require complicated contracts, deal terms, and protracted negotiations through brokers and technical consultancies. Sometimes carriers own their own tower business subsidiary, again requiring large staff and costly consultants. The public is generally not aware of these activities and has no way to participate in this business or activity, which is a disadvantage for both the carriers and the public at large.

It is well understood that Ebay has emerged as a leader for citizens to auction goods directly over the internet, and the Ebay website allows people to auction off items through the internet without having to deal with a large staff or complicated legal agreements. Meanwhile, many Web 2.0 companies, such as MySpace, Itaggit, eHarmony, and Facebook allow people with similar interests or specific needs to meet on line, and allow the exchange of information between people, often resulting in bartering or sharing of knowledge or information. Google has become one of the most trusted sources to find information on the web, because of its powerful searching capability to find postings on many topics. The public is able to access items quickly, efficiently, and at no cost to them. All of these previously mentioned websites allow people to easily and directly interact, without a lot of overhead or hassle.

Unfortunately, however, customers of internet or telephone service are generally viewed by the carrier as passive subscribers, paying a monthly bill to the telecom provider but not actively participating in the engineering or business improvement of the telecom provider's service. Today, telecommunication customers generally have no ability to readily participate in the improvement of services or the quality of their

provider, or to actively play a useful role in the distribution of the telecom company's capabilities, except through the action of calling customer service to complain about their personal service experience. Today's telecom end-user customer is virtually powerless to readily participate in the improvement of delivery of service of a commercial telecommunication company's product, and is thus shut out from benefiting financially from any such improvement that that individual customer might otherwise be able to offer. While there may be special cases, where "someone knows someone at the telephone company who has a problem", by and large, telecom companies have no way to readily scale or access the interests of individual customers who have a willingness and interest to help improve their own telecom experience, while also helping the carrier.

In short, today, there does not exist a system or method or apparatus that allows for the general public to easily alert or notify their telecommunications carrier, or any carrier, that they are interested and willing to offer their premises to allow the carrier to improve service. Further, there does not presently exist a public clearinghouse where carriers can explore readily (and without public knowledge, if so desired) available tower sites or available real estate or land available to their business needs. Not only does the public lose the ability to help the carrier, but the carriers also lose out because they are not aware of those customers who would be willing to help them with infrastructure or over-the-air monitoring needs. Instead, carriers pay high priced consultants in a close marketplace for infrastructure acquisition, thereby missing out on a virtually unlimited untapped number of viable sites for use by their businesses.

Currently, companies such as Tropos Netwtorks, and the MotoMesh and Canopy products (by Motorola), and many other companies are offering wireless telecom gear that can offer communications network connectivity, where network traffic is sent wirelessly through one or several nodes of a network over a geographic area such as a city. An example of this was explained at the 2006 Texas Wireless Summit conference by a Tropos Networks executive, Oct. 2006, in Austin Texas. Many cellular, WIMAX, and Wireless Internet Service Providers (WISPs) today are deploying cellular or hub and spoke networks using line of sight radios at 900MHz, 2.4 GHz, and 5 GHz in various unlicensed (and sometimes licensed) bands for backhaul, and cable television over wireless and T1/T3 wireless replacements are sure to emerge as a vital marketplace.

WiMax and 4th Generation cellular, with increasing bandwidths, will require more tower/site locations per square km, in line with the Power vs. Bandwidth tradeoff, that requires that more towers per square kilometer be used when the operating bandwidth increases for a given transmit power. See Wireless Communications: Principles and Practice, c. 2002, Prentice Hall, written by the inventor. Many cellular carriers, public/private network carriers, municipalities, WISPs, etc. today struggle with finding suitable towers or rooftop locations, or struggle gaining access to water tower locations, and are often hindered by zoning ordinances, lack of public understanding, or knowledge of why and how they could easily place their equipment to serve customers. Even though many rural residents would love to have wireless service, it is difficult for many WISPs to deploy broadband networks with limited capital, and the difficulty with dealing with town ordinances, neighborhood covenants, and other restrictions, regulations, or bureaucracy involved for gaining permission to use or erect towers and other infrastructure deployments.

As an example, in today's implementation of Mesh or WiFi Networks, the deployments of such systems usually rely on a particular municipality (muni-wifi customer) to have its own tower infrastructure (for example, city lamp poles, or water towers or police towers near city hall, etc.) in order to build the system. Keeping track of this infrastructure currently is difficult, often requiring consultants or different software, operating in a stove-pipe fashion, across different municipalities, where there is little or no public way to view or add to the knowledge base of the infrastructure.

An important emerging trend is that as carrier frequencies go higher, and as digital signal processing and modulation techniques such as MIMO and OFDM improve, the physical size of antennas will decrease, or at least become distributed in space, meaning that the future tower structures and physical size of antennas needed for telecom's wireless communications links will shrink. Cooperative networking, mesh networking, and peer-to-peer communications will also likely evolve, making the base station infrastructure less different then the end user equipment, and less bulky than today's infrastructure. Thus, towers of the future will not need to be today's large, bulky and ugly cellular or line-of-sight microwave variety, but will be much more lightweight, less obtrusive (e.g. skinnier), and more convenient, less expensive, and readily available

for use on rooftops, billboard, church towers, or home TV or ham towers, and requiring many more tower locations per square kilometer than today.

Wireless equipment is being installed throughout the world to bring telephone and internet services in locations where broadband previously did not exist. This is trend is certain to remain in other countries throughout the world, and most particularly in countries such as China, India, and other emerging nations that have a strong need to be connected on the world's telecom grid, e.g. the world wide web or telephone network. Because of the necessity of towers or antennas, and associated network equipment, to be situated at particularly good radio locations that are specific to each telecom company and their customer's specific locations, and given each carrier's need is specific to their own network's specific design criteria and history of evolution, and because of the radio propagation aspects and geographical impact associated with wireless transmissions, it has been heretofore impossible for telecom companies to engage in direct communication with a large customer base, in order to energize and engage its customer base to help its product and service delivery.

Today, the inventor envisions very early signs of what will eventually be the "democratization" of the telecommunications infrastructure industry, where all users may participate in helping carriers locate infrastructure, and where open-access spectrum will require that all subscribers of any particular carrier be allowed too use the spectrum and services of competing carriers. Today, end user customers are willing to subscribe to satellite TV services, such as Echostar or Direct TV, and as part of that service, home owners allow the satellite carrier to bolt antennas and cables onto their homes or on masts in their yards. These satellite services require that a technician come directly to the end user's home, and in a matter of just a few hours, the technician installs a satellite dish and receiver on the roof, yard, or telephone pole or tree of the end- user's property, often having to drill holes through the exterior of the home, or through a wiring cabinet to bring the cable into the end users home, all the while hammering/bolting hardware to the exterior or roof of the home. Customers are willing to allow equipment to be installed at their premises, as shown by the satellite TV industry, and its very rapid growth in just a few years. While satellite dish antennas serve the individual homeowner, the satellite system is a receive-only system and the equipment installed at the homeowner does not

allow the satellite provider to improve the delivery of its content to neighboring houses or neighborhoods. Furthermore, there does not exist a public clearinghouse that lets others know which homes have satellite dish equipment in their yards, and which do not. But this example is an early indicator, illustrating how citizens are now willing to have alien telecom equipment installed on their own premises, and to allow a technician to climb around on the roof, yard, and drill holes in the house, if it provides some benefit to them (e.g. gives them the ability to watch satellite TV). Note that satellite antennas being installed today by Echostar and DirecTV are relatively small and unobtrusive, which is a harbinger of future wireless technologies.

Today, customers do not have a methodical, computerized way of receiving perks or bartered value in addition to improved service from carriers, in exchange for giving carriers the right to install and operate the carrier's special equipment on its own property. However, if the carrier was able to communicate and take inventory of each end user's capabilities, the carrier could derive great value in its business and technical operations beyond just servicing the end user, in exchange for the end user's willingness to allow the carrier access to its dwelling and property for the carrier's overall benefit. End users, if allowed to provide access to carriers, could enjoy the goodwill of the surrounding neighbors, as they would be acting as a provider and enabler of services that would benefit households around them.

Today, thousands of small, medium, and large telecom companies, such as wireless cable companies, wireless Internet service providers (WISPs), and mainstream wireless carriers throughout the world such as those companies mentioned above are deploying wireless broadband networks, using an inventory of towers and or building structures where they have access, to deliver last-mile services, but with no ability to enlist or solicit the interests of ordinary citizens or even hobbyists who, if they were aware of the opportunity, might be willing to offer assistance to carriers. Today, the telecommunications industry is unable to solicit the help directly from its customer base, or from the citizenry at large, because of the previously mentioned technical difficulties and trust issues involved with tower and equipment site selection, and the sheer lack of ability to communicate the needs and wants and capabilities of the service provider, and the needs and wants and capabilities of the end customer, in an easy, clear, and orderly

manner. There has not been, to date, a trusted source that carriers can rely upon to broker communications directly between end users and the carrier, itself. That is, there has not been, to date, such a "convener" for the telecommunications industry that would allow carriers to tap the interest of its end user customers to aid it in the rapid expansion, or improvement of quality and capabilities of telecommunication services, particular broadband, multimedia, WiFi, WiMax, cellular, satellite, public/private network, RFID or sensor based mass- communication networks, and at lower design, operating, and ongoing cost levels. Furthermore, as shown herein, there are enormous benefits for the provisioning of network services and content, on a localized or specific end-user basis, through the establishment of a trusted clearinghouse.

Summary of Invention

An exemplary embodiment of this invention is to provide a system, method, process, and apparatus that will dramatically enhance the knowledge of available wireless network infrastructure locations, which will reduce the costs of antenna, equipment, or tower site acquisition, dramatically improve the ability for carriers to deploy wireless networks from a cost, efficiency, and quality standpoint, and provide previously unavailable, non-obvious, and unknown methods, systems, processes, and techniques for carrier networks to be augmented or built from scratch more efficiently through the aid and participation of end users. In addition to the assistance offered by citizens through this invention, the invention further contemplates the public at large being able to contribute to and expand the knowledge base that may be exploited by both carriers and end users, since the invention contemplates that ordinances, laws, zoning regulations, technical details, and graphical data such as plat maps, topographical contours of land, and radio coverage zones, as well as educational information and public data, be made available through the disclosed clearinghouse. From this expanded knowledge, the invention exploits the clearinghouse to provide the ability to monitor and control large numbers of wireless devices across different networks and frequency bands for enhanced operation, based on location specific information. The invention also allows for location-

specific content, such as advertising, to be provided to particular groups of telecommunication users in specific areas where infrastructure exists.

The present invention allows the customers of a carrier to benefit from better service, lower price for service, as well as receive benefits from the carrier for being a "helping" or "value added" customer, etc. while the carrier is able to use the "helping" customer to improve its service or better utilize its resources, better locate its infrastructure, and improve its capital expenditures. In the specific case of a telecom carrier, more effective, reliable and cost effective provisioning and placement of network gear, antennas, bandwidth allocation over its geographic region, more effective equipment or tower locations, etc. results from awareness and access to end users who are in a position to help the carrier. Furthermore, with this clearinghouse and included database comes the ability to monitor, in real-time or in non-real time, through automatic or manual processes, the performance or quality experienced by various end users and to provide rank ordering of various carrier services for end users in various locations throughout the earth, so that either/both the clearinghouse or an end user of wireless telecommunications services (or even a third party) may enjoy and archive/remember/know the performance or quality of service, such as performance metrics of wireless service, availabity of service, a ranked list of preferred carriers, etc., as a function of where the wireless end user wishes or plans to use wireless service. The clearinghouse and database further allows localized content to be delivered to particular end users, or users in particular local areas, in a way not contemplated before.

It is the complexity of tower height, tower engineering and installation, antenna design and radio propagation fundamentals, and town ordinances and restrictions in neighborhoods, combined with the often secretive nature of a network operator's approach to coverage and quality issues, that has led to the current state of affairs, where specific companies and high priced consultancies serve as tower owners or brokers, and where specific, specialized companies provide for the telecom carrier detailed technical or electrical services, such as antenna engineering or propagation design, or access to building structures or towers, at higher costs than what telecom companies would likely pay if they otherwise could deal directly with their end customers in a non-confusing and trusted way. Not only is wireless infrastructure a problem for carriers today, but there

are instances where a carrier would like to install power conditioning, wired infrastructure, vehicles, parking places, or backup equipment or gear in a particular location, and if the carrier could locate such devices or infrastructure on a particular customer's premises, it would be of great value to the carrier, particularly if the end user was trustworthy, had expressed an interest and willingness to help the carrier, and gained some consideration (e.g. free internet or payments to help with her power bill). The invention solves the problem stated in this paragraph, by democratizing the site acquisition process, and furthermore builds on the inherent knowledge created through the clearinghouse to create powerful quality/performance monitoring as well as localized content provisioning.

Mobiledea and its extension, CellReception.com, were started by Allen Tasi. These are firms or websites that use the FCC database of tower locations, and plot the approximate coverage for customers to see using Google Maps. These websites also allow customers to share comments on cellphone reception. Consumer-based websites and companies such as Mobiledia.com and CellReception.com provide revenues for the website owner by allowing for advertising by companies such as Radio Shack and various cellphone vendors, and the sites provide for public comments regarding cell reception, individual cellphones, and other cellular and wireless issues, but they do not serve in a clearinghouse capacity as contemplated by this invention. Antennasearch.com is a website provided by General Data Resources that provides a search of various public domain databases regarding tower locations and tower filings, such as the database provided by the FCC website that lists all tower locations and pending tower applications. Antennasearch.com generates an on-line report that shows a map of tower locations for a specific street address or zipcode. The on-line report may be completed by someone browsing the worldwide web. Google has recently begun to show the location of WiFi hotspots (infrastructure locations) on its Google Maps or Google Earth applications, in order to provide a position location capability for end–users. However, Google, AntennaSearch, and everyone else for that matter, has not offered a clearinghouse that allows any citizen or any carrier to exploit a database of wants and needs in order to create a marketplace for determining available infrastructure sites, and furthermore has not exploited such a clearinghouse in order to provision, monitor, or control wireless

networks for the benefit of end users or carriers, nor has anyone further exploited such a database to offer localized advertising or site-specific content.

Clearly the aforementioned companies, services, and websites do not allow customers or the public to offer their own assets for the deployment of telecom services, nor do they shed light on antenna regulations, zoning ordinances, RF planning (suitable for specifying new or inventoried tower sites), or neighborhood restrictions. These types of websites furthermore offer no forum to exchange or add public domain documents pertaining to town ordinances or covenants for neighborhoods in specific zip codes, which would be of great value to end users, the public, and carriers wishing to serve that particular area. Zip codes are a popular sorting technique for parcel delivery services that are scheduling using the world-wide web for companies such as FedEx, DHL, and UPS. These websites also do not allow a carrier to discretely determine which of its customers, or potential customers, might have some land, tower site, rooftop, or building that he would be willing to allow the carrier to use for buildout of its network. Thus, there is no attempt currently to create a clearinghouse of telecom infrastructure assets, which may further be exploited to offer the capabilities disclosed herein.

Use of mapping technologies and applications such as Google Maps or a GIS package, such as the USGS, or commercial programs such as those made by EDX Engineering, Wireless Valley Communications (now owned by Motorola), Comsearch, Celplan, etc., are well known in the art. In schools across the world, students are learning how to interact with Google Maps and other GIS applications, even when they have no or little regard for wireless theory, telecom regulations, the needs of the telecom industry, or RF propagation. For example, at the Massachusetts Institute of Technology (MIT) in Spring 2007, a computer science course on pervasive human-centric and mobile computing (MIT 6.883 taught by Larry Rudolph) had students using Google Maps to create circular contours of hypothetical tower locations, without regard for tower zoning ordinances or RF coverage or equipment installation guidelines, and with no contemplation of the invention disclosed herein. The user's manuals for these mapping technologies and applications , and the course notes and links to information which are posted on the worldwide web for the Spring 2007 Class of 6.883 at MIT are hereby

incorporated by reference. It should be evident that none of these contemplate or make obvious the invention disclosed herein.

See:

http://people.csail.mit.edu/rudolph/Teaching/home883.html, and

http://people.csail.mit.edu/rudolph/Teaching/ps1.pdf

This patent describes a computerized "convener" apparatus, system, and method where individual citizens or businesses of a community may offer the use of their homes, land, building structures, outbuildings, apartments, billboards, churches, water towers, towers, trees, light poles, barns, and any other possible location on or about their premises to eager telecom service providers. Up until now, telecommunications companies were not able to alert a wide customer base that it needs a specific tower located at a particular latitude and longitude or street address, for example, that it needs a tower that complies with neighborhood covenants, town ordinances, and yet requires a tower that permits RF propagation with a signal strength (say of -70 dBm), and a particular front to back ratio (say of 20 dB) at a particular address or geographic region in order to cover a particular neighborhood that is just out of reach of its existing towers. Until this invention, a telecommunications company could not acquire the information from its large customer base as to who would be interested in helping them with a specific tower location. It simply has not been done in the history of the telecommunications industry, and this invention solves this unmet need to allow both customers and telecom providers to benefit. Furthermore, this invention provides the key to offering services to end users and to carriers, as well as third party intermediaries as the telecommunications world evolves to an open-standard, where end users may share the networks of many competing providers.

Today, carriers are often secretive about where they have service problems because it may alienate customers in that area, and could allow competitors to seize opportunities where the carrier is known to be having poor quality or coverage problems. This invention solves this problem, among others.

Furthermore, this patent describes a new kind of apparatus, system, and method that can exploit the inventorying and clearinghouse information provided by end users, carriers, and the public, in a form such that it may be franchised or distributed in a

private label or Original Equipment Manufacturing (OEM) manner, and where the systems and methods described herein may be offered as a trusted service by carriers, non-profits, for-profit companies, governments, intermediaries and the like, either across specific customer types, or within specific geographic localities.

This invention applies to any carrier-based system, but is preferably used for a telecommunication network, no matter what the distance is between users of the network, whether it is wired or wireless, or what the transmitter-receiver separation distance is of wireless components, or what the technology, modulation, access method, etc. may be. That is, this patent is not limited to wireless, optical, cellular, WiMax, Mesh, WiFi, RFID, LMDS, cable, or satellite, and not limited to fixed, mobile, or portable operation by users, as it is intended to be used in its broadest form, as would be understood by one skilled in the art in deploying, designing, operating, or using such a network that has end users, and where infrastructure is needed and must be located, at physical locations, for carrying out communications, either wired or wireless communications, and also as well anticipating the provisioning of an open access environment where federal or local regulations require end users to have access or the ability to specify or select (either manually, pre-selected, or automatically on-the-fly as the wireless device is used by the end-user) more than one single carrier for broadband access with a particular end user and/or her device. Thus, this invention serves the needs of indoor/enterprise networks or femtocells within public or private buildings, as well as microcell or macrocell cellular network usage and coverage ranges, emerging WiMax systems, satellite systems, future cable TV/wireless networks, and city/county, country, or worldwide networks, and public safety networks, whether public or private.

Furthermore, this invention may be extended beyond telecommunications, and may be applied to any carrier-based service, where subscribers pay for an on-going service over a period of several days, months, or years, and where participation of the end users, and direct interaction between the carrier and the users could improve the efficiency, quality, business operations, or technical operations of the carrier over its serving areas.

The invention allows a 3rd party entity (A person, or a corporation, say a website company, or tower holding company, or an intermediary, for example) to offer inventory

and polling services to carriers and the carrier's customers (end users), as well as to the public, through the use of the knowledge-base that is created from the clearinghouse of interested citizens willing to assist telecom companies.

The invention further allows a person or a carrier or an intermediary to inform, educate, and solicit inputs from its customers regarding its customer's interest or ability to help the carrier with expansion, alteration, or improvement of the carrier's network, or on multi-carrier networks, through the use of the knowledge-base that is created from the clearinghouse of interested citizens willing to assist telecom companies.

The invention provides a system and method and process that allows a person or a company, such as a publisher, a Web 2.0 company, a carrier, or a trusted web portal, to offer an e-magazine, a printed magazine, a newsletter, a website, and/or an internet blog, where each may include an inventorying service between one or more carriers and its customer base of end users, such that end users are able to provide the carrier an inventory of their assets that may be used to help the carrier(s).

The invention provides a system and method and process that allows a person or company, such as a publisher, a Web 2.0 company, a carrier, a tower holding company, or a trusted web portal, to offer an e-magazine, a printed magazine, a newsletter, a website, or an internet blog, where each may include a bartering system and method between one or more carriers and its customer base, for the bartering of installation or redeployment of equipment at the end user's dwelling in exchange for compensation of some type from the carrier(s) or an intermediary.

The invention provides a system and method and process that allows a person or a company, such as a publisher, a Web 2.0 company, a carrier, or a trusted web portal, to offer an e-magazine, a printed magazine, a newsletter, a website or an internet blog, where each may include a registration system and method between a carrier and its customer base, whereby end user customers may register to express interest and ability to support equipment at their dwelling with one or more carriers, and where each may include a system and method that allows a carrier to execute an agreement regarding the installation or modification of telecommunications equipment at the dwelling owned or or used or controlled by end users in its customer base, with pre-negotiated or selectable terms for remuneration, or with terms handled over the internet or through computer

access, thereby eliminating the need of costly lawyers and protracted, cumbersome negotiations for site acquisition which is the state of affairs today.

The invention provides a system and method and process that permits carriers or an independent clearinghouse, or a third party intermediary, to communicate with end user customers, or the wireless devices of end-user customers, in order to aid the end-user in determining how and where new or existing telecommunications assets may be deployed or where service and which service is best or more preferred to the end user, while allowing performance or quality of service knowledge or rank ordering of available telecommunication services to be provided to a wireless end-user. The invention furthermore allows for the control of the operation of a wireless device for enhanced operation, in a particular location based on a ranking of performance or specific requests (made either automatically or as preset) by an end -user, or carrier, or a clearhinghouse that provides knowledge on multiple carriers.

The invention provides a system and method and process that permits a clearinghouse to communicate with end user customers, or the wireless devices of end-user customers, in order to allow the clearinghouse to monitor the radio operating conditions and location of end user devices, whereby the monitored radio operating conditions and locations may be stored, processed and used to update the clearinghouse for monitoring wireless network performance and quality.

The invention provides a system and method that permits a carrier, technician or the end-user to determine how and where new or existing telecommunications assets may be deployed or are available. The system and method is available to the end user, and allows one or more carriers, or a clearinghouse with knowledge of multiple carriers, to provide measures of wireless quality and rank ordering of available telecommunication services to a wireless end-user, for the benefit of the end user, or to control the operation of a wireless device for enhanced operation, in a particular location based on a ranking of performance or specific requests by an end -user or carrier. Furthermore, the invention provides a system and method that permits one or more end users to report their observations of wireless performance and quality, or rank orderings thereof, as a function of location, to the clearinghouse so that the clearinghouse may maintain archived or updated knowledge of wireless quality as a function of location throughout earth.

Samsung Ex. 1004, Page 236 of 305

The invention provides a system and method and process that allows a person or company, such as a publisher, a Web 2.0 company, a carrier, or a trusted web portal, to offer one or more of an inventorying, registration, lease agreement execution, and bartering service, system, or method to specific types of real estate owners in order to aggregate the assets available to form a database for the clearinghouse.

The computerized system according to this invention serves at least two types of customers: end users or carriers, with password protection and opt-in capabilities where the end users may chose to have their availability/interest in supporting carrier needs shared among more than one carrier.

The computerized system according to this invention provides the entry of customer interests/desires, customer data, and provides access to documents such as town ordinances, town zoning rules, neighborhood covenants, and contracts or sample contracts or agreements between telecom carriers and end users for allowing end users to aid the carriers under mutually agreeable terms.

A computerized system according to the invention allows end users or carriers or a third party to add documents such as town ordinances, town zoning rules, neighborhood covenants, state or local laws, and contracts or sample contracts or agreements between telecom carriers and end users.

A computerized system and method where a graphical information system (GIS), such as (but not limited to) Google Earth, MapInfo, USGS, is used with a database of infrastructure locations provided by end-users through the clearinghouse in order to aid carriers or end users for determining radio coverage footprints or possibly useful/valuable infrastructure locations.

A computerized system according to the invention allows radio propagation prediction algorithms to be run using the GIS and equipment models in order to determine coverage regions, obstacles due to terrain or buildings, and viable locations for towers, antennas, repeaters, nodes, and end user premise equipment.

A computer system according to the invention can be built upon a database of customer needs, and may also include carrier needs, that allows the rapid sorting and pinpointing of available locations for a carrier or other party to build, lease, or use a Dwelling or existing location for improvement of services.

A computer system according to the invention allows end users to learn about telecom laws, ordinances, opportunities, and technical details so that they are more knowledgeable and interested in assisting telecom carriers in the provisioning of telecom networks.

A computerized system according to the invention allows end users to rank their happiness or satisfaction with their carrier, or with information providers to the clearinghouse, after entering into a relationship through the "convener" clearinghouse, and where carriers or other parties may also rank their happiness with end users, as well.

A computer system according to the invention includes a database of locations of end users who are willing to assist with the provisioning of telecom services at their premises, combined with RF coverage details that enable the determination of promising locations of towers or structures (either existing or to be built), combined with legal records such as covenants, town ordinances, combined with plat maps or zoning boundaries, so that a telecom carrier or end user can quickly and easily see what is viable for provisioning of telecom services. One embodiment of the invention allows for the computerized system and method to automatically determine the best locations from a wish-list provided by one or more carriers or third parties, based on the available public records and end user inventory of locations available.

A computer system according to the invention allows for an educational or newsworthy web publication or paper publication to be created rapidly from content stored on a computer, where such web publication or paper publication may be private labeled or customized specifically for a particular carrier, neighborhood, locality, or group of people or specific entities/customers.

Description of Figures

This invention will be further understood through illustrations provided in the accompanying figures, which are now described.

Figure 1 is a block diagram of the clearinghouse computer system, including applications that run on the computer system, the types of interfaces provided to end-users, and the types of users of the clearinghouse.

Figure 2 illustrates an embodiment of how the database of the clearinghouse system is organized, and the types of information and records maintained for each of the types of users.

Figure 3 illustrates an example form that is completed by an end user or carrier for input to the clearinghouse system, using the various types of available interfaces.

Figure 4 illustrates a flow diagram of how the clearinghouse determines matches between the end user interests, the carrier's infrastructure requirements, and local ordinances that apply, and how the clearinghouse notifies the carrier. This also can assume an automated process that may have carrier involvement/intercession if required by the carrier to notify end users that they may be of assistance to the carrier's needs, and the terms and conditions available to the end user. Not shown, but implied, is the ability to generate lease forms or business forms needed to codify a legal and business agreement between end-user and carrier.

Figure 5 illustrates a database, which may be a primary database or back-up database, which is accessible by various users of the clearinghouse, and which may be refreshed or updated upon computer command.

Figure 6 illustrates the various applications that may be actuated by the invention, and which are available to users.

Figure 7 illustrates a mobile device and how it may be connected by wireless or wired means through the worldwide web to the clearinghouse.

Figure 8 illustrates a mobile device and how it may report its observations of its location, as well as network quality and the available spectrum back to the clearinghouse.

Figure 9 illustrates a mobile device receiving information from the clearinghouse so that a mobile device may be manually or automatically configured for improved wireless operation.

Figure 10 shows a flow diagram of how a clearinghouse works with a wireless device, such as a cellphone, to enhance wireless performance at the wireless device.

Figure 11 shows a flow diagram of how the wireless device reports its observations to the clearinghouse for ranking of possible wireless connection options, and updating of knowledge of wireless environment at the clearinghouse.

Figure 12 shows a flow diagram of how a wireless device is able to receive updated information about its operating parameters, based on the knowledge of the operating environment by clearinghouse, so that the wireless device may be sent instructions that cause the wireless device to be automatically tuned to appropriate frequencies, air interfaces, and other operating parameters to provide enhanced operation for the particular wireless device, or the entire network.

Figure 13 shows a diagram of wireless infrastructure using an Internet Protocol (IP) network backhaul from the base transceiver station (BTS) or switch. The BTS or switch, as well as infrastructure components closer to edge of the wireless network, are coupled to the clearinghouse using IP or world wide web addressing, where through such addressing, advertising content is provided to particular pieces of infrastructure through an advertiser server that may be located centrally or may be integrated and coupled to various wireless infrastructure components.

Figure 14 illustrates a flow diagram of how local advertising may be cached or stored at the clearinghouse and may also be optionally distributed to local ad servers throughout a wireless network.

Figure 15 shows a flow diagram of how the clearinghouse may be used to provide local advertising content by identifying the requested IP address or worldwide web address requested by the wireless device (wireless user) and by formatting data suitable for interpretation by the wireless user.

DETAILED DESCRIPTION

This invention uses a computer, also known as a central processing unit, or CPU, which may be a single computer, a web server, a cluster of web servers, or some other configuration of computing equipment, whether in series or in parallel or distributed that is able to obtain information through telephonic, text, voice/telephone, internet communication, or other methods known now or in the future. The computer runs programs and algorithms in order to prompt and to determine an end-user's interest in adding his or her property and locations, and facts about the available real estate that the end –user wishes to make available. The computer provides for the storage of provided information in memory of the computer, for use in the clearinghouse repository. The CPU is also understood to use memory for storage and retrieval of operating instructions which dictate the proper operation of the website, the response to various inputs from users via the worldwide web, telephone, or other various interfaces, and the programs needed to interpret inputs, store and process the received information, and to properly format and display the information, and also uses memory to retain information stored in databases, where such databases represent the details provided by end-users, or carriers, or which represent data that has been obtained through the use of web-crawlers from public websites, as further described in the accompanying figures.

The computer interacts with employees from carriers, or from the computers of other companies, such as carriers or tower companies, or from public websites, as well as from intermediaries that may help to store, cache, process, or post data to memory (where such memory is coupled to the clearinghouse computer, or elsewhere) in order to determine the specific needs and interests of the carrier or tower company. The computer is able to provide or process one or more of: automated voice prompts, speech recognition, touchtone recognition, web-based communication, handwritten, or human to human interaction, and so on. Through the computer interface, and the associated systems and methods described subsequently, end user customers of telecommunications services are able to make its telecom carrier, or, optionally, even potential competitors to their current telecom carrier, aware of his or her ability and/or interest to help carriers with

their distribution of telecommunications services through the use of their own premises. Similarly, the computer interface and associated systems and methods described subsequently allow a carrier, a public organization, or optionally the general public to be aware of the locations at which citizens are willing or interested in allowing their locations to be used to house telecommunications infrastructure.

Below are some useful definitions of terms used throughout this patent.

Dwelling or **Premises**: any property, building, outbuilding, structure, tower, vegetation, or land, or any thing on or in or over or under a property occupied or used or controlled by an end user for which the end user may wish to make available for use by others. The definition of "dwelling" may also include one or more rooftops, silos, billboards, trees, church steeples, poles, towers, ledges, parts of a building, outbuildings, lookouts, extensions to buildings, or signs, and/or any improvements.

Carrier: Any company or entity that offers services to an end user on a regular basis over time. The term "carrier" is intended to be given its broadest possible meaning, as it is meant to describe companies that offer to end users services such as telecommunications, connectivity, entertainment (such as movies, cable, multimedia, music, on all possible media and all possible delivery mechanisms), AC power for the home, mail delivery/retrieval, archiving or storage, inventorying, cleaning, yard maintenance, water delivery, laundry service, and the like.

End user: Any person or entity that participates in an ongoing service from a provider. An end user may be someone who simply stumbles across the clearinghouse disclosed herein, who browses or interacts with the clearinghouse only one time, or someone who interacts with the clearinghouse many times, and who may even list their infrastructure location with the clearinghouse disclosed herein. Alternatively, an end user may be a telecommunications subscriber or a clearinghouse participant who obtains cellphone or internet service from a telecom carrier or quality/ranking/performance information or local content from the clearinghouse. End-users may also include those people or entities which are not yet subscribing to the service offered by a carrier or the clearinghouse, but who have interest in participating and inquiring about the content of the clearinghouse and possibly contributing assets or capabilities to the clearinghouse or to a carrier, either from their own personal interest or edification, or because they hope to

gain some benefit or remuneration of some kind at some point. An end user may be a person, but also may be an entity or an enterprise, such as a church, and apartment building complex, a co-op of people, a shopping mall, a car dealership or chain of car dealerships, or a business, either stand-alone or spread out on a campus or throughout the world, for example. End-users may be people from the general public, or may be a typical user from a specific type of user population (for example, employees within a large corporation may be end-users of the invention, if the invention were implemented in an enterprise fashion for a particular corporation. As another example, not meant to be limiting, an end user could be a ham radio operator who is a member of the American Radio Relay League, ARRL, if the invention were made available to all ARRL members). Other examples are readily understood.

Computer: May be a single computer or a group of computers, or CPUs, which may include associated circuitry and components, such as banks of memory (storage), back up gear, displays, human and machine interfaces of various kinds, parallel computer processors, distributed computer processors, distributed or single connections to the internet, distributed or single displays or editing/viewing capabilities, one or more web servers, mail servers, and multipurpose servers and routers, or any coupling of computerized components that allow for one or more of: telephonic answering, touch tone interpretation, voice recognition, handwriting recognition, facial or fingerprint recognition, stylus recognition or typed data entry (either directly from a keyboard, via telephone or internet connection, from a phone, over wired or wireless or optical connection), text recognition, file transfers, data transfers, file caching, file storage or entry or manipulation, running of software, hosting of applications, running of applications made up of computer programs from one or many sources, where components and software are coupled or combined as known to one skilled in the art. The term "Computer" is to be construed in its broadest interpretation, as the invention may clearly be practiced at a single location, distributed across a country, a city, or used worldwide with a network of computers and backup storage located throughout different continents, as it is contemplated to host at least one website, and to enable connections of the website with and between end users and carriers. This specification describes the operations implemented on a computer, but it must be understood that a computer with

memory may be implemented in many ways, and that the computer of the clearinghouse may need to directly or indirectly interact with other computers and databases as provided by web intermediaries, such as Akamai that can cache/store/stream content, Rackspace or INetU, that can provide web hosting, and so on. The disclosed invention, including the computer (CPU) described herein, is understood to include the ability to interface using some or all of these known techniques for hosting a web-based clearinghouse for end users as described herein through the use of sub-contractors and external vendors and service providers for internet access and commerce.

Many techniques are known in the art for computers to be able to interact with and assimilate data from people. Consider some examples of telephonic and touch tone phone inputs that are provided by humans and are processed by a computer. Furthermore, voice recognition systems, and voice over IP (VoIP) calls to a computer are well understood today, and it is further recognized that end uses of telecom services, and people throughout the world in general, may access a computer in many different ways using the worldwide web. For example, web interfaces are used in programs for personal computers, and personal computers may be connected via any form of internet connection to a computer that hosts a website. Websites may also be accessed by cellphones, PDAs, tablet computers, such as those made by Motion Computing with handwriting and fingerprint recognition, and many other devices.

Websites which allow for posted materials, updated materials, and graphical and text interactions, even podcasts or videos, are well known in the art, as demonstrated by Google, Inc.'s wide range of web portals, as well as those by eBay, YouTube, Yahoo, and the like. All of these websites and product companies described above use a "computer" as contemplated here. Furthermore, automatic document generators are also well known and are in regular use today, where content can be bundled and packaged into web form, electronic media form, or print form, to have a homogenous look and feel, based on content that is stored in file formats such as files in .XML, .HTML, .BMP, .TIG, .GIF, .PDF and other formats known now or in the future, and through use of JavaScript programming language, and cross-platform techniques such as AJAX (Asynchronous

Java Script and XML), which allows web applications to seem much more responsive by not interfering with normal web page loading.

To launch a commercial website, many companies provide tools and capabilities that make it viable. For example, InetU or Rackspace provide Managed Web Hosting, where they provide a computerized system that a customer (the website company) can use and access through a log in to edit, remove, add, or reorganize content in the form of webpages, downloads, documents, and a wide range of other viewable or useable multimedia forms that may be accessed by the public, or by password protected classes of users who may or may not pay a subscription for access to the website. Also, the website company may choose to simply do hosted services. In order to generate revenue, PayPal offers software and servicers that enables a hosted site to exploit the PayPal developer network to create webpage(s) that allows a website company to securely collect monies from the browsing public, accepting all major credit cards and PayPal currency through web transactions. To maintain databases that contain important information, a website company will use MySQL (open source) or SQLServer, or Postgress as a backend database system to store myriads of data records, for rapid access by the applications running on the computer, and other known document management techniques are used for archiving and retrieving documents, and for accessing applications over the web such as Google Earth, USGS, or county or local city/county plat maps, ordinances, or board meeting notes that are often available on line.

With reference to the drawings, Figure 1 shows an exemplary embodiment of the Clearinghouse system. On the left portion of Figure 1, various types of users of the system are shown. Note that Carriers 10, End user customers 12, and public users 14 each may have access to the clearinghouse 16 via a wide range of interfaces, including web 18, phone 20 or 22 (using cellphone or wired phone or VoIP phone), email 24, or through automated voice recognition or digital recorders (that may recognize speech, handwriting, fingerprinting, etc). The owner or operator or proprietor 26 (and any employees or subcontractors) of the clearinghouse 16 may also access the clearinghouse 16 by these interfaces, as well, and may have one or more additional proprietary interfaces to the system (not shown). On the right side of Figure 1, a number of applications 28, capable of running on the Clearinghouse computer 30, or being controlled by the computer on

distributed processors (not shown), and some applications which may be made available to only certain classes of users (e.g. end users, carriers, third parties, the public, owners/operators of the clearinghouse itself, and so on), are shown and are further described subsequently. Figure 1 also shows that carrier records 32 and end user records 31 are also available to the computer 30, and that a sorting and parsing application 36 is available to process these records. Note that the Clearinghouse computer 30 is preferably coupled to the Internet 38, as shown in Figure 1, so that the various users and user classes may access the Clearinghouse (Figures 1 and 6) and its database (Figure 5) through the Internet (e.g. worldwide web), as well as the other interfaces shown in Figure 1. Note that the Internet access shown in Figure 1 may be a public web connection, or provided on a private network.

The carriers 10 and end user customers 12 may or may not be regular subscribers or participants of the clearinghouse 16. A preferred embodiment is for the clearinghouse 16 to have revenue-generating subscribers, where the carriers 10 and end user customers 12 sign up for access, preferably using credit card (although written check or wire transfer or debit card or purchase orders may also be accepted by the clearinghouse) for monthly or annual billing. The sign up and password management and credit card billing is preferably handled by the credit card sign up and password management application 40 (shown on right portion of Figure 1). This application 40 is preferably run under computer control and provides various prompts through the interfaces for users to enter credit card data, password and user identification information, so that the Clearinghouse 16 may uniquely identify individual users, store their log in and password information, and store credit card information for billing purposes. These data may be stored in a single memory location 42 or in a distributed memory bank or in any other suitable storage medium or database, and would preferably be encrypted for privacy.

By signing up as a subscriber, for example over a year period, carriers have continual access to the clearinghouse and end user database (see Figure 5) during that time, and some of the features that they would enjoy are exemplified by the various applications shown in Figure 1 and Figure 6. For example, a carrier 10 that is a user of the Clearinghouse 16 could provide its current locations of all its infrastructure assets and could also include desired "wish list" locations for infrastructure access through the

carrier records application which is described in more detail subsequently (also see Figures 2 and 3). Based on the inputs, the computer 30 implements the sorting and parsing application 36 to periodically search the end user records 31 provided by end user 12. Note that in a preferred embodiment, the carrier 10 or the end user 12 may specify locations by simply clicking on a web page for "click on map" (not shown in Figure 2, shown on Figure 3 as 310), and then using a mouse or other computer indicating device, may simply click on a map displayed on a webpage in order to express or denote a particular location that is entered as a record 210. This capability is also available to general public users 14, and other users of the Clearinghouse 16 in order to rapidly denote locations of interest.

Figure 3 shows, as an example, both an end user form and a carrier form, that exemplifies what may be used by users and presented by the Clearinghouse for data entry to create information used in the end user records and carrier records. Of course, other data as contemplated within this patent may be included, and is not shown in Figure 3. Also, other approaches may be used to input data to the clearinghouse, including file transfers, catalog entries from third parties that aggregate user information, and other input techniques known to provide inputs of large numbers of customers into clearinghouses and their databases. For the case of a carrier 10 specifying its particular infrastructure needs, the user 10 (the employee, consultant, or agent of the carrier) could simply press "click on map" 311 shown in Figure 3 in the carrier record form, and could identify portions of a map where needs exist as indicated above. Alternatively, carriers 10 could indicate their "wish list" for infrastructure by entering streets, counties, zip codes, Lat./Long. Coordinates, or even text descriptions of where they need coverage, or uploadable files that contain many listings of locations, in GPS or Lat./Long format, address, or zipcode format, etc. such that the computer could interpret the entry to determine the geographic locations of needed infrastructure (not shown on Figure 3, but should be understood from this description). It is clear that carriers 10 could alternatively enter their current infrastructure locations using the carrier records (e.g., entering data on the form in Figure 3-the form in Figure 3 is preferably a computer-fillable form; however, paper based forms and electronic files can be used in some applications. In addition, the information in the form can include or more less information than that

shown on Figure 3). By having some or all of a carrier's infrastructure cataloged in the carrier records database (Figure 5), the Clearinghouse 16 can then better manage the carrier's assets and better display and process the end user databases to meet the carriers current and future needs. For example, the Clearinghouse 16, given knowledge of the carrier's 10 complete inventory of existing infrastructure, could implement the RF engineering/planning application to take into account RF propagation, interference, spectrum use, and antenna patterns to better determine site needs and to provide management of RF planning for the carrier 10. Information generated by the Clearinghouse 16 may be displayed 44 on site or remotely, and different displayed information can be provided to different users 10, 12, 14, and 26.

The Clearinghouse database 510, shown in Figure 5, is accessible by many different classes of users 512, 514, 516 or 518, and is made up of records provided and modified by end users and carriers, as shown in Figure 1 and described above. The Clearinghouse database 510 also includes data that is submitted or provided by the public (e.g. through public websites, through links to external databases, or which is provided as inputs from general public users). Also, the employees/owners/managers/suppliers of the Clearinghouse itself must be able to access and at times manipulate the database. The Clearinghouse computer 30 or a computing system under its control determines the refresh update rate of the database 510, and governs how often the databases are backed up, refreshed, and modified for presentation to the outside world through the interfaces shown in Figure 1. Thus, preferably the various classes of users, when accessing the Clearinghouse 16, are not necessarily obtaining the most recent information provided by all classes of users, but are obtaining information that is updated at a rate specified by or at least acceptable to the Clearinghouse computer 30, which would typically be once a day, but could be more often or less often. Data inputs might be made instantly at the discretion of the computer 30 or outside vendors or other computers which interface with computer 30. The term "database" means all of the data available to the Clearinghouse, but it should be clear when a subset of data is being discussed, the term "database" may only refer to that subset of information. The term database should not be viewed as limiting, as the database for the clearinghouse may be implemented in parallel, distributed, real time, non-real time, and a wide variety of forms known now or in the

future. Note that database 510 may incorporate a wide range of possible data formats, mixed formats, and may include data that is contained at various locations, by various suppliers or vendors. That is, while a MySQL format may be the preferred format for storing data in the database, nothing is meant to limit the way in which the database is formed, as it is understood that the database may comprise a wide range of different sources and formats of data, and in fact the database may be distributed geographically, and provided by many different sources and vendors, such as through Akamai for caching/storage, Rackspace as a web host, and public websites which are accessed by the clearinghouse to provide on-demand or cached versions of public data. This patent intends for the database 510 to include data that may be retained in current and future data formats that may not be known today, and it is understood that various methods for storing/archiving, modifying, and retrieving data, which includes the use of software that is run by the Clearinghouse CPU to provide hooks into/interact with other computers which may control access to external databases, as well as data maintained or owned by the clearinghouse itself, may be contained in database 510. Furthermore, the database may be populated or edited by various sources, including people who are remote or employed by third parties, and web crawlers that may or may not be under control of the Clearinghouse computer 30. Human intervention, to vet or approve data that comes from internal and external sources, may also be used, and the entry of human-approved data may also be included in the database 510.

When matches to the desired needs of the carrier are found in the database containing end user records, a "hit list" of all potentially available properties or locations that are deemed suitable is constructed by the applications. The computer then may implement the email application to send an email to the carrier 10, and optionally also to the end users 12 (depending on carrier preference), or alternatively, the web application may be implemented to provide the "hit list" in web viewable format available to the carrier 10 when they are logged in to the Clearinghouse 16. In this manner, the Clearinghouse 16 may over time allow the carrier 10 to be automatically notified when new end-users 12 offer dwellings for use, either by email or by on-screen notification when they log on or through a messaging feature.

Furthermore, the computer may run the selection/optimizer application 34 on occasion or periodically (on an hourly/daily/weekly/or some other time basis or on a random basis) where the application 34 uses inputs by the carrier 10 that are stored in the Clearinghouse 16. The interval may be determined by the clearinghouse provider 16, or may be selected by the carrier 10, perhaps with a premium being charged for searches that occur more often. The clearinghouse computer 30 preferably runs a computer program or subroutine, or groups of programs or subroutines that may be running in many geographically dispersed locations under control of the clearinghouse, or perhaps on various vendors/suppliers/subcontractors computers as well as on the clearinghouse computer 30, that systematically checks the carriers' needs with the end-user offerings (which are stored and processed using the end user record application and the sorting and parsing application 36). Figure 4 shows a flow diagram, where the computer reads the carrier records 410, and uses the specified data by the carrier to check all of the records in the database attributable to end user records 412. Note that end user records 412 are understood to also include public domain records available from public databases, or from data sources not provided by end users but which are blended with the end user records for sake of the applications being run at the Clearinghouse (e.g. Google Earth may have WiFi hot spot locations, and this information may be included along with end user records that have been provided by citizens to the Clearinghouse). Note that a user of the Clearinghouse may specify the option of including or excluding various public domain databases from the end user database processing, so as to distinctively identify and process only true end user submissions in the various applications. The sorting implemented by the computer to find the carrier needs may be done in any number of ways which are well known to those skilled in the art of computer programming and database sorting. Zip code sort, price/leasing terms sort, physical building type or land use sort, or past history or profile of the end user herself might be used to determine "best" sites that exist in the end user database. As shown in Figure 4, after entry into the clearinghouse 414 and checking of the availability of locations 416, algorithms at 418 that compare the end user database to the carrier needs may include the RF engineering application 29, which provides for RF propagation prediction coverage mapping in determining whether a particular end user entry satisfactorily meets the carrier needs.

Alternatively, no RF propagation may be used, where simple straight line distances, crude address matching or simple text string matches on zipcodes or street addresses, or even county addresses or GPS coordinates (Lat/Long.) are used to determine good matches in the database during the computer controlled sort. The carrier may establish one or more criterion for rank ordering the end user sites, such as based on fee wanted by an end user, the RF coverage of each end user location, the land use or type of property being offered by the end user, or if there are carriers already using the end user site. A hard or soft limit on what should be and should not be deemed suitable may be specified by the carrier, or may be preset by the Clearinghouse in order to manage database sizes and CPU time. A rank ordered list of properties is presented to the carrier at 420, either by email, by a web page hosted by the Clearinghouse specifically for the carrier, or by fax, mail, cellphone alert, or some other known method. Note that the rank ordering may be done in a wide range of methods, where close proximity to the carrier needs may be one rank, or lowest cost end-user access may be another, whereas the ranking may be based on a carrier's preset priority for properties that it needs (e.g. to fill an urgent customer request in a particular location. Alternatively, there may not be any ranking done by the Clearinghouse, leaving the data in an unsorted form for the carrier or third party to analyze on its own. The Clearinghouse may also alert the end users as to potential interest by the carrier at 422, if the carrier indicates in its records that it wishes for the Clearinghouse to do so upon finding a match (this may be done using a canned or prepared message by the carrier in order to entice interest by the end user). The sorting in the Selection Optimizer application may be run over and over again, as often as needed, and alerts may be issued by the Clearinghouse for just new hits, or the most recent several hits, or the entire rank ordered list. Pricing may be instituted to offer premium or basic notification and search results. Interest by the end user can be confirmed by a responsive message by telephone, e-mail or web posting at 424, and non-interest can be provided similarly at 426, which presumably results in a return and rerunning of the search processes. The sorting process may also include a check of zoning and other ordinances at 428 that may have a beneficial or negative impact on the suitability of any particular end user's assets by the carrier.

Alternatively, depending on the business model, the clearinghouse may be implemented without a subscriber model, where carriers and end users access the clearinghouse for no charge. In either case, the carriers or end users may simply be given unique ID's or clearinghouse names using the credit card/password application (their unique ID may be their email address, or a customer–specified log in name), and in any case, these customers are provided passwords (that may either be specified by them, or issued by the clearinghouse) that allows the end users and carrier customers access to the clearinghouse. The various access permissions allowed to each class of user of the clearinghouse is preferably managed by the access to web manager application 33.

The clearinghouse allows its users to connect over the myriad of connections, such as phone, internet, email, etc. The clearinghouse is preferably connected via the internet to allow dissemination of its content over the worldwide web, so that the public can gain access and view/use the information contained in the clearinghouse. The content of the clearinghouse is stored in a wide range of forms, such as databases that may be within the computer, databases that are located outside of the computer, in applications that may be run or managed by third parties, and may include public domain databases and information from links on the worldwide web.

Some of the information may be modified or viewed by different users. For example, and with reference to Figure 2, carriers may view the records of all end users 210 to help the carrier see what opportunities exist for it to locate its equipment, and the carriers could also use the clearinghouse to indicate its own desires, needs, interests, and problem areas where they have need to find locations for equipment in the carrier records 212. In one embodiment, other carriers, end-users, or the public users would not be privy to the carrier's specific desires or needs, but the carrier would be able to use these records. End-users may use the clearinghouse to enter their data, expressing their interest (an offer) in having their dwelling used by carriers. In one embodiment, other end-users would not generally be allowed to see the offers of a particular end-user, but carriers would be allowed to see it. The storing, parsing, controlling, and organization of end-user records 210 is done by the sorting and parsing applications 36 used by the clearinghouse (shown on right of Figure 1). The construction and creation of software applications to do

this are well understood, and this could be internally developed by the clearinghouse staff, or developed using well known third party programs.

All users, including public users could use the clearinghouse to view various zoning/covenants affecting their own neighborhoods. Users can preferably submit records, documents, plat maps, zoning ordinances, or provide web links thereto, by accessing the Clearinghouse and using one of the applications dedicated for such locationing and mounting or linking of records in the Clearinghouse. Thereby, all users of the Clearinghouse can readily access public records 214 in an easy manner, such as key documents, zoning records, or other public ordinances surrounding telecom regulations in their specific location, neighborhood, country, or city, etc. Such records can be mounted in the Clearinghouse and sorted using either Zipcode, city, county, township, state, country name, whereby applications allow the documents to be retrieved and stored in a manner that makes them easily retrievable and accessible by users of the Clearinghouse. For specific classes of users, such as end users and carriers, for example, lease agreements, which provide for the business and legal terms for a legal contract between an end user and one or more carriers, may also be available for download, execution, and upload between parties, where the Clearinghouse serves as the agent that provides this capability. By law, some documents may need to be notarized or faxed, instead of uploaded, but the Clearinghouse could nevertheless provide the appropriate legal documents and store them, crossing the transaction between the parties, and may also participate in a commission, either one time or on going during the lease of the end user property. Carriers and perhaps even end users could provide the Clearinghouse with a small commission, on the order of 2 or 3%, for the monthly rental charge paid by the carrier to the end user, and this could be automatically deducted from credit card or electronic banking funds, or other means known now or in the future.

Note that some documents may be uploaded to the Clearinghouse by PDF or other well known document formats, or may simply be pointed to using URL addresses or other techniques known now or in the future. Services such as Google or webcrawlers or web bots may also be used to provide the clearinghouse information, through end user records 210, carrier records 212 or public records 214 as shown in Figure 2, and in many instances a particular map or document might need to be categorized under a state or

national as well as local category. The Clearinghouse computer could maintain this data in its own storage facility (e.g in its own internal database), or rely on the web-based storage of other websites as part of its overall database 510 (although this latter approach may mean some data disappears or becomes incorrectly pointed to over time).

Figure 6 shows a number of the same elements as Figure 1 including the computer 30, display 44, internet connection 38, as well as a variety of applications 28 for covenants and/or plat maps, city planning and zoning ordinances and neighborhood covenants, Google Earth , GIS or other mapping applications, forums and exchanges including chat features, education and customer content, re-engineering applications, and proprietary or public RF Design. Figure 6 also shows customized advertising or web content provided to homeowners or other end users 610 and carriers 612. Carriers, end users and public users may access the Clearinghouse with phone banks, web servers, telephone operators (either its own phone operators, or through a leased or rented call center, or using a 3rd party provider for telephone answering services), automatic speech recognition devices (not shown), voice mail, or digital recorders and email servers. Note that some or all of these may be used in an actual embodiment, and it is understood that other embodiments other than the one shown could be used, based on the cost or preference or technology or rollout of the Clearinghouse. It should be clear that not all applications shown in Figures 1 and 6 would need to be installed or used at once, and one skilled in the art can envision different applications, or different approaches to organizing content, or subsets of the applications, or a merge between some of these applications could be implemented over time, while keeping in the spirit and intent of the invention.

Given the aggregation capabilities of the Clearinghouse, advertisers, attempting to focus on various customer segments, can preferably provide advertising to the various users of the Clearinghouse, either through email, the website display, through voice mail and video/multimedia services when users access the Clearinghouse, and through regular mail, based on the address records contained in the end user records and carrier records applications. Web advertising is an emerging business, and the Clearinghouse would serve as a highly targeted and useful medium for advertising over many domains, given the new capability and targeted clientele afforded by the present invention. The email application may also be used by the Clearinghouse, itself, to send email alerts to users of

the Clearinghouse (e.g. to end users or carriers, or to the public which has registered their email with the Clearinghouse), and the web application may be used by the Clearinghouse, as well, to provide web postings to specific users who are allocated specific web addresses or password protected access for confidential or specialized data.

Figures 1 and 6 show the Clearinghouse also supports forums and exchanges, where end users may communicate with one another, where carriers and end users may communicate with each other, and where carriers may meet and communicate with each other. This may be provided using chat facilities, instant messaging, VoIP, or web posting, as well as other forms of peer-to-peer and peer-to-group hosting applications. The archives in this portion of the Clearinghouse will help others in gaining knowledge and understanding of the clearinghouse and the needs of the telecommunication industry, carriers, and end users in general, thereby providing valuable insights for a growing customer base. In addition to the forums, Figures 1 and 6 show the Clearinghouse serves as an educator, a trusted resource that provides content, links to important telecom rulings and happenings, and provides open content for the world to access. This education/content application allows the Clearinghouse to also publish, either in print, email, or web, or podcast, or broadcast form, newsletters, information pieces, and promotional pieces that may advance the needs of particular carriers or segments of the telecom industry.

Access to carriers and end-users as described herein allows the Clearinghouse to be private labeled or OEMed by particular carriers, or by particular intermediaries in the infrastructure industry, or entities, such as the American Radio Relay League or JARL, which has many constituents who own towers or have interest in advancing telecom in general. By creating a private labeled enterprise or user class web presence or print presence, the knowledge and content of the Clearinghouse can be dispensed to particular groups of customers or end users, for the benefit of the industry or for the benefit of a particular carrier, intermediary, business, or industry segment. Thus, the knowledge contained by the Clearinghouse may be distributed in many different ways in parallel. This perpetuates the growth of subscribers or users of the Clearinghouse, while serving an unmet need which would benefit many carriers or organizations, particularly small and medium WISPs, citizens in general, expanding telecom providers in rural or emerging

lands, large carriers looking to roll out "small iron" infrastructure, and large and small telecom companies that realize that the clearinghouse is a less expensive resource to promote their own technology or their own presence or needs.

In addition to the abilities mentioned above, the computer provides the Clearinghouse with the ability to allow a carrier to exploit the end-user information in order to identify locations or dwellings where end users will allow it to install equipment or towers, etc. Without divulging the needs of the carriers, or the entire contents of the end user database, the Clearinghouse may allow the general public to view its own local areas of interest, say through zip code search or street search, to see who in their community is offering site opportunities. Of course, the end user must first have opted to have his or her listing made public for the general public to be able to see it, which is an option that may be provided when end user records are provided to the Clearinghouse. By viewing local listings, the community may validate that the listing, the map, and description is good – generally people in the same neighborhood will be interested in seeing if it's the right plat map, the right link, etc). If made public by the end user or carrier, or clearinghouse, neighbors may also be interested in the remuneration provided to the end user from one or more carriers. The Clearinghouse preferably would allow the general public to rate the quality of the postings (for example, one to five stars), and to provide customer feedback, thoughts on the experience, etc. (social commerce and word of mouth). Everyone who uses the Clearinghouse website would optionally and preferably need to have an assigned account or screen name so they can be credited with finding and posting info/data, and get ranked by the community.

In one embodiment, the Clearinghouse allows carriers or intermediaries to have a look at all end user offerings without giving away what the carrier wants or needs. Carriers may list their standard legal and business term agreements and have the ability to use the Clearinghouse to see readily if there will be local ordinance hassles, neighborhood hassles, limitations due to covenants, as shown in Figure 4 and as described above. Letting the end users and the public post this information, on a zip code or neighborhood by neighborhood, county by county, township by township, sq mile by sq mile basis, is best, as these maps for the boundaries exist.

Ham radio operators already have towers and are technically savvy, often ready to help with the provisioning of broadband. The Amateur Radio Relay League, (ARRL); Japan Amateur Radio League (JARL), Radio Society of Great Britain (RSGB), etc. would likely have interest in hosting or rebranding the Clearinghouse to its own purposes and for its membership, possibly as a revenue generating opportunity for its own society and as a service to its ham radio operator members, who often have towers and have already taken care of the zoning issues in their own neighborhoods. Amateur radio towers are often exempt from tower restrictions due to the common good and emergency preparedness that amateur (or "ham") operators provide to society. The lower profile ("small iron" footprint) of today's wireless telecom equipment, such as WiFi, WiMax, and much of the emerging broadband wireless infrastructure, does not require bulky cell towers, and can readily be installed on most ham radio towers today. The invention will allow carriers or intermediaries to immediately find these hams and offer leasing terms, so that the carriers may approach this community for potential tower sites. This helps quicken the deployment of wireless without the need to erect new towers or to go through extensive zoning hearings. Increasing the time to build out coverage or capacity is very valuable to a carrier, and thus the carrier would likely pay to have access to the Clearinghouse.

Record Forms shown in Figure 3 are submitted via web or submitted by voice, email/ touch tone, data entry/handwriting, fax, and other electronic means known now or in the future, including file transfer, etc . The forms reflect data shown in Figures 2 and 3, which is processed, sorted and parsed by the sorting and parsing application 36, and stored in the Clearinghouse database 510 (Figure 5). The data preferably indicate where the end user is physically located, and whether the end user has a Tower, or places on roof, house, building for antenna mounting or equipment mounting, etc . For example, either through entered data by the end user, or through public access to records that augments the end user provided records,or from file transfers from third parties, the carrier or third party uses the clearinghouse to determine answers to questions such as: Does the end user have to be on site when telecom company comes? Does end user have power or utilities available? Does end user want maintenance of tower/building? Will user want cash, cash rebate, or free internet or phone service? Does end user own the land

or rent? Is user aware of any zoning or limitations, neighborhood covenants that would prevent stuff going up, if so where? Does the owner have insurance, and what liability insurance is needed, required, on hand? Has end user successfully leased to a carrier before? Is the end user a ham radio operator or technically minded? Can cabling be buried on the premises? How close is the end user to other towers included in the end user database or public databases? What is the value of end users home, as identified by tax plat public tax record database, and is it a single family residence, apartment, commercial building, etc.? What are the desired business and/or legal terms to do a lease transaction, and what is the first/best/desired offer. These types of data would be linked in with town/country records of public land, and further linked with Google maps or another mapping technology, so that end users and or carriers or third parties could view potential locations with a vast amount of information contained in the Clearinghouse database.

Of course, some end users may wish to negotiate for deal terms on leases to carriers, in which case the Clearinghouse can provide the forum for an electronic negotiation, or an auction, where a carrier may find a potential site of interest, notify the end-user through email about their interest and with a first offer, and then wait for a reply from the end user as to how to move to a final negotiation and signed lease agreement. Alternatively, the end user may have an idea of their initial business terms, and this may be provided in the end user's provided records. All of these steps are handled by the Clearinghouse and its applications as described above, preferably through the worldwide web, or by other electronic interface means.

Using the Clearinghouse for radio quality and service for wireless devices

As described above, the Clearinghouse provides a database of tower locations provided by end users and carriers, and further provides for the ability to access public records such as governmental tower databases and frequency planning rules and regulations. Thus, it is clear that the Clearinghouse is able to maintain information about more than one carrier, and in fact can store information about every publicly disclosed tower, as well as the inventory of towers provided by end users, as well as infrastructure information provided by multiple carriers. Data such as transmitter frequencies, antenna

heights above ground, owners of spectrum, leaser of spectrum, type of license, date the license expires, type of services offered, may all be cataloged and stored in (or accessible to) the database in the Clearinghouse so that there exists, on the worldwide web at the Clearinghouse website, a position-tagged listing of wireless assets for multiple bands, and multiple carriers. This web site may be private access (password/subscriber protected) or open access to the world, depending on the desired business model.

Given that the clearinghouse is coupled to the internet, the Clearinghouse database can be used for cataloging the wireless availability (signals, bandwidth/capacity, services, carriers who provide service, quality of offered service, over multiple bands and for one or many carriers and services that are available to a particular wireless device in a specific location or locations on earth. Furthermore, the Clearinghouse may average, smooth, or provide best/worst/average estimates of the quality of wireless service, and its availability, based on the on-going measurements reported by end users and their devices at various parts of the globe. Thus, the Clearinghouse becomes an archived record of wireless quality at various locations, and this record is included in the clearinghouse database and updated or refreshed under computer control as described in Figure 5. This invention can be extended to work for different kinds of wireless devices, for example WiFi LANs are different than cellular/WiMax/LTE networks, so this Clearinghouse capability could be available for each type of service, or providing information for all services in a single clearinghouse.

The inventor envisions a clearinghouse that can be used/updated/accessed and built upon, by individual's experiences in accessing wireless connectivity across the globe. As shown in Figure 7, the reports of RF quality and capacity are preferably done by the end user or the end user's device, where the user of the wireless device, or the wireless device 710 itself (as shown in Figure 7), reports to the web Clearinghouse its experiences over a wide range of bands, frequencies, providers, and services. The wireless device 710 may be capable of voice, data, multimedia, and/or wireless call connections. Web connections could be in band, the same channel as current wireless "call" connection or out of band, or different channels than the present wireless call. Note that the coupling of the mobile device 710 to the internet (e.g. the Clearinghouse website) is done over the wireless call connection. However, this coupling may also be

done over a wired means as described below, or may be conducted at a different time or location using a different wireless carrier or frequency than used for a wireless call or internet session. While not shown explicitly in Figure 7, another embodiment of this feature of the invention would be for the base station or fixed infrastructure of a wireless network (and not the wireless end user device) to collect measurements or performance metrics over a wide range of spectrum for the quality of RF coverage, capacity, and overall communications quality, on either/both the forward and reverse wireless links, and to provide that data to the Clearinghouse via worldwide web connection that is often provided at the base station or fixed infrastructure. Of course, both the fixed infrastructure and the mobile device could collectively and cooperatively report back data to the clearinghouse, as well as receive data from the Clearinghouse.

Preferably, the end users phone 710 would report its observations to the Clearinghouse in an automatic manner without ongoing user control and even without knowledge by the user. Indeed, phones or wireless mobile devices 710 of the future may be simple dongles, computers, and a wide range of wearable or sensor devices 711 that may access the Clearinghouse in real time, or prior to a wireless phone call, or intermittently during or after a call, while the mobile device 710 is idle, or even when the cellphone (e.g mobile device) is off or not in use (but connected to the internet by wired means). That is, the memory 712 of the wireless device 710 may store the measurements and observations of various radio quality and performance metrics, for uploading to the Clearinghouse using any type of connection to the worldwide web – wired or wireless, not necessarily just during a call or during travel. These measurements will be paired with geographic location information obtained uses a GPS or any other location sensing or position estimating techniques 714 that may involve an onboard computer (not shown) in the cellphone or computer 711, or external to the mobile device 710, such as through infrastructure position location methods. Thus, the Clearinghouse is able to continue to build a database that is built upon location-specific reports of radio coverage, services, carriers, bandwidths, and past user experiences, even when certain mobile devices must wait to report their observations (due to poor coverage, priorities of the device or user in providing communications, or when battery 716 is too weak to justify accessing the Clearinghouse at certain times). Figure 7 contemplates a mobile device 710 that is able

to access the Clearinghouse via the worldwide web, in order to query or determine information, in either real-time or non-real time, about the radio environment and performance quality in its particular location. This access may also be in real time or non real time by either wireless or wired means.

As shown in Figure 8, using the invention described herein, a wireless device 810 is able to couple to the Clearinghouse website (and consequently the Clearinghouse database 820) through its wireless carrier to automatically provide (e.g. upload) its readings, measurements, or observations to the Clearinghouse, either in a batch (stored) method, or periodic, intermittent, or random update method, using either wireless 825 or wired connectivity to the internet 830, and is also able to access the Clearinghouse database (e.g download) to determine general information about the radio environment (to help optimize the battery use, RF radiation, or mode/data rate selection of the mobile device) or to find what channel to tune to, what carrier to use, or what services to expect or access, without wasting transmit power, battery life. Thus, the Clearinghouse can both rely on data provided by wireless devices at various locations in order to provide data that allows particular inquiring wireless devices to adjust their access techniques to the wireless channel in a certain geographic area in a manner that matches the specific coverage/RF/quality of the location. While Figure 8 shows a wireless connection, the device 810 could be connected by wired/optical connection through the Internet 830 to the Clearinghouse database 820. Note that location information may be provided by the mobile device 810, or may obtained through an external or alternative means, perhaps from the carrier's infrastructure, or through other methods.

The network performance or quality of service information as a function of location may be downloaded to the wireless device from the Clearinghouse either before a user of the device travels to a location, or during the travel, itself, as illustrated in Figure 9. While Figure 9 shows a wireless connection, it should be noted that clearinghouse information may be provided to the mbile device 910 using wired means, as well. Figure 9 is substantially similar to Figure 8, and shows the flow of information from the Clearinghouse, and consequently the Clearinghouse database 920 to the wireless device 910 through the Internet 930 and Tower 925.As shown in Figure 9, recent snapshots or data values of quality as a function of location, as obtained from the

Clearinghouse, may be stored in the memory of a mobile device 910, and updated at a rate determined by either the Clearinghouse, the end user, or the wireless carrier providing end user service. When in the field with a planned trip, the user can get downloaded information after handshake by the wireless device 910 being able to retrieve from the Clearinghouse 920 (in an automated fashion or with a user interfacing interval) the local "state" of the RF environment he or she is in or traveling to which may include the services that are available, carriers, locations of towers, etc., so that the phone can use power and allocate spectrum better. This handshake may be provided over the air in real time or pseudo real time, or may take place earlier when the phone is connected or idle at home in a wired or wireless home network, or docked in its charger, etc.

Figure 10 shows a flow diagram of how the Clearinghouse and mobile device work together to provide enhanced service for the wireless subscriber end user. The network quality information, and relative ranking of carriers, frequencies, or selected power levels or data rates/modulation types as a function of location may be downloaded from the internet at steps 1010 and 1012 (e.g. Clearinghouse website) before leaving for the trip, where the position location coordinates are obtained prior to the trip path from Google Map, Mapquest, or some other path finding method that allows for interpolation or storage of position coordinates, and these position location coordinates are stored in the memory of the mobile device. Alternatively, if implemented in real time or in near real time during a trip, the mobile device may use a road navigation system in the car, a navigation application in the phone, or GPS in the phone in order to determine its position location as shown at step 1010. The wireless device thus has latitude/longitude or GPS coordinates, either measured by GPS or by its own navigation application, or as interpolated or as stored from a pre-planned trip route stored in memory. These locations are then provided by the mobile device to the Clearinghouse at 1012, (note that the locations provided by the mobile device to the Clearinghouse could be determined on the fly as the user moves with her wireless device on the trip, either in band or out of band, across a wireless network during the travel.) The Clearinghouse, based on the locations presented by the mobile device, provides to the device specific performance or quality of service metrics or rankings, such as desired frequencies, best or rank ordered list of carriers to use at each specific location, preferred modulation types, upper or lower limit

on data rate, upper or lower limit on bandwidth, or a ranked listing of available (in the area who provide service) wireless carriers at the various interpolated locations at step 1014. This information may be transparent to the user of the mobile device, as shown at step 1014, and may match a user profile, such as "highest download speed", or "cheapest cost" or "always pick Verizon if it can give me better than 10 Mbps", which the user may have programmed on his cellphone or programmed through his wireless carrier through a website or in the store upon purchase or renewal. Alternatively, the information provided by the Clearinghouse may be visible to the end user, as also shown at step 1014, either over the wireless device, or at the Clearinghouse website, provided the end user is a participant of the Clearinghouse. In this manner, the Clearinghouse facilitates multiple-carrier operation at step 1020 and may provide network enhancements over a wide range of spectrum for a single user, which will be required if federal regulations require an open spectrum policy where various carriers must support traffic by users of a specific carrier network. Such operation enhances battery life and improves phone and network performance through control of interference, spectrum usage, and power, while being impartial to any one particular wireless carrier.

Given the location (whether actual or estimated) of the wireless device, and information of the radio frequency (RF) quality and coverage and the services and bands available for access are identified at step 1016, the wireless device may make good decisions at step 1018 as how to access wireless in the particular location, thereby saving battery life, cost, time, or improving connectivity for the particular desired application used by the user of the wireless device. The Clearinghouse/database on the web would communicate to wireless devices either in real time over the web, or prior to the wireless device going to a location, with information that allows the phone to determine the best or 2nd best (or a priority/ranked list) of frequencies, or carrier providers, or services, or bandwidths, based on the customer's predetermined desires/needs (lowest cost service, highest data rate service, longest battery life service, etc). Or the user may adjust their desires for service priority on the fly as they travel and learn the quality of the networks they are in. This may be done automatically (with preset user settings) or may be visible/shown to the user through an application on the web or via the wireless device. Note that the carrier/service provider, or the wireless device manufacturer, or some other

party, may also set the priorities for desired service based on price, availability, instant channel loading in the network, or other factors.

In fact, the world's RF/QoS/coverage/service map could be loaded on to a wireless device from the web clearinghouse, and the updated periodically or infrequently, at either the request of the phone user or automatically by the wireless device, to update the database of the RF/QoS/services, capabilities over location.

The phone/wireless device could access the web either through a user application or this could be done autonomously, where a web server that hosts the clearinghouse communicates over wireless or wired means with the wireless device. This can be done using low level formatting that would not be readable by a regular user, but which is loaded into memory of the wireless device.

The web server and clearinghouse may be central or distributed, and can store and represent the services, locations, frequencies, carrier/owners, and other information that would be useful for a wireless device to automatically determine what frequencies or applications or capabilities it might experience in a particular location on the globe. Global coordinates may be represented in many ways known to those skilled in the art, and the ability to autonomously access the web is well understood today.

Users may also, either by their own activities, or through the wireless device autonomously either known or unknown to the user, communicate updates or in-the-field readings of the various signals and capacities/bandwidths received by the wireless device in a particular location back to the clearinghouse. That is, wireless devices may report back (autonomously in a preferred embodiment) to the clearinghouse their user experiences over a wide range of frequencies, bands, applications, along with the location of the wireless device. Figure 11 indicates a flow chart that shows how a mobile device provides information to the Clearinghouse, and how such information is applied to the location-specific database maintained by the Clearinghouse. The idea of using GPS or some other position location means, even if as crude as sensing what major tower or market or carrier signal or nearby TV or FM or AM transmitter, etc. is received by the wireless device (crude position locationing) could be used, as could more accurate TDOA or GPS methods. In any case, the invention contemplates the ability of users to report back to the Clearinghouse in step 1110, either in real time or when they become located

where network access is easy or free, the measured quality and coverage and capabilities of wireless in a particular location/geographic region. The courseness of the geographic region may be determined based on speed of user, the application used by the user, or set by the Clearinghouse, or by many other methods. Similarly, the courseness or the position location may be specified or set by the Clearinghouse, and more value or cost or premium preference may be given to certain subscribers or users of the Clearinghouse who wish to have more accurate (fine resolution, say within a few meters, few hundred meters) of wireless spectrum quality/availability than those who are satisfied with course position locationing (say a few thousand meters).

The measurements reported back to the Clearinghouse by wireless users are added to the location specific database in step 1112, and just like the obtaining of various radio qualities and metrics for a particular location of the wireless user, may also be done without knowledge by the user, and may be done in an autonomous communication between the wireless device and clearinghouse.

This database can also be contributed to by users who wish to add/record their own experiences, either autonomously or manually through a public website offered by the Clearinghouse. Carriers could enter their own database into the web clearinghouse, or the clearinghouse could use bots or automated web crawlers to find websites from FCC, Chinese government, private or public company wesbsites, Comsearch, etc. to build a large database of spectrum availability and tower locations and bandwidths/services with a common website. Note that this Clearinghouse could also have users provide inputs as to their perceived or experiential views of radio coverage or phone/web quality at step 1114 when they were in a particular location. Note that the entry of this "performance" data could be added by users based on their own experience, and could also be provided by carriers based on their known infrastructure locations. Alternatively, phones of the future, equipped with GPS or any other type of location capability, could automatically, without any human interaction, upload to the website, on a periodic, one-time, infrequent, or regular basis, the perceived/measured radio reception quality, bitrate, capacity, availability, average use profile, average available profile, statistics on outage or reliability or coverage or capacity carrying capabilities, or an evaluation of the RF or end-user application performance, and this information may be loaded to the Clearinghouse

for inclusion in the database that is available. The database is updated at step 1116 at various intervals that make sense for the implementation of the Clearinghouse (daily, hourly, by minute, by week, and this may be done on a global or on a specific location basis across the clearinghouse database, that itself may be distributed or located centrally). The updated information is made available to users on an ongoing basis, for further utility and enjoyment.

Reporters of RF quality and quality of the services, and access to the clearinghouse may be shared between carriers, user populations, owners, etc. so that information may be made available to update the global clearinghouse while providing those updates to large numbers of users who own wireless devices, for the improvement of operation of the wireless devices, or benefit to the carrier(s) or to the customers of wireless devices or customers of the wireless service access.

Once this clearinghouse is created, then future phones or wireless devices could access this Clearinghouse web site at step 1118, either conducted by the person who is the subscriber, or automatically by the phone device itself, or by the carrier or service provider, and could even be accessed by the application running on the mobile device that is intended to be used at the specific location, and over a wireless channel, to rapidly determine the type of coverage/ quality of coverage, the various vendors in the geographic region of the user, how to best send the message, how to conserve bandwidth, improve battery life, etc.

Figure 12 illustrates the flow diagram of how a mobile device may access the Clearinghouse, whether in the idle mode, or during a cellphone or internet session, or whether connected to the internet via wireless or wired means. The mobile device is able to use the Clearinghouse-provided rankings of best service providers or air interface specifications and observations in order to enhance or optimize its own performance. This may simultaneously correspond to enhanced performance of the entire network that the phone is operating in. The wireless device is able to maintain a ranked list of preferred operating modes and carriers or services based on its current location, as well as estimated future locations, as it provided to the Clearinghouse. Future locations may be determined from past records maintained in the phone itself as to where it often in use (using past position location measurements), or future locations may be determined by

the carrier, which may provide intermittent measurements of an end user's location. Alternatively, the Clearinghouse may maintain records of past usage and location information of particular end users, through low overhead wireless internet connections or through batched (stored) records from particular wireless devices.

The exchange between the end user mobile device and the Clearinghouse's worldwide web address (e.g. IP Address) requires a handshake so that users may be properly identified and properly monitored and controlled uniquely by the Clearinghouse at step 1210. Thus, there is a negotiated password/access that must take place whenever the mobile device attempts to connect with the Clearinghouse, and vice versa. This may be facilitated through the credit card sign up and password management application of the Clearinghouse, or may be a separate application under computer control. The end user's Mobile ID number (MIN), Electronic Serial Number (ESN), or some combination of data using one or both of these numbers may be used for registration/access to the Clearinghouse, and so that mobile devices may be identified uniquely through over the air or web-access data exchanges. Once identified, data can be sent to the phone from the Clearinghouse at step 1212, and the phone can be properly tuned to the best band service provider or be interfaced for minimum power drain at step 1214. The Clearinghouse will also allow reporters of information to be ranked based on their accuracy and collaboration with other reporters of quality/RF/services/information. Furthermore, the service providers or spectrum allocations, themselves, would be ranked by the Clearinghouse (e.g. at this Location, WiMax band is best, and gets 5 starts, whereas PCS Band has bad coverage or performance, and only gets 1 star, etc). This listing information can be maintained in the phone at step 1216 and can be updated based on current and estimated future locations. Step 1218 shows that when the device is in motion , updates can be obtained automatically from the Clearinghouse. Individuals who report in their observations may also be ranked (.e.g. Bill Smith does a good job reporting quality of different radio bands and services near Austin, and gets 5 starts, or a 99% rating, as opposed to someone who frauds the system by reporting bogus measurements – the peer group or the web crawlers/data analysis of the database would find these outliers and give them lower rankings, say 1 star or 10% accuracy). These rankings could be weighted to give assessment of the entire radio spectrum and services/quality/coverage in

any location on the earth. This will be a critical and vital invention for the future of multiband radios, and has clear applications in open-access wireless which is likely to evolve with the 700 MHz FCC spectrum auction, and the entrance of Google, Amazon, EBay/Skype into the wireless world. This invention also has strong impact and will assist the evolution of Cognitive or Software defined radios (SDRs).

Using the Clearinghouse for Local Advertising using wireless infrastructure

This invention may be extended further to allow for distributed wireless content, either provided through standard internet browsers, or through recorded, or real-time means in audio or video or multimedia or text formats, that may be transmitted through transmission to cellphone devices, computer devices, or other mobile devices or other devices that are connected using wireless transmission, known now or in the future, to be delivered on a location–specific basis. As mentioned above, media content may be audio, video, multimedia, or webpage based, as well as other forms that may be known now or in the future. This invention has particular applicability to local advertising, as advertising content is often difficult to provide through the worldwide web. Furthermore, this invention can be used generally for any type of content, not just advertisement content, that has specific value to users or viewers in specific geographic, physical locations. That is, the invention may be used for signage that provides location-specific content to wireless displays or wireless users, for example, or which, for example, provides information about movies that are playing in a movie theater to wireless users who are in the parking lot of the movie theater.

Today, the internet advertising industry has difficulty in providing location-based content, since people who log onto the web may be located anywhere in the world. For example, on a Google search page, ads that appear on the right hand column of the display, are generally not displayed in a location-specific basis. Indeed, access over the internet allows users from all over the planet to access a particular webpage, through a web address (an Internet Protocol address). Thus, the standard internet protocol does not allow a web server to know, ahead of time, the specific physical location of a particular browsing user. While there are techniques to improve the guess as to where web browsers

are located, through the use of cookies and previously entered data by a fixed internet user, wireless communications (which includes optical communications, and all electromagnetic signals), based on the law of physics such as Friis free space equation, is the best way to provide local coverage, since wireless is limited in propagation distance based on a number of factors such as the radiated power of the transmitter, the height of the transmitting and receiving antenna, antenna gains, and carrier frequency, obstructions in the physical environment, etc. Thus, wireless provides a built in ability to ensure location-based advertising which has not been previously exploited. This invention describes a way that advertising content can be pushed to users within the radio frequency (RF) propagation range of mobile/portable/fixed users who are tuned to a specific transmitted signal. Similarly, the processes described herein have application tor devices that are capable of receiving multiple transmitted signals, from multiple radiating sources, either simultaneously or in sequence, or sporadically.

The concept of today's internet-based advertising is to use generic, nationwide webpages, such as a typical webpage that may use banner ads to offer a product or service, or the use of banner ads on web blogs or other web pages, or adsense or adword ads (by Google, for example). However, the difficulty with these ads, from the standpoint of the advertiser, is that it is unknown where the specific user is physically located, thus it is very difficult to offer, in an efficient or market-driven manner, ads that are specifically local to the wireless users that might have interest (for example, a local coffee shop in a particular city would not want to pay for a national ad on a national webpage, but would rather pay only for those ads which are viewed specifically by mobile or fixed wireless users who are in the same city/town or neighborhood of the café and who want to take advantage of special coffee specials.

One approach to provide location-based ads, is being pursued by Loopt, where they are working to sign up carriers in the cellular radio field. It was reported in December 2007 that Loopts has partnerships with Sprint Nextel and Boost Wireless. Loopt relies on users being able to run a middlewear application on their cellphone device, which allows the mobile device to send its GPS coordinates through the cellular infrastructure, and based on the cellular infrastructure and GPS location, the location of user is determined, and an ad may be pushed to the device from the carrier network. See

Samsung Ex. 1004, Page 269 of 305

New York Times, Feb 6, 2008, Business Day article,"In CBS Test, Mobile ads find users"

In the invention, I approach location-based advertising in a different, and more efficient way than Loopt. The invention allows for the Clearinghouse and its database to be an integral and valuable part of a novel local advertising system and method, that uses readily available hardware to store, reformat, revise and transmit altered web pages that have specific local content. No middlewear is required on the mobile/fixed wireless device in this invention, although in some embodiments it may be used for acquiring user data, and helping to cache or provision the invention in a more efficient manner.

By using the Clearinghouse and database for radio quality and service for wireless devices, and by maintaining an on-going list of performance records of users and infrastructure locations, it becomes possible to build a listing of towers, frequencies, types of service, users who have permission/access abilities to the network, coverage regions of a particular tower or transmitting signal, etc. as well as the physical location and proximity of users on one or more wireless services. However, even without the GPS information from users, one can provide location based advertising, as disclosed herein and in conjunction with the knowledge of towers, frequencies, and services offered.

Instead of having to determine the GPS location of each mobile user, as with Loopt, using the present invention it is possible to use the information of the specific tower or transmitter site in order to "alter" or "fill" the national webpage with specific, local ads in particular places on the displayed webpage. That is, a server, which may be remote or located at the same location as the wireless infrastructure providing the local signal, would be used to alter, modify, or rewrite the "original" webpage, and then would transmit the 'localized" webpage over the local infrastructure, so that local advertisements would be used in place of national advertisements, in various places on a webpage, or in various audio or video fill locations, or in specific text messages that are tailored for specific locations.

In this manner, its possible for a national or international organization, or an international web portal, to be able to provide local, target-specific ads, through knowledge of the location of specific base stations. In addition, the clearinghouse system would further allow particular users to be monitored for what type of ads they use, how

they select different links (in the case of a webpage) and the internet browsing patterns or effectiveness of the localized ads.

Figure 13 shows a diagram of local content wireless infrastructure. Figure 13 shows a computerized Clearinghouse system, that may be a web-server, or multiple servers, that may be located at, near, or remote from the base station infrastructure 1310 or 1312, whereby this server 1314 (or group of servers) may be provided the local-advertising information, in a machine readable format that allows the server 1314 to "override" or replace the national webpage server in particular parts of the displayed webpage at the mobile/fixed wireless device. Note that the fixed infrastructure at the edge of the wireless network, shown as a base transceiver station (BTS) or Switch or WLAN access point 1316, is connected to the Internet 1318 through an IP network 1320 backbone. The Clearinghouse 1322 is also connected to the IP Network 1320, thus it is possible to couple the Clearinghouse 1322 content to the edge infrastructure 1316, as contemplated above (see Figures 1, 5, 6, 7, 8 and 9, for example). The Clearinghouse 1322 provides format information for the content server (also called an ad server) , so that the content server 1314 knows what content to offer, and how to integrate the local content it has to offer along with the standard content provided over the wireless network. Noted that Clearinghouse 1322 can be copied to the local ad server 1314. The local advertising content or content from the Clearinghouse 1322 is transmitted to the mobile or fixed device 1324, thereby assuring delivery of localized advertising to the mobile or fixed device 1324.

The local content server 1314 is shown coupled to the edge infrastructure 1316 in Figure 13. This local content server 1314 may receive copies of local content as provided by the Clearinghouse 1322, or may obtain content from other sources over the worldwide web, under the control of the Clearinghouse 1322. Note, however, the local content server 1314 may be located remotely from the edge, or it may alternatively be embedded within the hardware of the edge infrastructure 1316. Since there is internet connectivity, the physical location of the content server 1314 doesn't matter tremendously, unless very high speed traffic is contemplated, in which case providing the server near the edge infrastructure 1316 is the best choice.

Using the position-tagged listing of wireless assets for one or multiple bands, and one or multiple carriers, the disclosed invention provides the ability to provide local advertising content for transmission in the datastreams at particular local infrastructure locations. This may be done by providing content for a localized ad (or other content) in a computer file, and then providing a format for said content within the file so that it may be conveniently packaged/placed, as either a banner or pop-up or adword type or other form suitable for use on a partial webpage display that is transmitted by the edge infrastructure 1316. The mobile or fixed device 1324 receives the local advertising content from the infrastructure 1310 and 1312, and establishments desiring localized advertisements to devices within range of the infrastructure can be assured of a more targeted advertising campaign.

Figure 14 shows a flow chart that allows local advertisers or local content providers to access the Clearinghouse system through the worldwide web, where the local advertisers can create and alter localized content. When the content is created at step 1410 and loaded onto the Clearinghouse system at step 1412, the advertiser is then able to use the Clearinghouse to specify the format of their local content at step 1414, and view it at step 1416 as it will appear in the local edge transmissions, and may select geographical areas, cities, or specific locations at step 1418 where the local content may appear. The Clearinghouse may use its billing application to receive revenues at step 1420 for local advertisers, and the local content is then loaded into the Clearinghouse, and may be distributed to the network edge servers at step 1422. As noted in Figure 14, the order of steps can vary, and the process allows the advertiser to alter, draft, and create in an iterative fashion to achieve the content or style that is desired and to better identify the targeted audience. In some embodiments, the advertising may be distributed to a plurality of local ad servers 1420 (e.g., distribution to multiple states during a primary campaign season for a national elected office, etc.) Also, as noted in Figure 14, some of the steps are optional and can be varied in the practice of the invention. For example, instead of a monetary payment, the advertiser may provide some other form of service in exchange for the local advertising afforded by the invention.

Figure 15 shows how the local ad server continually checks the web pages that are accessed by the local users in the vicinity of the edge infrastructure. Once a local

advertiser has registered with the Clearinghouse, and has placed its content on the Clearinghouse (and also the local ad servers, if caching is done), then the local content provider's web address is added to a list of local advertisers. When any webpage is requested by a local wireless user at step 1510, the local ad server (or, alternatively, the Clearinghouse or the edge infrastructure itself) searches the list of local advertisers at step 1520, and if a local advertiser's web address is received at step 1530, the local ad server replaces the "normal" national webpage with the content specified in the local format at step 1540. This modified, local format web page is then passed to the edge infrastructure at step 1550 for transmission over the local edge network. It should be clear that while web pages are discussed here, any type of content could be replaced, and any type of local content could be inserted in this manner. If the local advertiser's web address is not received the requested web page is retrieved at step 1560.

The local webpage may be of ordinary form, with the local content in standard form as would be used for display on a wireless device (such as a laptop or cellphone). Then, a server computer or computers is used to take a source webpage (say from the national or the standard template provided over the internet) to then alter the datastreams transmitted from the local infrastructure, being different from the datastream obtained from the source (such as a national webpage), and altered specifically for the specific physical location of the transmitter tower, or group of towers, or infrastructure that is located in some physical location such that wireless coverage is provided within a specified geographical range. The transmitted local webpage is altered efficiently based on the format of the local content file, which provides instructions as to where, specifically on the web page, the local ad should be placed. This placement may either replace an ad on the national webpage, or it could be a complete replacement of the national webpage with a custom local webpage, or some other content could be made to be transmitted from the local infrastructure.

This allows an advertiser to have local information filled in the proper locations on a web page display, or at the proper time sequence or file location in an audio or video or multi-media transmission. This also allows web portals such as Google or Yahoo or Ebay or any other to provide localized advertising without requiring a specific GPS coordinate for each user in its region, thereby preserving valuable wireless resources that

would otherwise be used up to provide position acquisition and handshaking between the wireless infrastructure and the mobile device.

The invention also has the ability to measure web statistics, web page viewing, information about the use, page views, and click-through activity of localized advertisement or content webpages that are provided by the Clearinghouse or the local ad-server. It is understood that web hits may be counted and tabulated, using many commercial providers of such web statistics, or may be implemented by software running at the local content server, or at the Clearinghouse, in order to count the various views and uses of webpages by local end users. This data would be valuable for justifying and presenting the value and utility of local ad or local content provisions to the owner of the wireless network, as well as determining formats, presentation techniques, delay times, and other technical and non-technical implementation of local content for improved activity, use, and monetization.

The Clearinghouse could maintain a large archive of local advertisement files, and formats, that could be used and invoked over multiple bands and for one or many carriers and services that could be provided over wireless infrastructure for specific locations on earth. This invention can be extended to work for different kinds of wireless infrastructures and devices, for example WiFi LANs are different than cellular/WiMax/LTE systems, which are different than standard 2.5 cellular. The advertising system could be used in conjunction with the clearinghouse system described above, and one can envision this type of local advertising system being available for each type of service or carrier, or for a specific set of infrastructure (e.g. a WLAN system in a convention center, where our invention would provide specific local advertising for the specific convention center, whereas other convention centers around the world would have their own specific ads placed on their web pages). This invention could also be used to provide local ad content and information for all types of infrastructures and wireless standards from a single clearinghouse.

It is envisioned that the local ad content can be updated by a specific advertiser, where they are able to access a web portal and format their ad, along with payment for their ad, and having the ability indicate which city, specific tower locations, or specific

geographies they would like to have their ad appear on. Furthermore, they may pick if they want continual, or partial time ad placements, which would be at differing costs.

The advertiser would have the ability to view through the web portal what their ad would look like to mobile users in the specific selected geographic area, and they could compare that to the template, or national website.

Figures 13 through 15 illustrate an exemplary embodiment of how the local ad sever and Clearinghouse work together. They may be the same device, or information from the Clearinghouse may be copied, in part or in whole, to the local ad server. The local ad server, itself, may be collocated with base station or network provider infrastructure, or itself may be remote and addressable, although speed is of the essence to allow the localized webpage to quickly be revised and sent out over the infrastructure. It should be clear, however, that this disclosure is not limited to advertising, but any type of content may be applicable (e.g., localized emergency alerts; localized traffic announcements, etc.).

While the invention has been described in terms of several embodiments, it will be recognized that the invention can be practiced in a variety of forms within the scope of the appended claims.

CLAIMS

1. A clearinghouse system for communications networks, comprising:

a database including

records for one or more telecommunications carriers which identifies infrastructure needs for one or more telecommunications carriers in terms of one or more of (i) types of equipment and performance characteristics for said types of equipment, (ii) location information including one or more of geographical areas, and (iii) desired business terms for said infrastructure needs, and

records of a plurality of end users which identify one or more of (i) telecommunications assets owned or controlled by said end users including geographic location and type of available or existing telecommunications assets (ii) property assets owned or controlled by said end users including geographic location, and (iii) desired business terms or preferences for use of said telecommunications assets or said property assets;

one or more electronic interfaces which permits one or more telecommunications carriers and one or more end users to selectively view or catalog information about (a) available telecommunications assets or properties and locations thereof, (b) the owners or tenants of said available telecommunications assets or properties, (c) infrastructure needs of one or more telecommunications carriers for one or more locations, and (d) proposed or initial business terms for said infrastructure needs and said telecommunications assets or said property assets.

2. The clearinghouse system of claim 1 wherein said database includes

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations.

Samsung Ex. 1004, Page 276 of 305

3. The clearinghouse system of claim 1 wherein said one or more electronic interfaces permits one or more public users, who are not telecommunications carriers or end users, to selectively view or catalog information about said available telecommunications assets or properties and locations thereof, and said infrastructure needs of one or more telecommunications carriers for one or more locations.

4. The clearinghouse system of claim 1 wherein said one or more electronic interfaces includes one or more of an Internet interface, a telephone, a speech, handwriting or fingerprint recognition device, electronic mail interface, a facsimile, voicemail, a webserver, VoIP, or a digital recorder.

5. The clearinghouse system of claim 1 wherein at least one of said one or more electronic interfaces is connected to the world wide web, and wherein said records for a plurality of telecommunications carriers and said records for a plurality of end users can be viewed using a browser and can be retrieved by a web crawler.

6. The clearinghouse system of claim 1 further comprising a security application which protects the identity and infrastructure needs of said one or more telecommunications carriers.

7. The clearinghouse system of claim 1 further comprising a security application and billing application which permits charging said one or more telecommunications carriers or said one or more end users at selectable rates for use of said clearinghouse system.

8. The clearinghouse system of claim 1 further comprising a communications application which permits secure negotiation and acceptance of business and legal terms between one or more telecommunications carriers and one or more end users for use of said one or more telecommunications assets or one or more property assets.

9. The clearinghouse system of claim 8 wherein said property assets are selected from a building, a roof top, a billboard, a tower, and a lot or acreage.

10. The clearinghouse system of claim 1 wherein said database includes performance or quality of service information for specific locations.

11. The clearinghouse system of claim 10 wherein one of said one or more electronic interfaces provides automatic updates of said performance or quality of service information from one or more mobile or fixed devices located in said specific locations.

12. The clearinghouse system of claim 10 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or land devices that is located in or will be located in said specific locations.

13. The clearinghouse system of claim 10 wherein said performance or quality of service information includes multiple bands and multiple carriers.

14. The clearinghouse system of claim 1 further comprising

one or more local ad servers connected to said one or more electronic interfaces, said local ad servers providing localized content to one or more mobile or fixed devices in a specific location.

15. The clearinghouse system of claim 14 further comprising

one or more base stations connected to said one or more electronic interfaces.

16. The clearinghouse system of claim 14 wherein said local ad servers provide web page view and usage statistics to said database through said one or more electronic interfaces.

17. The clearinghouse system of claim 1 further comprising a computation application which identifies optimum locations for said infrastructure needs based on said records of said plurality of end users.

18. The clearinghouse system of claim 2 further comprising a computation application which identifies optimum locations for said infrastructure needs based on both said records of said plurality of end users and said public records.

19. The clearinghouse system of claim 1 further comprising an application program for forming binding agreements between at least one of said one or more telecommunications carriers and at least one of said plurality of end users.

20. A clearinghouse system for communications networks, comprising:

a database including performance or quality of service information for one or more specific locations, and

one or more of

records for a plurality of telecommunications carriers which identifies infrastructure and location information for one or more specific locations,

records for a plurality of end users which identifies telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces which permits performance or quality of service information obtained from one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically updated into said database, and which permits at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database.

21. The clearinghouse system of claim 20 wherein said one or more electronic interfaces provides performance or quality of service information to one or more mobile or fixed devices that are located in or will be located in said specific locations.

22. The clearinghouse system of claim 20 wherein said performance or quality of service information includes multiple bands and multiple carriers.

23. The clearinghouse system of claim 20 further comprising means for sending instructions from one of said one or more electronic interfaces to one or more mobile wireless devices for configuring or reconfiguring of said one or more electronic devices based on a ranking of performance or specific requests of an end user.

24. The clearinghouse system of claim 20 further comprising means for sending a rank ordering of available telecommunications services from one or said one or more electronic interfaces to one or more mobile wireless devices.

25. The clearinghouse system of claim 20 further comprising a monitoring application which permits monitoring of radio operating conditions of one or more wireless devices, wherein monitored radio operating conditions are used to update performance or quality of service information in said database.

26. The clearinghouse system of claim 20 further comprising an updating application which permits one or more wireless devices to update performance or quality of service information in said database by reporting of observations of wireless performance and quality to one of said one or more of said electronic interfaces.

27. A content providing system which provides selected content to one or more mobile or fixed devices located in specific locations, comprising:

a clearinghouse system for communications networks, said clearinghouse system including

a database including one or more of

performance or quality of service information for one or more specific locations,

records for a plurality of telecommunications carriers which identifies infrastructure and location information for one or more specific locations,

records for a plurality of end users which identifies telecommunications assets or property assets owned or controlled by said one or more end users, and

public records which include, for a plurality of geographic locations, one or more of mapping information for said geographic locations, zoning information for said geographic locations, local ordinances for said geographic locations, contact information for government officials for said geographic locations, and information about carriers serving said geographic locations; and

one or more electronic interfaces which permit one or more mobile or fixed devices to be connected to said clearinghouse system, said one or more electronic interfaces permitting one or more of

performance or quality of service information obtained from said one or more mobile or fixed devices that are located in one of said one more specific locations to be automatically updated into said database, and

at least one of said plurality of telecommunications carriers or said plurality of end users or one or more parties which are not telecommunications carriers or end users to review, catalog or sort information in said database;

means for identifying a geographic location of one or more mobile or fixed devices; and

one or more local ad servers in communication with said one or more electronic interfaces of said clearinghouse system, said local ad servers providing localized content to said one or more mobile or fixed devices in a specific location.

28. The content providing system of claim 27 further comprising

one or more base stations in communication with said one or more electronic interfaces of said clearinghouse system.

29. The content providing system of claim 27 wherein said local ad servers provide web page view and usage statistics to said database of said clearinghouse system through said one or more electronic interfaces.

30. The content providing system of claim 27 wherein said means for identifying a geographic location includes a GPS associated with each of said one or more mobile or fixed devices.

31. The content providing system of claim 27 wherein said means for identifying a geographic location includes a means for determining one more of towers and frequencies being used by said one or more mobile or fixed devices.

32. The content providing system 27 wherein said local ad servers provide content to said one or more mobile or fixed devices tuned to a specific transmitted signal

Abstract

A computerized system, method and process allows telecommunications carriers to find, evaluate and select locations for equipment through direct access to end users, while providing citizens the opportunity to offer the use of their dwelling or other assets to carriers. The system and method further provides a computerized mechanism for (a) creating an inventory and marketplace for available properties for use in telecommunications networks, (b) providing quality and/or performance monitoring and control for wireless communication systems based on data in the clearinghouse, and (c) providing localized content over wireless networks using the clearinghouse.

Docket No.
08610004AA

Declaration and Power of Attorney For Patent Application

English Language Declaration

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

Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network Performance for Enhancement, and Providing Localized Content in Communication Networks

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on _____ as United States Application No. or PCT International Application Number _____

and was amended on _____

(if applicable)

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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

Prior Foreign Application(s)			Priority Claimed
(Number)	(Country)	(Day/Month/Year Filed)	☒
(Number)	(Country)	(Day/Month/Year Filed)	☒
(Number)	(Country)	(Day/Month/Year Filed)	☒

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

60/971,175	**9/10/2007**
(Application Serial No.)	(Filing Date)
60/977,582	**10/4/2007**
(Application Serial No.)	(Filing Date)
61/028,261	**2/13/2008**
(Application Serial No.)	(Filing Date)

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

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

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

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Michael E. Whitham	**Reg. No. 32,635**
Marshall M. Curtis	**Reg. No. 33,138**
Clyde R Christofferson	**Reg. No. 34,138**
C. Lamont Whitham	**Reg. No. 22,424**

Send Correspondence to: **ASSOCIATE THIS APPLICATION WITH CUSTOMER NO. 30743**

Direct Telephone Calls to: *(name and telephone number)*
Michael E. Whitham 703/787-9400

Full name of sole or first inventor **Theodore R. Rappaport**
Sole or first inventor's signature Date Sept 10, 2008
Residence **Austin, TX**
Citizenship **USA**
Post Office Address **615 Hearn Street, Austin, TX 78703**

Full name of second inventor, if any
Second inventor's signature Date
Residence
Citizenship
Post Office Address

Fig. 1 Clearinghouse System

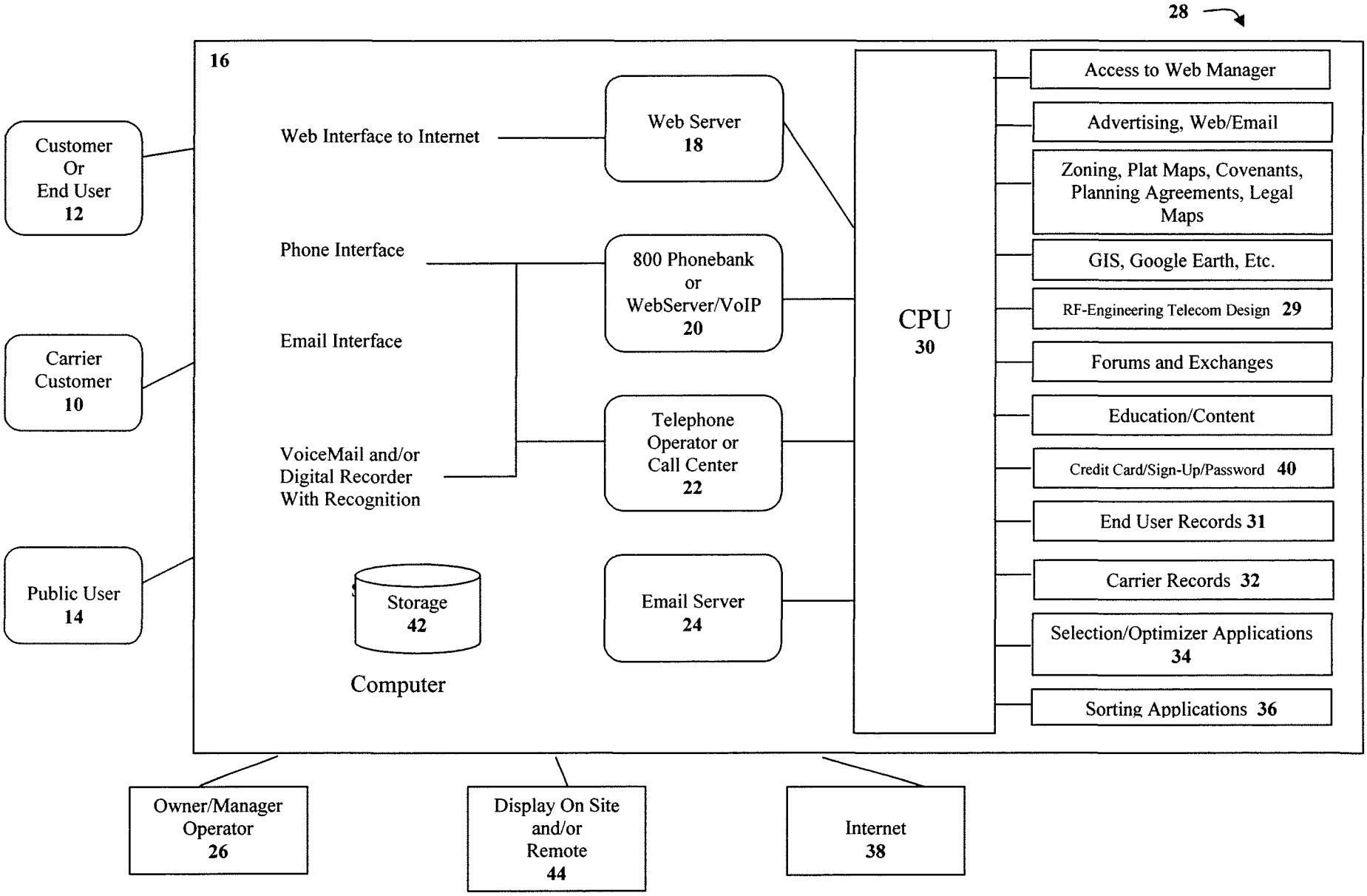


Fig. 2 All Records

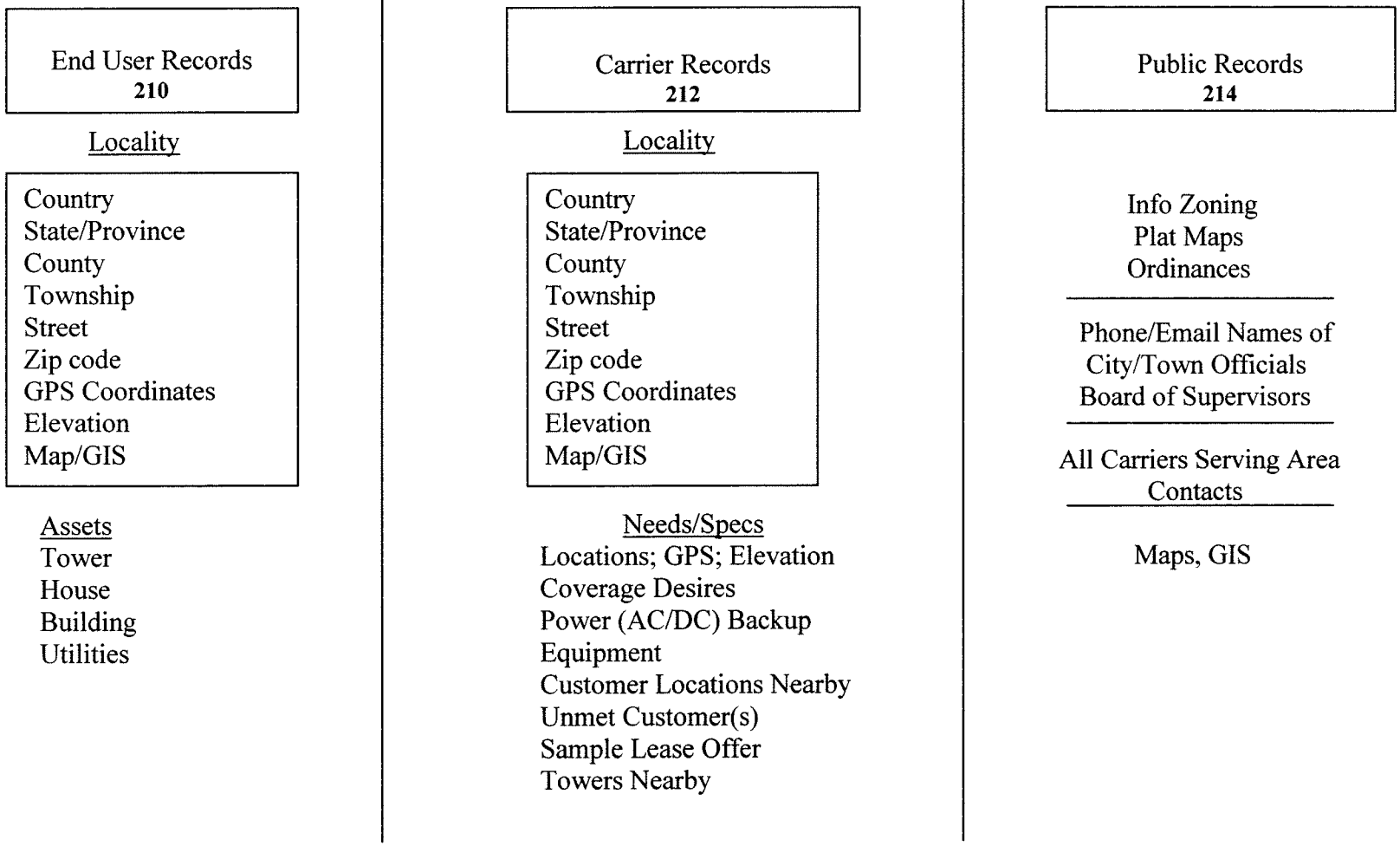


Fig. 3

End User Form

Name
Address
Phone/Email
Own or Rent?
Property Size
Identify Plat Map or Similar
Locator_____
Call_____

Your Interests:

I have a:
- Tower ☐
- Rooftop ☐
- Outbuilding ☐
- Church Steeple ☐
- AC Power ☐
- Backup or Generator ☐

I would like:
- Free Internet ☐
- Installed Tower ☐
- Installed Generator ☐
- Monthly credit on service ☐
- Nothing ☐

Click On Map 310

Carrier Form

Name
Address
Phone/Email
Market_____

Number of Customers Currently in Market_____

Number of Desired Customers in Market_____

Enter GPS Coordinates of Current Equipment

Number of Sites:

Site 1 Latitude____ Longitude____
Site 2 Latitude____ Longitude____
Site 3 Latitude____ Longitude____

Specific Needs:

- Towers ☐
- AC ☐
- AC Backup ☐
- Cable Right of Way ☐
- Storage Barn ☐
- Base Station ☐

Click On Map 311

Fig. 4

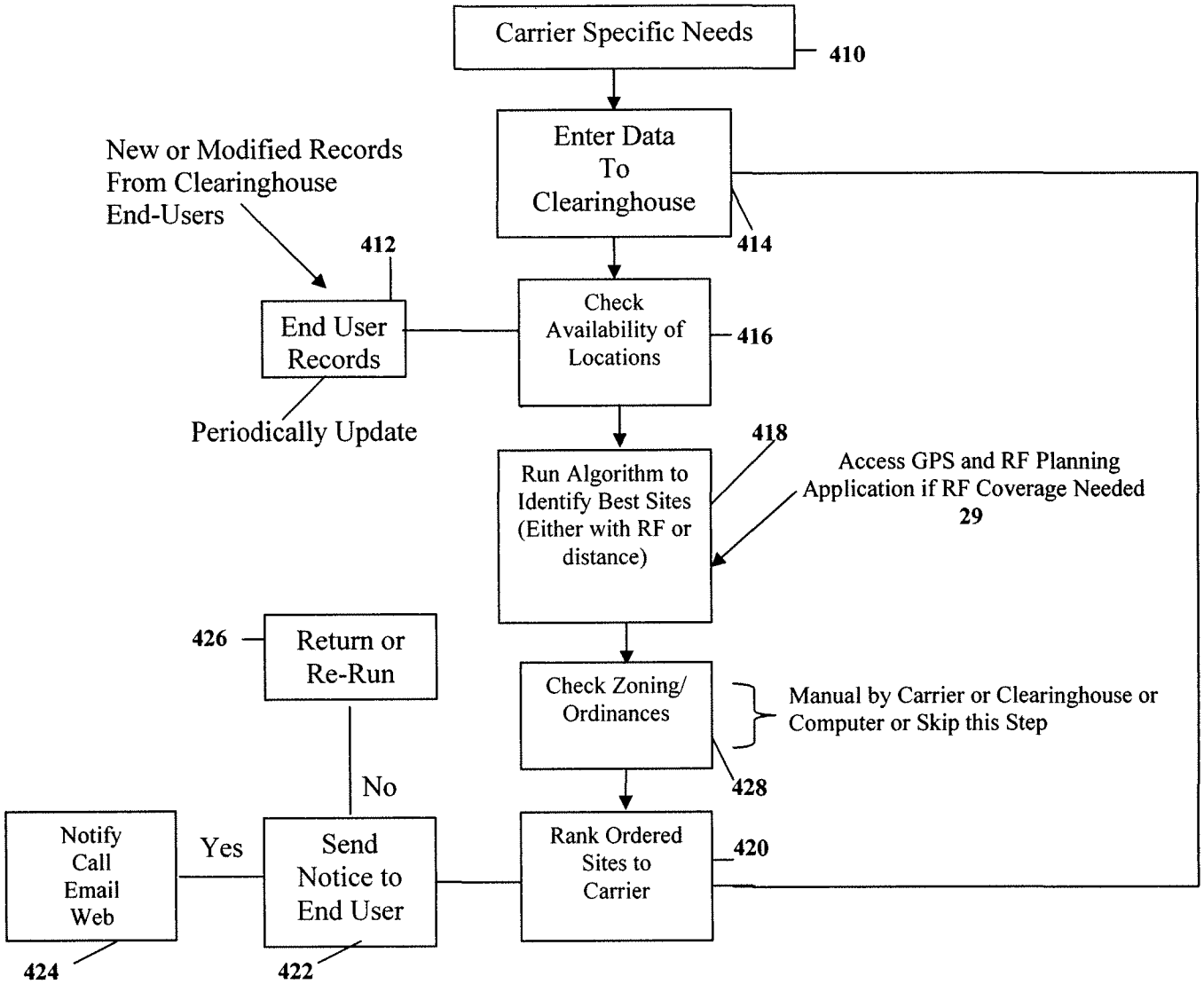

Carrier Specific Needs
410
Enter Data To Clearinghouse
414
New or Modified Records From Clearinghouse End-Users
412
End User Records
Periodically Update
Check Availability of Locations
416
418
Run Algorithm to Identify Best Sites (Either with RF or distance)
Access GPS and RF Planning Application if RF Coverage Needed
29
426
Return or Re-Run
Check Zoning/ Ordinances
Manual by Carrier or Clearinghouse or Computer or Skip this Step
428
No
Notify Call Email Web
Yes
Send Notice to End User
Rank Ordered Sites to Carrier
420
424
422

Fig. 5

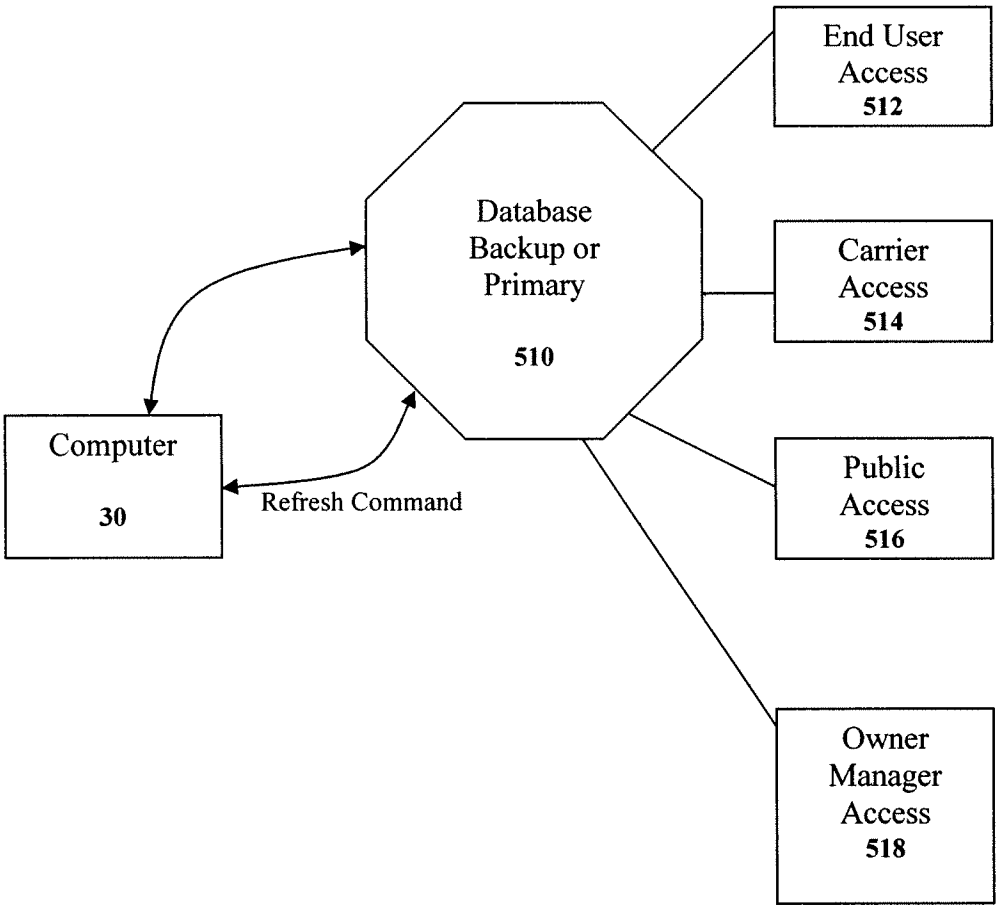

End User Access 512
Database Backup or Primary 510
Carrier Access 514
Computer 30
Refresh Command
Public Access 516
Owner Manager Access 518

Fig. 6

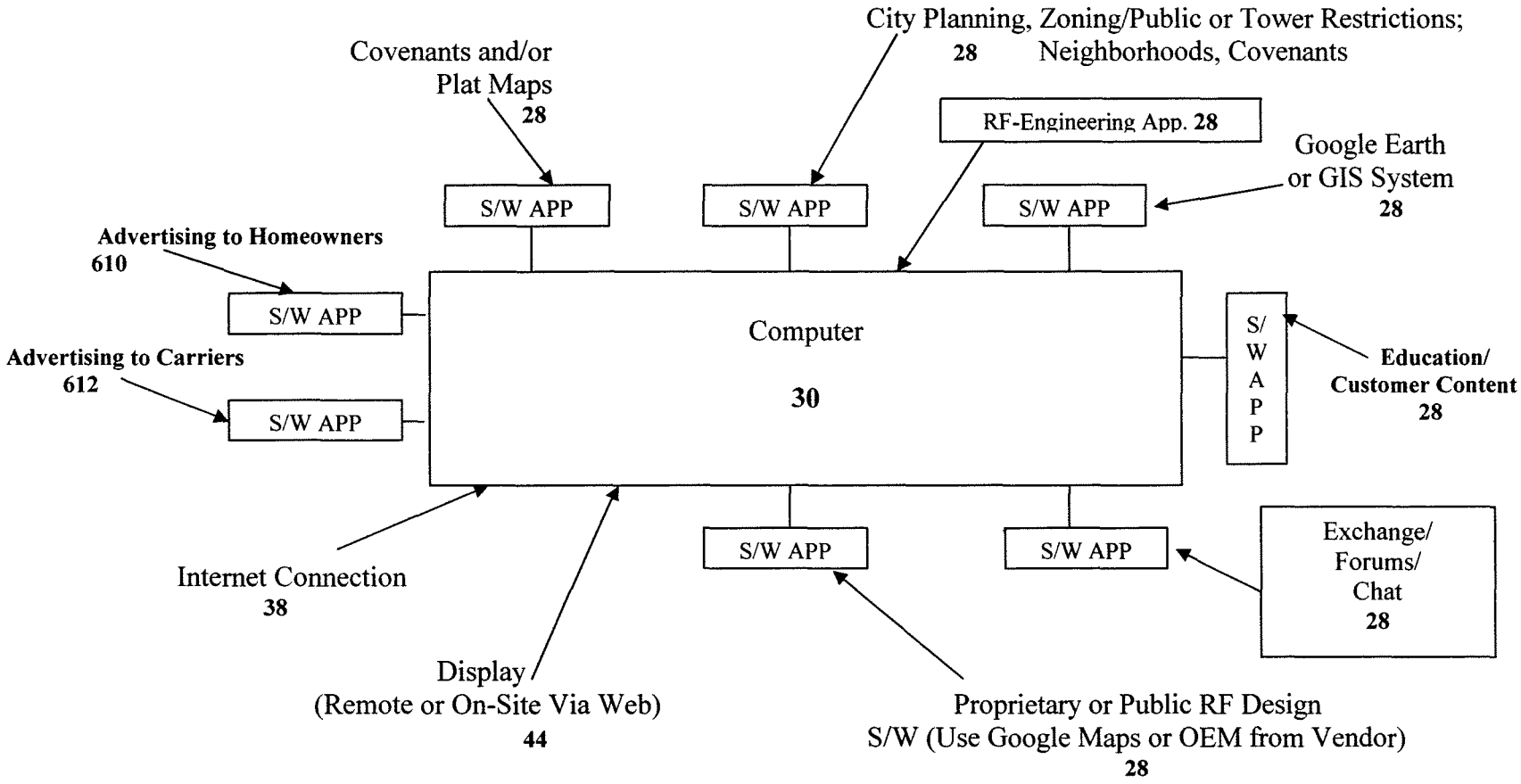

Covenants and/or
Plat Maps
28
City Planning, Zoning/Public or Tower Restrictions;
28 Neighborhoods, Covenants
RF-Engineering App. 28
Google Earth
or GIS System
28
S/W APP
S/W APP
S/W APP
Advertising to Homeowners
610
S/W APP
Advertising to Carriers
612
S/W APP
Computer
30
S/
W
A
P
P
Education/
Customer Content
28
S/W APP
S/W APP
Exchange/
Forums/
Chat
28
Internet Connection
38
Display
(Remote or On-Site Via Web)
44
Proprietary or Public RF Design
S/W (Use Google Maps or OEM from Vendor)
28

Fig. 7

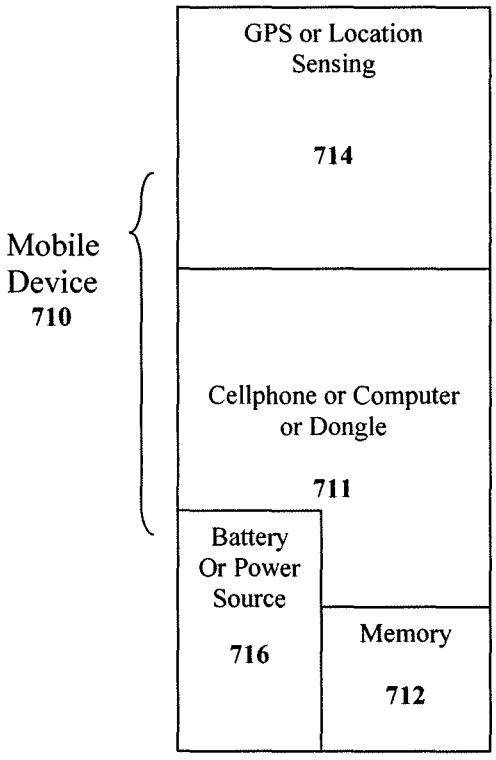
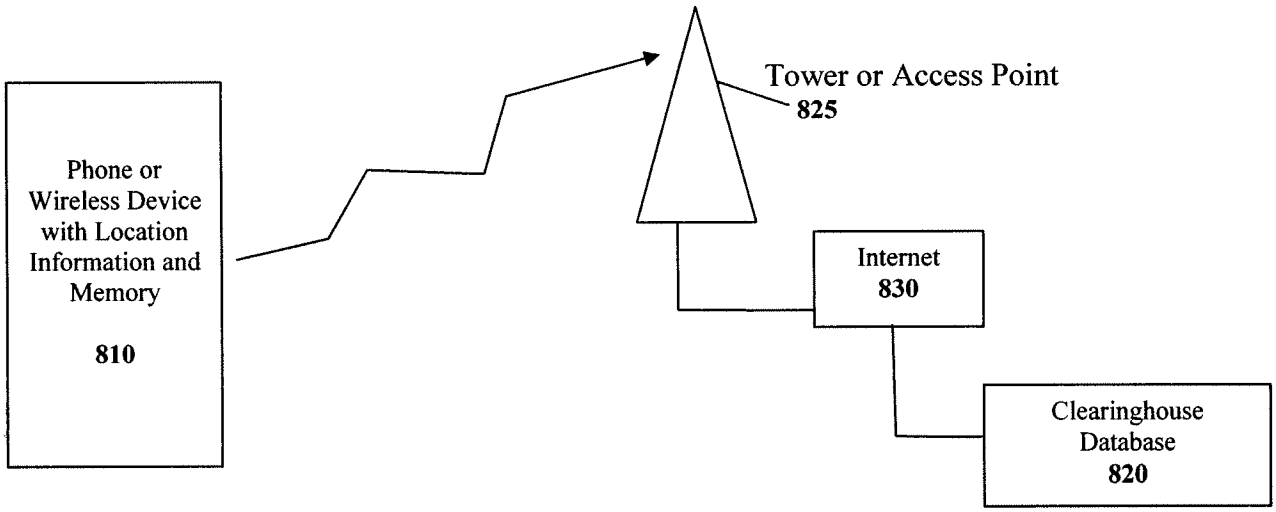

GPS or Location Sensing
714
Mobile Device
710
Cellphone or Computer or Dongle
711
Battery Or Power Source
716
Memory
712

Fig. 8



Phone reports back its "observations" to Clearinghouse

Fig. 9

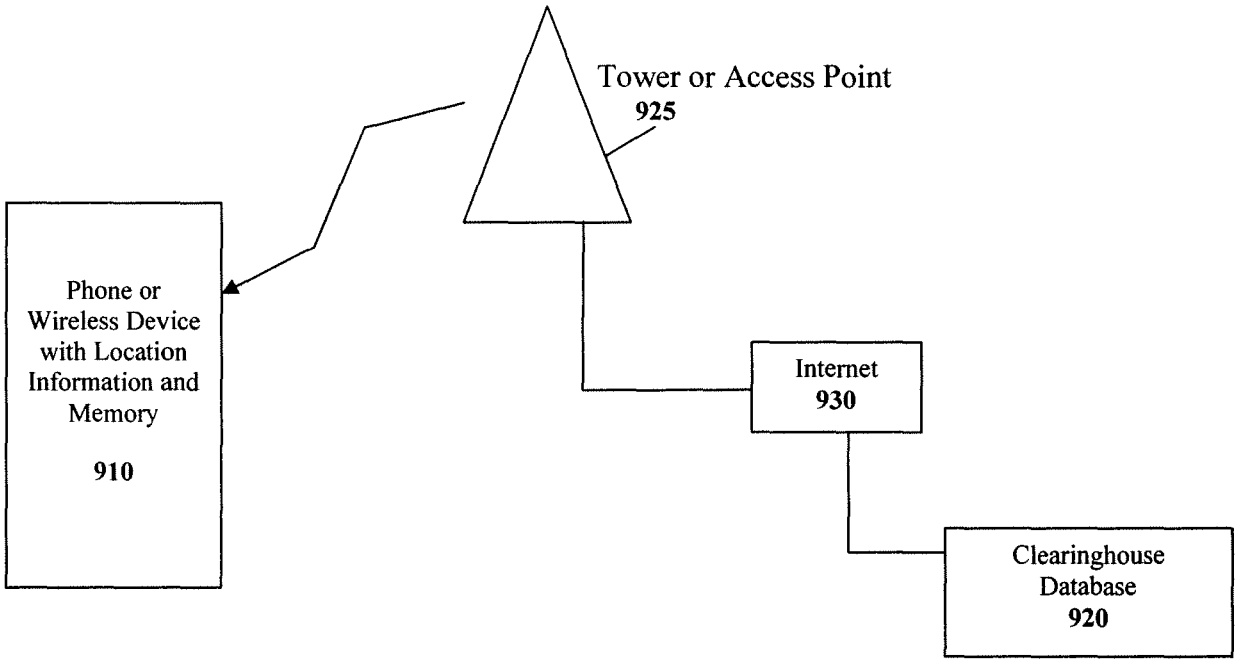

Tower or Access Point
925
Phone or Wireless Device with Location Information and Memory
910
Internet
930
Clearinghouse Database
920

Fig. 10

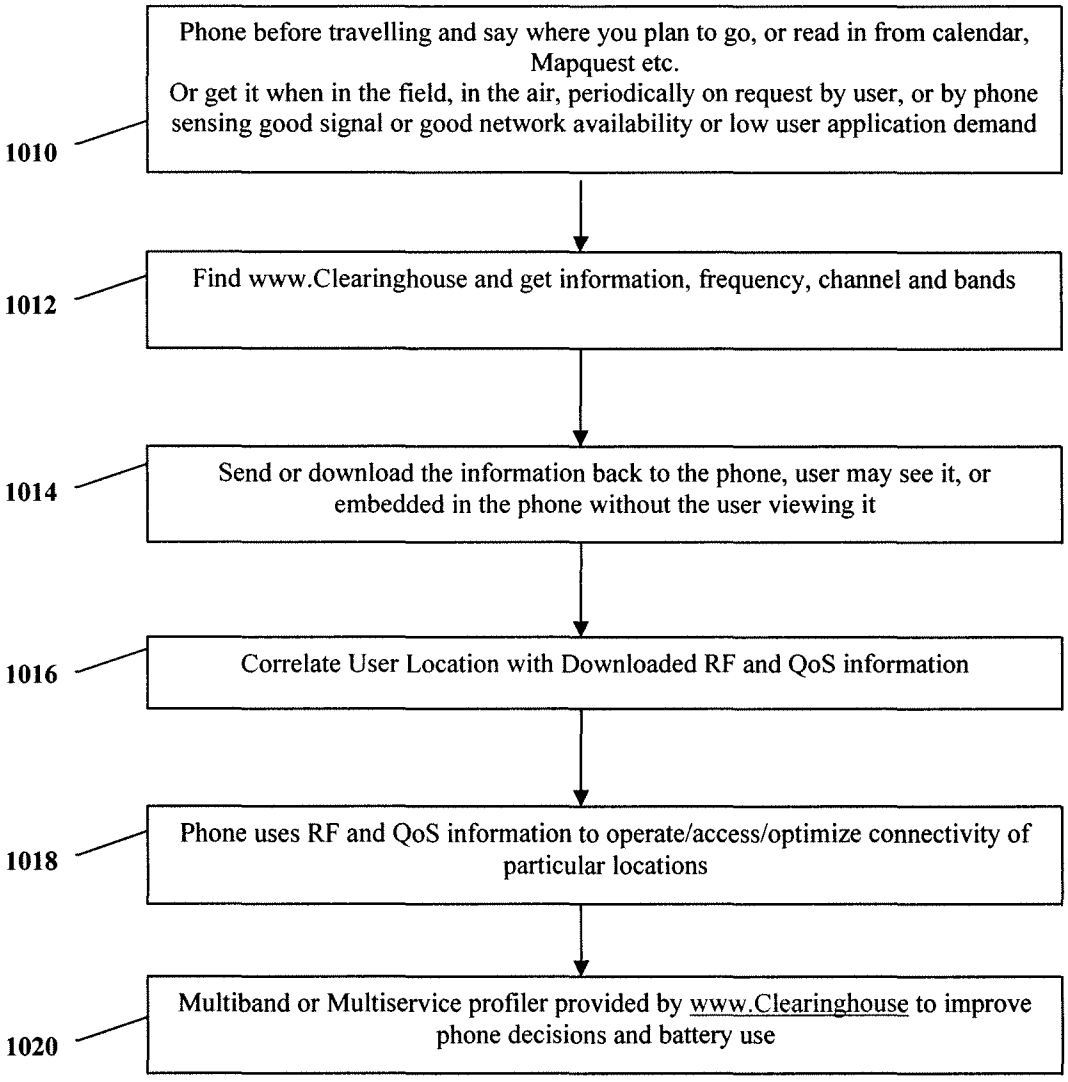

Phone before travelling and say where you plan to go, or read in from calendar, Mapquest etc.
Or get it when in the field, in the air, periodically on request by user, or by phone sensing good signal or good network availability or low user application demand
1010
Find www.Clearinghouse and get information, frequency, channel and bands
1012
Send or download the information back to the phone, user may see it, or embedded in the phone without the user viewing it
1014
Correlate User Location with Downloaded RF and QoS information
1016
Phone uses RF and QoS information to operate/access/optimize connectivity of particular locations
1018
Multiband or Multiservice profiler provided by www.Clearinghouse to improve phone decisions and battery use
1020

Fig. 11

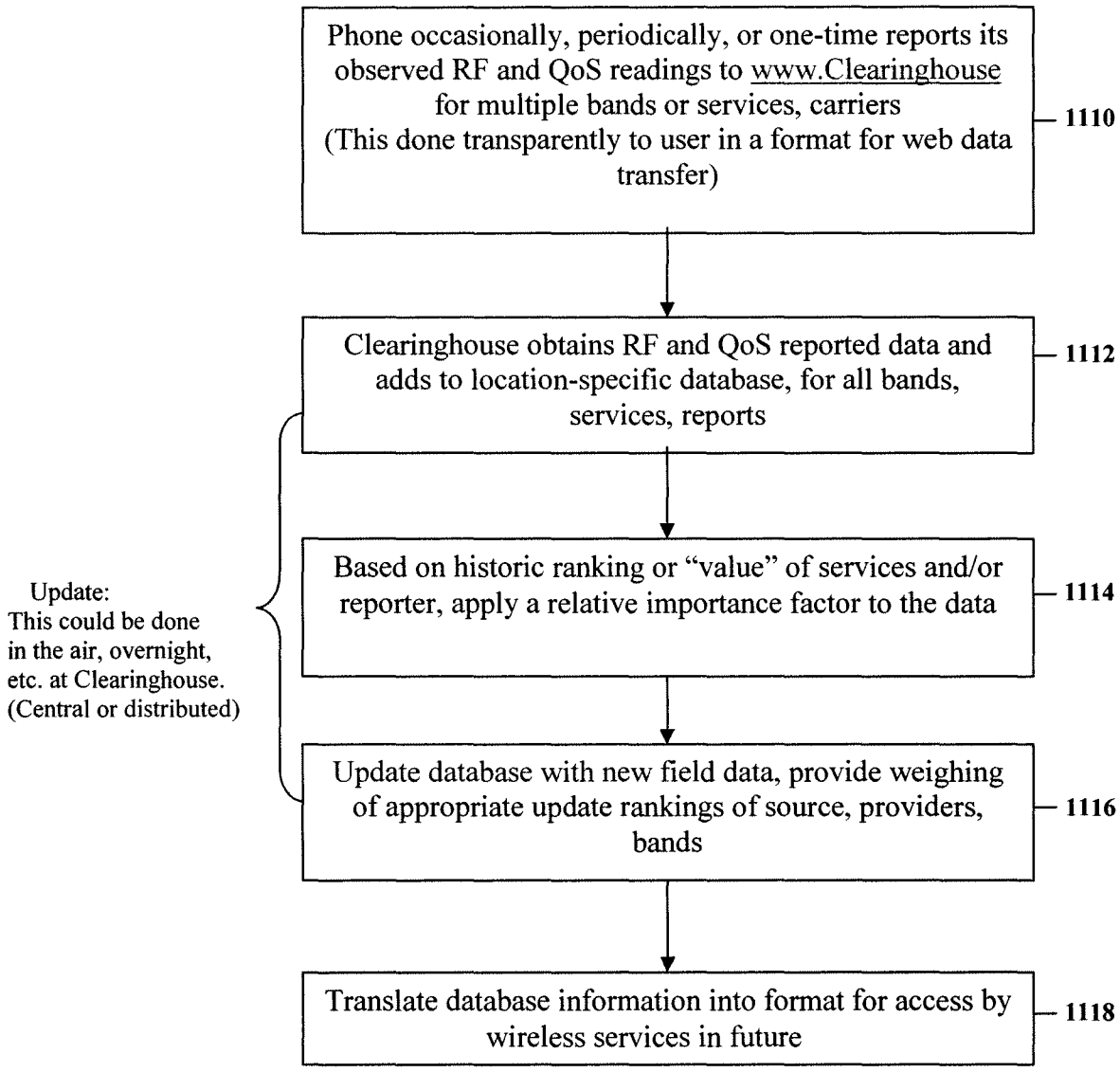

Phone occasionally, periodically, or one-time reports its observed RF and QoS readings to www.Clearinghouse for multiple bands or services, carriers (This done transparently to user in a format for web data transfer)
1110
Clearinghouse obtains RF and QoS reported data and adds to location-specific database, for all bands, services, reports
1112
Based on historic ranking or "value" of services and/or reporter, apply a relative importance factor to the data
1114
Update database with new field data, provide weighing of appropriate update rankings of source, providers, bands
1116
Translate database information into format for access by wireless services in future
1118
Update:
This could be done in the air, overnight, etc. at Clearinghouse. (Central or distributed)

Fig. 12

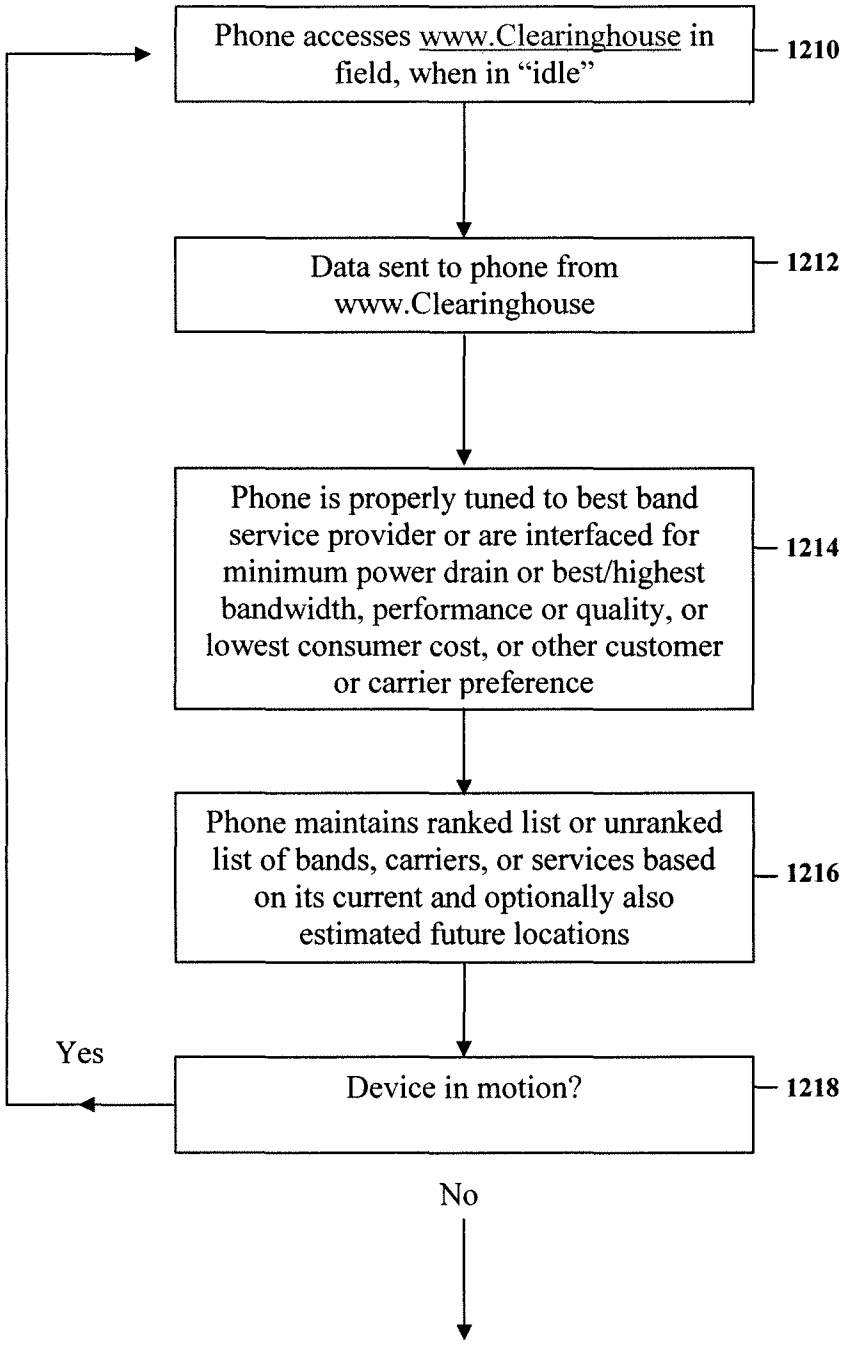

Phone accesses www.Clearinghouse in field, when in "idle"
1210
Data sent to phone from www.Clearinghouse
1212
Phone is properly tuned to best band service provider or are interfaced for minimum power drain or best/highest bandwidth, performance or quality, or lowest consumer cost, or other customer or carrier preference
1214
Phone maintains ranked list or unranked list of bands, carriers, or services based on its current and optionally also estimated future locations
1216
Yes
Device in motion?
1218
No

Fig. 13

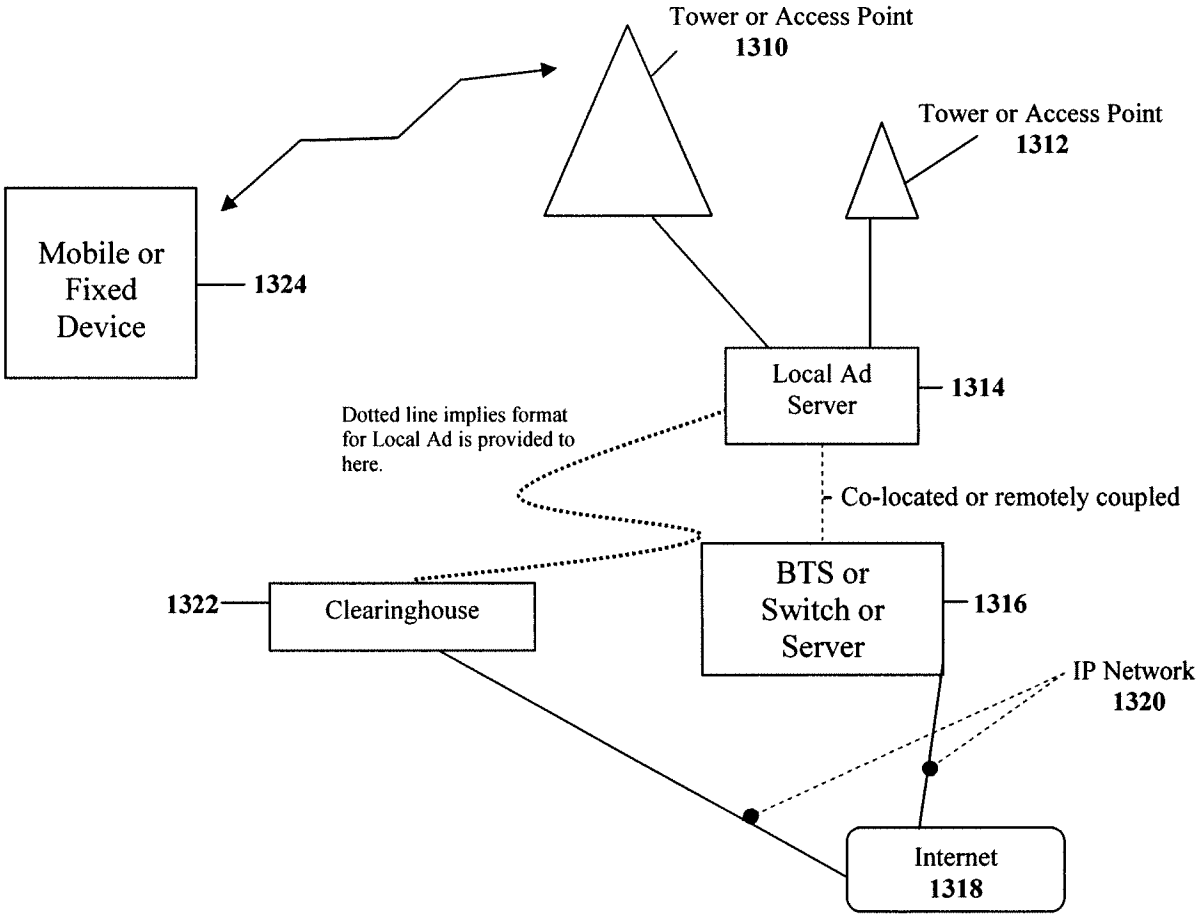

Tower or Access Point
1310
Tower or Access Point
1312
Mobile or
Fixed
Device
1324
Local Ad
Server
1314
Dotted line implies format
for Local Ad is provided to
here.
Co-located or remotely coupled
BTS or
Switch or
Server
1316
1322
Clearinghouse
IP Network
1320
Internet
1318

Fig. 14

Local Advertiser Flow Chart

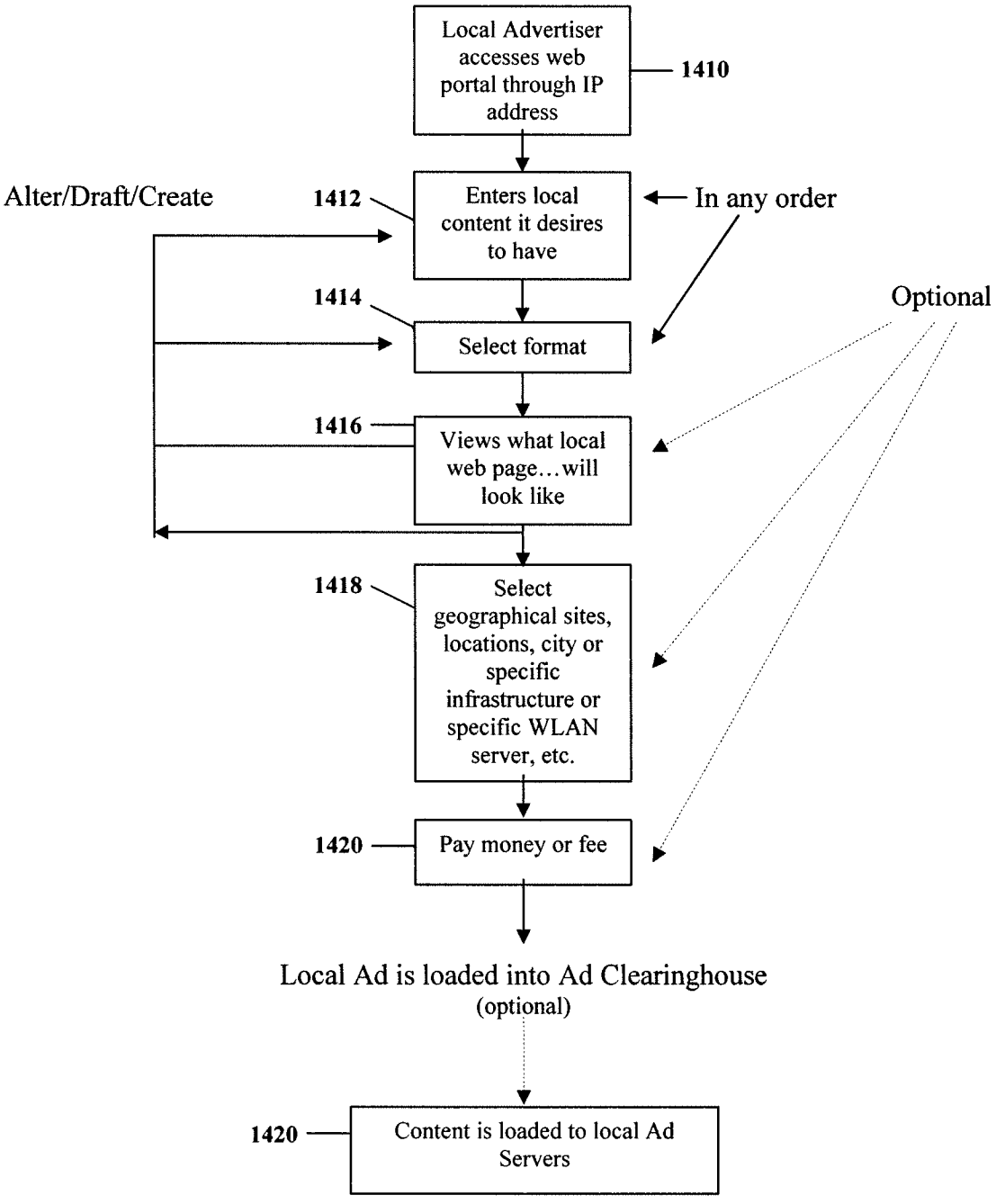
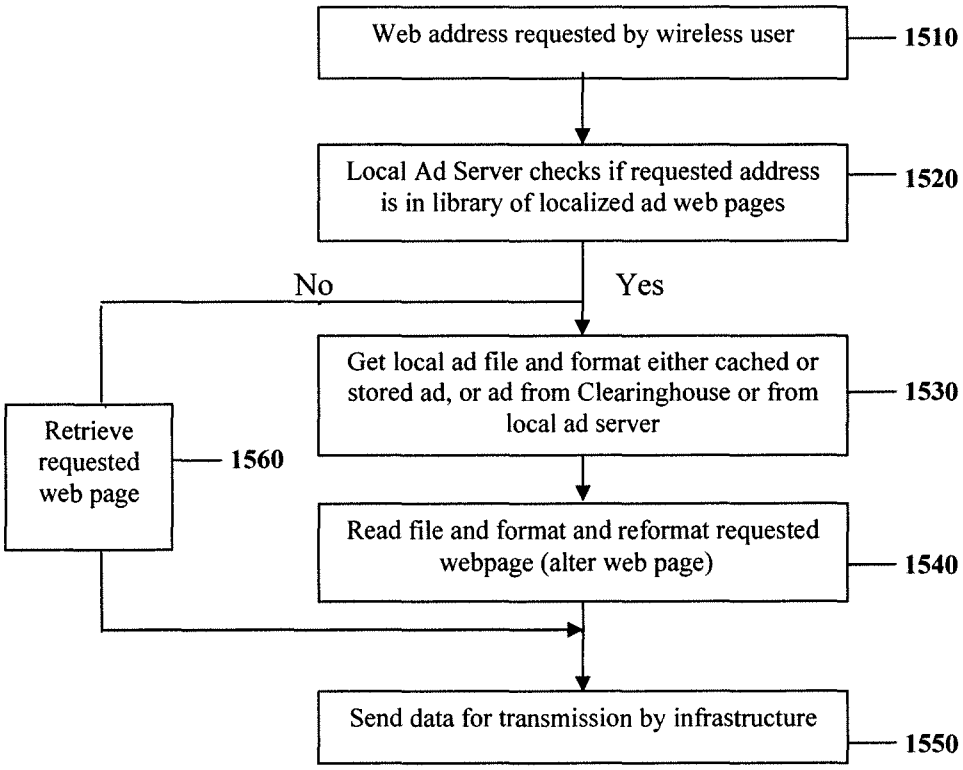


Fig. 15


Web address requested by wireless user
1510
Local Ad Server checks if requested address is in library of localized ad web pages
1520
No
Yes
Get local ad file and format either cached or stored ad, or ad from Clearinghouse or from local ad server
1530
Retrieve requested web page
1560
Read file and format and reformat requested webpage (alter web page)
1540
Send data for transmission by infrastructure
1550

Express Mail Label No.

UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)

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

Docket No. 08610004AA
Total Pages in this Submission

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

Clearinghouse System, Method, and Process for Inventorying and Acquiring Infrastructure, Monitoring and Controlling Network Performance for Enhancement, and Providing Localized Content in Communication Networks

and invented by:

Theodore R. Rappaport

If a CONTINUATION APPLICATION, *check appropriate box and supply the requisite information:*

☐ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: _____

Which is a:

☐ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: _____

Which is a:

☐ **Continuation** ☐ **Divisional** ☐ **Continuation-in-part (CIP)** of prior application No.: _____

Enclosed are:

Application Elements

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 62 pages and including the following:
   - a. ☒ Descriptive Title of the Invention
   - b. ☒ Cross References to Related Applications *(if applicable)*
   - c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*
   - d. ☐ Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
   - e. ☒ Background of the Invention
   - f. ☒ Brief Summary of the Invention
   - g. ☒ Brief Description of the Drawings *(if filed)*
   - h. ☒ Detailed Description
   - i. ☒ Claim(s) as Classified Below
   - j. ☒ Abstract of the Disclosure

Samsung Ex. 1004, Page 302 of 305

UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)

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

Docket No. 08610004AA
Total Pages in this Submission

Application Elements (Continued)

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
   a. ☒ Formal Number of Sheets **15**
   b. ☐ Informal Number of Sheets _____
4. ☒ Oath or Declaration
   a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
   b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
   c. ☒ With Power of Attorney ☐ Without Power of Attorney
   d. ☐ *DELETION OF INVENTOR(S)*
   Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*
   The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7. ☐ Application Data Sheet (See 37 CFR 1.76)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
   a. ☐ Computer Readable Form (CFR)
   b. ☐ Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statement(s) Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Certificate of Mailing
    ☐ First Class ☐ Express Mail *(Specify Label No.):* _____

Samsung Ex. 1004, Page 303 of 305

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

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

Docket No. 08610004AA
Total Pages in this Submission

Accompanying Application Parts (Continued)

17. ☒ Applicant claims small entity status. See 37 CFR 1.27.

    ☐ (Optional) Small Entity Statement(s) - Specify Number of Statements Submitted: _____

18. ☐ Additional Enclosures *(please identify below):*

Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

19. ☐ Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this 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 of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

20. ☐ Other:

Samsung Ex. 1004, Page 304 of 305

UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)

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

Docket No.
08610004AA
Total Pages in this Submission

Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra		Rate	Fee
Total Claims	32	- 20 =	12	x	$25.00	$300.00
Indep. Claims	3	- 3 =	0	x	$105.00	$0.00
Multiple Dependent Claims (check if applicable)	☐					$0.00
Total # of Pages in Specification	62	**Total # of Drawing Sheets**	15			
Total # of Pages	77				**Application Size Fee**	$0.00
					Basic Fee	$155.00
					Search Fee	$255.00
					Examination Fee	$105.00
OTHER FEE ***(specify purpose)***						$0.00
					TOTAL FILING FEE	$815.00

☐ A check in the amount of to cover the filing fee is enclosed.

☒ The Director is hereby authorized to charge and credit Deposit Account No. **50-2041** as described below.

- ☒ Charge the amount of **$815.00** as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

☐ Payment by credit card. Form PTO-2038 is attached.

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.

Dated: **9/10/2008**

Signature

Michael E. Whitham
Reg. No. 32,635

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