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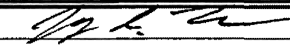
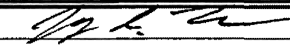
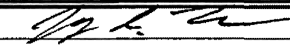
PTO/SB/05 (05-05)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCEUTILITY
PATENT APPLICATION
TRANSMITTAL

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

Attorney Docket No.	1082-0005
First Inventor	ShaoWei Pan
Title	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
Express Mail Label No.	EV 507 729 897 US

11/362395

022406

APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450																								
1. ☒ Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) 2. ☒ Applicant claims small entity status. See 37 CFR 1.27. 3. ☒ Specification [Total Pages <u>36</u>] Both the claims and abstract must start on a new page (For information on the preferred arrangement, see MPEP 608.01(a)) 4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>24</u>] 5. Oath or Declaration [Total Sheets <u>2</u>] a. ☒ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 18 completed) i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b). 6. ☒ Application Data Sheet. See 37 CFR 1.76 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) ☐ Landscape Table on CD 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. - c. are required) a. Computer Readable Form (CRF) i. ☐ Computer Readable Form (CRF) ii. ☐ Transfer Request (37 CFR 1.821(e)) b. Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	9. ☒ Assignment Papers (cover sheet & document(s)) Name of Assignee _____ Lemko Corporation 10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney 11. ☐ English Translation Document (if applicable) 12. ☐ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of foreign patent documents, publications, & other information 13. ☐ Preliminary Amendment 14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. ☐ Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 17. ☐ Other: _____																								
18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: ☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____ Prior application information: Examiner _____ Art Unit: _____																									
19. CORRESPONDENCE ADDRESS ☒ The address associated with Customer Number: <u>34456</u> OR ☐ Correspondence address below <table border="1"><tr><td>Name</td><td colspan="3"></td></tr><tr><td>Address</td><td colspan="3"></td></tr><tr><td>City</td><td>State</td><td>Zip Code</td><td></td></tr><tr><td>Country</td><td>Telephone</td><td>Email Address</td><td></td></tr></table> <table border="1"><tr><td>Signature</td><td></td><td>Date</td><td><u>2-24-2006</u></td></tr><tr><td>Name (Print/Type)</td><td>Jeffrey G. Toler</td><td>Registration No. (Attorney/Agent)</td><td>38,342</td></tr></table>		Name				Address				City	State	Zip Code		Country	Telephone	Email Address		Signature		Date	<u>2-24-2006</u>	Name (Print/Type)	Jeffrey G. Toler	Registration No. (Attorney/Agent)	38,342
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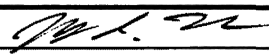
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Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).		Complete if Known	
FEE TRANSMITTAL For FY 2005		Application Number	Unknown
		Filing Date	Herewith
		First Named Inventor	ShaoWei Pan
		Examiner Name	Unknown
		Art Unit	Unknown
☒ Applicant claims small entity status. See 37 CFR 1.27		Attorney Docket No.	1082-0005
TOTAL AMOUNT OF PAYMENT	(\$) 665.00		

METHOD OF PAYMENT (check all that apply)	
☐ Check	☐ Credit Card
☐ Money Order	☐ None
☐ Other (please identify): _____	
☒ Deposit Account	Deposit Account Number: 50-2469
Deposit Account Name: TOLER, LARSON & ABEL, LLP	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
☒ Charge fee(s) indicated below	☐ Charge fee(s) indicated below, except for the filing fee
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17	☒ Credit any overpayments
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FEE CALCULATION							
1. BASIC FILING, SEARCH, AND EXAMINATION FEES							
	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fees Paid (\$)
Utility	300	150	500	250	200	100	500.00
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	
2. EXCESS CLAIM FEES							
Fee Description						Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)						50	25
Each independent claim over 3 (including Reissues)						200	100
Multiple dependent claims						360	180
Total Claims		Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims		
21 - 20 or HP = 1		x	25.00	= 25.00			
HP = highest number of total claims paid for, if greater than 20.							
Indep. Claims		Extra Claims	Fee (\$)	Fee Paid (\$)			
4 - 3 or HP = 1		x	100.00	= 100.00			
HP = highest number of independent claims paid for, if greater than 3.							
3. APPLICATION SIZE FEE							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)			
	- 100 =	/ 50 =	(round up to a whole number) x	=			
4. OTHER FEE(S)							
Non-English Specification, \$130 fee (no small entity discount)						Fees Paid (\$)	
Other (e.g., late filing surcharge): Recordation of Assignment Fee						40.00	

SUBMITTED BY			
Signature		Registration No. (Attorney/Agent) 38,342	Telephone 512-327-5515
Name (Print/Type)	Jeffrey G. Toler	Date 2-24-2006	

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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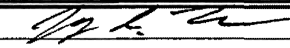
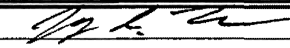
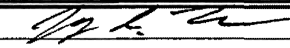
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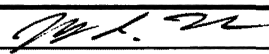
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METHOD OF PAYMENT (check all that apply)	
☐ Check	☐ Credit Card
☐ Money Order	☐ None
☐ Other (please identify): _____	
☒ Deposit Account	Deposit Account Number: 50-2469
Deposit Account Name: TOLER, LARSON & ABEL, LLP	
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)	
☒ Charge fee(s) indicated below	☐ Charge fee(s) indicated below, except for the filing fee
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Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	
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Each independent claim over 3 (including Reissues)						200	100
Multiple dependent claims						360	180
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EV 507 729 897 US

**SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS
USING A DISTRIBUTED MOBILE ARCHITECTURE**

ShaoWei Pan

FIELD OF THE DISCLOSURE

[0001] The present disclosure relates generally to the distributed mobile communication systems.

BACKGROUND

[0002] Access to basic telephony service is particularly important for rural and isolated communities. Telephony access allows small-scale enterprises, cooperatives, and farmers to obtain accurate information on fair prices for their products and to access regional and national markets. Access also reduces the cost of transportation and supports the local tourist industry. By bringing markets to people via telecommunications, rather than forcing people to leave in search of markets, urban migration is reduced and greater income and employment potential are generated in rural areas.

[0003] Unfortunately, the last decade of the telecommunications boom has not alleviated the disparities between urban and rural communities. The average imbalance, in terms of telephone penetration, in Asia, for example, is over ten to one and is often as high as twenty to one. This means that a country whose urban markets have a penetration of four (4) telephone lines per one-hundred (100) inhabitants, e.g., India and Pakistan, has a rural penetration of less than 0.2 per one-hundred (100). The situation is more acute in most African countries and in some parts of Latin America. By comparison, the disparity in average income level between urban and rural residents in the developing world is usually less than 4 to 1.

[0004] Current telephone systems are expensive to deploy. For example, a typical cellular system that includes a mobile switching center (MSC), a base station controller (BSC), and a home location register/visitor location register (HLR/VLR) can cost over \$2.0 million. Moreover, such a system may require a minimum of ten thousand users in order to be economically viable. In many rural areas, the population is not large enough to support the installation of such a system. Further, in many cases, the conditions in which the equipment, e.g., the MSC, BSC, and HLR/VLR, are to be operated are extremely harsh and environmentally challenging. An alternative to such a cellular system can include a wired system, but the costs associated with deploying and maintaining land lines are too high for certain rural areas.

[0005] Accordingly, there exists a need for an improved communications system that is relatively inexpensive to deploy and relatively inexpensive to operate.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The present invention is pointed out with particularity in the appended claims. However, other features are described in the following detailed description in conjunction with the accompanying drawings in which:

[0007] FIG. 1 is a diagram of a distributed and associative communication system;

[0008] FIG. 2 is a diagram of a network including a plurality of distributed mobile architectures;

[0009] FIG. 3 is a block diagram of a distributed management architecture server;

[0010] FIG. 4 is a diagram of a plurality of distributed mobile architectures;

[0011] FIG. 5 is a diagram of an exemplary data structure for use by an authentication, authorization, and accounting module of a distributed mobile architecture;

[0012] FIG. 6 is a flow chart to illustrate a method of determining a preferred call path for calls to be routed outside of a DMA network;

[0013] FIG. 7 is a flow chart to illustrate a method of providing a call between a first mobile subscriber and a second mobile subscriber via a single distributed mobile architecture;

[0014] FIG. 8 is a flow chart to illustrate a method of providing a call between a first mobile subscriber and a second mobile subscriber via a first distributed mobile architecture and a second distributed mobile architecture;

[0015] FIG. 9 is a flow chart to illustrate a method of providing a call between a first mobile subscriber and a roaming second mobile subscriber via a first distributed mobile architecture and a third distributed mobile architecture;

[0016] FIG. 10 is a diagram of an exemplary communication system in which a distributed management architecture server can be incorporated;

[0017] FIG. 11 is a diagram of a wireless local loop communication system in which a distributed management architecture server can be incorporated;

[0018] FIG. 12 is a diagram of plural wireless local loop communication systems connected to the public switched telephone network via a single back-haul connection;

[0019] FIG. 13 is a diagram of a communication system in which a distributed management architecture server can be deployed to extend an existing cellular network;

[0020] FIG. 14 is a diagram of a communication system in which a distributed management architecture server can be deployed to cover urban fringe around an existing network;

[0021] FIG. 15 is a diagram of a communication system in which a single distributed management architecture server can be connected to plural base transceiver stations and can provide a single backhaul to the public switched telephone network;

[0022] FIG. 16 is a diagram of an in-building communication system in which a distributed management architecture server can be deployed;

[0023] FIG. 17 is a diagram of a mobile in-field communication system in which multiple distributed management architecture servers can be deployed via multiple vehicles;

[0024] FIG. 18 is a diagram of a communication system in which a distributed management architecture server can utilize a satellite connection as a backhaul connection;

[0025] FIG. 19 is a diagram of a communication system in which a distributed management architecture server can receive multiple backhaul signals via multiple satellite signals;

[0026] FIG. 20 is a diagram of a communication system in which a single distributed management architecture server can be connected to multiple base transceiver stations;

[0027] FIG. 21 is a diagram of a mobile communication system in which a distributed management architecture server can be deployed via an airplanes;

[0028] FIG. 22 is a diagram of a mobile communication system in which a distributed management architecture server can be deployed via a ship;

[0029] FIG. 23 is a flow chart to illustrate a method of deploying a distributed management architecture server; and

[0030] FIG. 24 is a flow chart to illustrate a method of replacing a distributed management architecture server.

DETAILED DESCRIPTION OF THE DRAWINGS

[0031] An authentication, authorization, and accounting module of a first distributed mobile architecture system is disclosed and includes a destination preference register. The destination preference register includes a preferred call path for calls to be routed outside of a distributed mobile architecture network that is accessible to the first distributed mobile architecture system.

[0032] In a particular embodiment, the preferred call path is selected from a group comprising a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path. Further, in a particular embodiment, calls that are placed outside of the distributed mobile architecture network from the first distributed mobile architecture system are established via the preferred call path. Additionally, in another particular embodiment, calls that are routed outside of the distributed mobile architecture network from a mobile subscriber in communication with the first distributed mobile architecture system are established via the preferred call path.

[0033] In a particular embodiment, the destination preference register includes a first preferred call path, a second preferred call path, and a third preferred call path. Some calls that are routed outside of the distributed mobile architecture network are made via a first available preferred call path. In a particular embodiment, the module also includes a home location register that includes information associated with one or more mobile subscribers registered with the first distributed mobile architecture system, and wherein the home location register provides information related to a first community location register at a second distributed mobile architecture system.

[0034] In a particular embodiment, the module also includes a second community location register that includes information associated with one or more mobile subscribers registered with the second distributed mobile architecture system. Also, the module can include a third community location register that includes information associated with one or more mobile subscribers registered with a third distributed mobile architecture system.

[0035] In another particular embodiment, the module includes a visitor location register that includes information associated with one or more roaming mobile subscribers that are temporarily registered with the first distributed mobile architecture system.

[0036] In another embodiment, a method of communication is disclosed and includes receiving a call directed to a destination mobile directory number that is not available within a community location register within a distributed mobile architecture and matching

a prefix of the mobile directory number to a mobile directory number prefix within a destination preference register.

[0037] In yet another embodiment, a distributed mobile architecture device is provided and includes a processor and a computer readable medium that is accessible to the processor. An authentication, authorization, and accounting module is embedded within the computer readable medium and includes a destination preference register. The destination preference register includes at least one preferred call path associated with calls to be placed outside a distributed mobile architecture network that is accessible from one or more distributed mobile architecture devices.

[0038] In still another embodiment, a system is disclosed and includes a distributed mobile architecture network that includes a first distributed mobile architecture device, a second distributed mobile architecture that is coupled to the first distributed mobile architecture, and a third distributed mobile architecture that is coupled to the first distributed mobile architecture and to the second distributed mobile architecture. Further, a voice over Internet protocol (VoIP) interface can be coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture. An integrated services digital network (ISDN) interface can be coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture. Also, a mobile switching center (MSC) interface can be coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture. In this embodiment, the first distributed mobile architecture, the second distributed mobile architecture, and the third distributed mobile architecture can each include a destination preference register that includes at least one preferred interface supporting calls to be placed outside the distributed mobile architecture network.

[0039] Referring to FIG. 1, a non-limiting, exemplary embodiment of a distributed and associative telecommunications system is illustrated and is generally designated 100. As depicted in FIG. 1, the system 100 includes four cellular coverage sites 102. Each coverage site 102 includes an antenna 104. In one embodiment, the antenna 104 is

connected to a transceiver belonging to a base transceiver station (BTS) and the BTS is a 3-sector BTS. FIG. 1 also indicates that a distributed mobile architecture (DMA) 106 can be connected to each antenna 104. In one embodiment, each DMA 106 is physically and directly connected to its respective antenna 104, e.g., by a wire or cable 108. Further, in an illustrative embodiment, each DMA 106 can include the components described herein in conjunction with FIG. 3.

[0040] As illustrated in FIG. 1, each DMA 106 is interconnected with the other DMAs 106 via an Internet protocol network 110. As such, there exists a peer-to-peer connection 112 between each DMA 106 in the system 100. The DMAs 106 can handle telephony traffic that is communicated at each antenna 104. For example, the DMAs 106 can switch and route calls received via each antenna 104. Additionally, the DMAs 106 can hand-off calls to each other as mobile communication devices move around and between the cellular coverage sites 102. The DMAs 106 can communicate with each other via the IP network 110 and can further transmit calls to each other via the IP network 110. It should be understood that more than four cellular coverage sites 102 can be included in the system and that the inclusion of only four cellular coverage sites 102 in FIG. 1 is merely for clarity and explanation purposes.

[0041] Within the distributed and associative communications system 100, the controlling logic can be distributed and de-centralized. Moreover, the wireless coverage provided by the disclosed system 100 is self-healing and redundant. In other words, due to the interconnectivity via the IP network 110, if one or more of the DMAs 106 loses power, fails, or is otherwise inoperable, telephony traffic handled by the inoperable DMA 106 can re-routed to one of the remaining operable DMAs 106. Additionally, user data stored in a database, e.g., a home locator resource (HLR) or a visitor locator resource (VLR), can be distributed equally and fully among all of the DMAs 106. It can also be appreciated that new cellular coverage sites can be easily added to the system 100 as the demand for users increases. Specifically, a DMA can be deployed, connected to an antenna, connected to the IP network, and activated to provide cellular coverage in a new area.

[0042] FIG. 2 shows an exemplary, non-limiting embodiment of a network system, generally designated 200, that includes a plurality of DMAs. As illustrated in FIG. 2, the system 200 can include an Internet protocol (IP) peer-to-peer network that includes a first distributed mobile architecture 202 that is coupled to a second distributed mobile architecture 204 and to a third distributed mobile architecture 206. Further, the second distributed mobile architecture 204 is coupled to the third distributed mobile architecture 206.

[0043] As shown in FIG. 2, a first mobile subscriber 208 and a second mobile subscriber 210 are wirelessly coupled to the first distributed mobile architecture 202. A first mobile subscriber 212 and a second mobile subscriber 214 are wirelessly coupled to the second distributed mobile architecture 204. Additionally, a first mobile subscriber 216 and a second mobile subscriber 218 are wirelessly coupled to the third distributed mobile architecture 206. FIG. 3 further indicates that a mobile switching center (MSC) interface 220 can be coupled to the first distributed mobile architecture 202 to provide access to a mobile telephone network, such as a cellular telephone network. Further, a voice over Internet protocol (VoIP) interface 222 is coupled to the second distributed mobile architecture 204 to provide access to a VoIP network. FIG. 3 also shows that an integrated services digital network (ISDN) interface 224 can be coupled to the third distributed mobile architecture 206 to provide connectivity to an ISDN.

[0044] In a particular embodiment, as described in detail herein, a mobile subscriber can communicate with another mobile subscriber via the first distributed mobile architecture 202, the second distributed mobile architecture 204, or the third distributed mobile architecture 206. Further, in a particular embodiment, a mobile subscriber can communicate with another mobile subscriber via the first distributed mobile architecture 202 and the second distributed mobile architecture 204, the first distributed mobile architecture 202 and the third distributed mobile architecture 206, and the second distributed mobile architecture 204 and the third distributed mobile architecture 206. Additionally, in a particular embodiment, a mobile subscriber can communicate with another mobile subscriber via the first distributed mobile architecture 202, the second distributed mobile architecture 204, or the third distributed mobile architecture 206.

[0045] Further, in a particular embodiment, the first mobile subscriber 210 of the first DMA 202 can be connected locally to the second mobile subscriber 210 of the first DMA 202 after locating the second mobile subscriber 210 within the a home location register (HLR) within the first DMA 202. Additionally, the first or second mobile subscriber 210, 212 of the first DMA 202 can be connected to the first or second mobile subscriber 212, 214 of the second DMA 204 after locating the first or second mobile subscriber 212, 214 of the second DMA 204 within a second community location register (CLR) associated with the second DMA 202 that is stored within the first DMA 202. Moreover, the first or second mobile subscriber 210, 212 of the first DMA 202 can be connected to the first or second mobile subscriber 216, 218 of the third DMA 206 after locating the first or second mobile subscriber 216, 218 of the third DMA 206 within a third community location register (CLR) associated with the third DMA 206 that is stored within the first DMA 202.

[0046] As a mobile subscriber roams into a coverage area that is not provided by the DMA to which the mobile subscriber is registered, the mobile subscriber can be temporarily registered with a new DMA while the mobile subscriber is roaming. CLR information concerning the roaming mobile subscriber can be obtained from the new DMA in order to complete a call to the roaming mobile subscriber.

[0047] In another particular embodiment, calls can be made from a mobile subscriber to an external destination, i.e., external to the DMA network, via the MSC interface 220, the VoIP interface 222, or the ISDN interface 224. A user can create a preferred hierarchy of interfaces to make calls external to the DMA network. As such, a user can indicate that all calls made from a mobile subscriber to an external device are to be established via the VoIP interface 222. If the VoIP interface 222 is unavailable, a second preferred interface can be used to establish the external call.

[0048] FIG. 3 shows an exemplary, non-limiting, embodiment of a DMA, e.g., one of the DMAs 106 described in conjunction with FIG. 1 or one of the DMAs 202, 204, 206 shown in FIG.2. In a particular embodiment, the DMA 106 includes a processor, or computer, having a housing and a computer readable medium 300 that is disposed

therein. A power supply 302 can also be disposed within the housing of the DMA 106 in order to provide power to the DMA 106. The power supply 302 can be a rechargeable battery disposed within the DMA 106 or it can be external to the DMA 106, i.e., a standard power outlet. Moreover, a cooling system 304, e.g., a fan with a thermostat, can be within the DMA 106 in order to keep the DMA 106 from overheating. In an alternative embodiment, the DMA 106 can be a single board processor that does not require a fan.

[0049] As depicted in FIG. 3, the DMA 106 can include a mobile switching center (MSC) module 306 and a base station controller (BSC) module 308 embedded within the computer readable medium 300. In an exemplary, non-limiting embodiment, the MSC module 306 can include a gatekeeper (GK) 310 that is connected to several gateways. For example, a circuit gateway (CGW) 312 can be connected to the GK 310 and can provide connectivity to an integrated services digital network/public switched telephone network (ISDN/PSTN) interface 314. The CGW 312 can provide a circuit switched to packet data conversion. In an exemplary, non-limiting embodiment, the PSTN portion of the ISDN/PSTN interface 314 can be an inter-office interface that uses the Bellcore industry standard ISDN user part (ISUP) signaling on a signaling system seven (SS7) link set. Moreover, the voice trunks on this interface can be timeslots on a T1 connection. Inbound and outbound voice calls can be supported on the ISDN portion of the ISDN/PSTN interface 314.

[0050] As further illustrated in FIG. 3, a packet data service node (PDSN) gateway 316 for CDMA, or a Gateway GPRS Support Node (GGSN) for Global System for Mobile Communication (GSM), and a Session Initiation Protocol (SIP) gateway 318 can also be connected to the GK 310. The PDSN gateway 316 and the SIP gateway 318 can provide connectivity to an Internet protocol (IP) interface 320. Further, the PDSN gateway 316 or a GGSN can establish a reverse tunnel with the PDSN or GGSN gateway 316 using generic routing encapsulation (GRE). Moreover, the PDSN gateway 316, or GGSN, can implement the Pseudo Random Function (PRF)/ Foreign Agent (FA) functionality of the DMA 106 which supports mobile IP functions.

[0051] FIG. 3 further shows an SS7 gateway 322 that provides connectivity to an ANSI-41 and GSM Mobile Application Part (MAP) interface 324. In a particular embodiment, the ANSI-41 interface can be an SS7 TCAP/SCCP interface on the same SS7 link set used for ISUP signaling. The same SS7 point code can be used to identify the DMA 106 in the ANSI-41 network. The ANSI-41 interface can be used for roamer registration. Further, in an exemplary, non-limiting embodiment, the GSM MAP interface can be an SS7 TCAP/SCCP interface on the same SS7 link set used for ISUP signaling. It can be appreciated that there are different protocols of MAP from MAP/B to MAP/I, but in the illustrative embodiment, the different MAP/x protocols are not stacked – they are used independently.

[0052] As depicted in FIG. 3, a media gateway 326 can also be coupled to the GK 310. In an exemplary, non-limiting embodiment, the media gateway 326 can include cellular transcoders, one or more intranet gateways, conferencing bridges, and group calling functionality. Further, an authentication, authorization, and accounting (AAA) module 328 can be coupled to the GK 310. In an exemplary, non-limiting embodiment, there are three levels of authentication management. The highest level is for administration, the mid-level is for operations, and the lowest level is for normal users. The functions of the AAA module 328 can be included in the user level.

[0053] In an exemplary, non-limiting embodiment, the GK 310 can act as an AAA server and a feather server to support advanced supplementary service, short message service, etc. Moreover, the GK 310 can act as a call manager and can support ISUP and PSTN function calls. Additionally, the GK 310 can act as a signal gateway, e.g., IP to SS7 inter-working, ISUP, GSM MAP or ANSI-41 to PSTN and ANSI-42/GSM. The GK 310 can also function as a data call server.

[0054] As illustrated in FIG. 3, the BSC module 308 includes a cellular radio network controller (CRNC) 330 and a cellular selection/distribution unit (CSDU) 332 that are connected to a call protocol controller (CPC) 334. In turn, the CPC 334 can be connected to a plurality of base transceiver stations (BTSSs) 336. Specifically, the DMA 106 includes a BTS interface 338 at the CPC 334 that can be physically and directly

connected to the BTSs 336. The CRNC 330 can provide cellular radio resource management and cellular call control. The CSDU 332 can provide Fundamental Channel (FCH) soft handoff and distribution, Link Access Control (LAC) processing for inband signaling, multiplexer (MUX) functions, and centralized power control. Further, the CPC 334 can convert a T1 or E1 message or ATM interface to a data packet message. In a particular embodiment, each BTS 336 supports signals and traffic up to the front point of the CPC 334, e.g., up to the BTS interface 338. Further, in a particular embodiment, the CRNC 330, the CPC 334, the CSDU 332 and the OAMP 340 can perform one or more of the functions of legacy Base Station Controllers (BSC).

[0055] In an exemplary, non-limiting embodiment, the BTS interface 338 can be an IS-95A OR IS-2000 interface over E1 or ATM, or the BTS interface 338 can be a GSM BTS interface using Abis or an UMTS Iub interface or customized application for mobile network enhanced logic (CAMEL). In an illustrative embodiment, the CPC 334 can be connected to one or more BTSs 336. FIG. 3 further shows that the BSC module 308 includes an operations, administration, maintenance, and provisioning (OAMP) module 340. In an exemplary, non-limiting embodiment, the OAMP module 340 can use simple network management protocol (SNMP) for operations interfaces. Further, the OAMP module 340 can include a JAVA user interface. The OAMP module 340 can also include a software agent that is assigned to each component within the DMA 106. The agents independently monitor their respective components. Moreover, each agent can provision its respective component.

[0056] In a particular embodiment, a DMA can be implemented as a system or a device. For example, a DMA system or a DMA device can include a DMA server or an DMA on board processor.

[0057] FIG. 4 depicts a plurality of DMAs. Particularly, FIG. 4 depicts a first DMA 400, a second DMA 402, and a third DMA 404. FIG. 4 indicates that, in general, each DMA 400 includes a visitor location register (VLR), a home location register (HLR), and at least one community location register (CLR). In a particular embodiment, the VLR, HLR, and the CLR within each DMA 400, 402, 404 are part of an AAA module within

each DMA 400, 402, 404. For example, the HLR, VLR, and CLR may be within the AAA module 328 of the exemplary DMA of FIG. 3.

[0058] In a particular embodiment, as indicated in FIG. 4, the first DMA 400 includes a VLR 406, an HLR 408, a second CLR 410, and a third CLR 412. Further, the second DMA 402 includes a VLR 414, a first CLR 416, an HLR 418, and a third CLR 420. Additionally, the third DMA 404 includes a VLR 422, a first CLR 424, a second CLR 426, and an HLR 428.

[0059] In an exemplary, non-limiting embodiment, the first CLR 416 within the second DMA 402 and the first CLR 424 within the third DMA 404 correspond to the HLR 408 of the first DMA 400. More particularly, the first CLR 416 within the second DMA 402 and the first CLR 424 within the third DMA 404 include information that is stored within the HLR 408 of the first DMA server 400.

[0060] Additionally, in an exemplary, non-limiting embodiment, the second CLR 410 within the first DMA 400 and the second CLR 426 within the third DMA 404 correspond to the HLR 418 of the second DMA 402. More particularly, the second CLR 410 within the first DMA 400 and the second CLR 426 within the third DMA 404 include the information that is stored within the HLR 418 of the second DMA server 402.

[0061] Also, in an exemplary, non-limiting embodiment, the third CLR 412 within the first DMA 400 and the third CLR 420 within the second DMA 402 correspond to the HLR 428 of the third DMA 404. More particularly, the third CLR 412 within the first DMA 400 and the third CLR 420 within the second DMA 402 include the information that is stored within the HLR 428 of the third DMA server 404.

[0062] FIG. 4 further indicates that the first DMA 400 can include a destination preference register (DPR) 430. Also, the second DMA 402 can include a DPR 432. Moreover, the third DMA 404 can also include a DPR 434. In a particular embodiment, each DPR 430, 432, 434 includes a preference for a call path to be used to place calls outside of a DMA network provided by the DMAs 400, 402, 404. In a particular embodiment, the preference is established for each mobile-subscriber registered with the

DMA network. In another embodiment, the preference is established for each DMA within the DMA network.

[0063] Referring to FIG. 5, an exemplary, non-limiting embodiment of an authentication, authorization, and accounting (AAA) module is shown and is generally designated 500. The AAA module depicted in FIG. 5 can be embedded within any of the DMAs that are described herein. As indicated in FIG. 5, the AAA module 500 includes data associated with an HLR 502, a second CLR 504, a third CLR 506, and a VLR 508. As shown, the HLR 502 data includes a plurality of IP addresses that can be used to establish one or more telephone calls within a first DMA in which the AAA module 500 is embedded. The HLR 502 data further includes a GPS location of the first DMA in which the AAA 500 is embedded.

[0064] As illustrated in FIG. 5, the second CLR 504 and the third CLR 506 include one or more IP addresses that can be used to establish one or more telephone calls via a second and third DMA that are coupled to the first DMA in which the AAA module 500 is embedded. The second CLR 504 and the third CLR 506 also include a GPS location for the second and third DMA that are coupled to the first DMA in which the AAA module 500 is embedded. Further, the second CLR 502 and the third CLR 504 include a neighborhood (NB) list to identify neighboring DMS that are located proximately to the DMA in which the AAA module 500 is embedded.

[0065] FIG. 5 further indicates the data associated with the HLR 502, the second CLR 504, the third CLR 506, and the VLR 508 include at least one international mobile subscriber identification (IMSI) 512 and at least one electronic series number (ESN) 514. Moreover, the HLR 502, the second CLR 504, and the third CLR 506 records also include at least one mobile directory number (MDN) 516. In a particular embodiment, the HLR 502 includes a location 518 for at least one mobile subscriber that is registered with the HLR 502.

[0066] As shown in FIG. 5, the HLR 502 and the VLR 508 further include at least one temporary location directory number (TLDN) 520, a registration indicator 522, a timer 524, a mobile switching center (MSC) preference indicator 526, an integrated services

digital network (ISDN) preference indicator 528, and a voice over Internet protocol (VoIP) preference indicator 530 and a timer interval given to the visited mobile to be-registered.

[0067] As shown in FIG. 5, the AAA module 500 can also include a DPR 530. As shown the DPR 530 includes at least one MDN prefix 532. Further, the DPR 530 includes a first preferred destination indicator 534, a second preferred destination indicator 536, and a third preferred destination indicator 538. In a particular embodiment, the preferred destination indicators 534, 536, 538 indicate a hierarchy of call paths that may be used to place calls outside a DMA network provided by one or more DMAs. For example, the first preferred destination indicator 534 can be a VoIP call path, the second preferred destination indicator 536 can be an ISDN call path, and the third destination indicator can be an MSC call path.

[0068] As such, in an illustrative embodiment, when a mobile subscriber attempts to call a particular MDN that is not within the HLR 502, the second CLR 504, or the third CLR 506, the AAA module 500 can match the prefix of the MDN to the at least one MDN prefix in order to determine a preferred call path destination for establishing a call outside of the DMA network provided by the DMA in which the AAA module 500 is embedded. Accordingly, if a user wishes to save money, the user can choose to make calls outside of the DMA network via a VoIP interface. In another example, if a user wishes to have a higher call quality, the user can choose to make calls outside of the DMA network via an ISDN interface.

[0069] Referring to FIG. 6, a method of determining a preferred call path for calls to be routed outside of a DMA network is shown and commences at block 600. At block 600, a DMA registers a mobile subscriber within a home location register (HLR) of the DMA. At block 602, the DMA receives a call directed to a destination mobile directory number (MDN) that is not within any community location register (CLR) stored within the DMA. In a particular embodiment, this is an indication that the call is being made to a mobile directory number that is outside of a DMA network provided by one or more DMAs. Moving to block 604, the DMA determines a preferred call path based on the prefix of

the MDN. In a particular embodiment, the DMA can match the prefix of the MDN with an MDN prefix within a destination preference register (DPR) stored within the DMA in order to determine a hierarchy of preferred call paths for routing the call to the MDN. In a particular embodiment, the MDN is a ten digit telephone number, e.g., 222-333-4444, and the prefix of the MDN can be the first three digits of the number, e.g., 222. Further, in a particular embodiment, the preferred call path can be placed over a VoIP interface, an ISDN interface, or an MSC interface.

[0070] Proceeding to block 606, the DMA determines whether an interface associated with a selected first preferred the call path is available. If so, the method continues to block 608 and the DMA establishes the call to the MDN outside of the DMA network via a DMA server that routes the call over the preferred call path. The method then ends at state 610. For example, with reference to FIG. 2, if the first subscriber 208 of the first DMA 202 includes a first preferred call path that is set to ISDN and the ISDN interface at the third DMA 206 is available, a call from the first subscriber 208 of the first DMA 202 to an external device can be routed to the third DMA 206. In turn, the third DMA 206 can route the external device via the ISDN interface 224.

[0071] Returning to decision step 606, if the first preferred call path is not available, the DMA determines the next preferred call path for the matching MDN prefix within the DPR. The method then returns to decision step 606 and continues as described herein. Again, with reference to FIG. 2, if the ISDN interface 224 is unavailable, a call to an external device can be routed to the first DMA 202, which can route the call to the external device via the MSC interface 220. Additionally, if the ISDN interface 224 and the MSC interface 220 is unavailable, a call to an external device can be routed to the second DMA 204, which can route the call to the external device via the VoIP interface. In a particular embodiment, if none of the preferred call paths are available, the DMA can indicate that the call cannot be connected.

[0072] Referring to FIG. 7, a method of establishing communication via a distributed mobile architecture (DMA) is shown and commences at block 700. At block 700, the DMA registers a first mobile subscriber within the home location register (HLR) of the

DMA. Next, at block 702, the DMA registers a second mobile subscriber within the home location register (HLR) of the DMA. Moving to block 704, the DMA receives a call from the first mobile subscriber to the second mobile subscriber. At block 706, the DMA locates the first mobile subscriber within the home location register of the DMA. Next, at block 708, the DMA locates the second mobile subscriber within the home location register of the DMA. Proceeding to block 710, the DMA connects the call between the first mobile subscriber and the second mobile subscriber via one or more local IP addresses within the DMA. The method then ends at state 712.

[0073] FIG. 8 depicts a method of establishing communication via a first distributed mobile architecture (DMA) and a second DMA. Beginning at block 800, the first DMA registers a first mobile subscriber within a home location register (HLR) of the first DMA. At block 802, the second DMA registers a second mobile subscriber within the home location register (HLR) of the second DMA. Thereafter, at block 804, the first DMA pre-fetches the home location register (HLR) information from the second DMA and stores it within a second community location register (CLR) at the first DMA. In a particular embodiment, the first DMA and the second DMA can be linked to each other via an IP network.

[0074] Moving to block 806, the first DMA receives a call from the first mobile subscriber to be routed to the second mobile subscriber. At block 808, the first DMA locates the first mobile subscriber within the home location register (HLR) of the first DMA. Proceeding to block 810, the first DMA locates the second mobile subscriber within the second community location register (CLR) associated with the second DMA. At block 812, the first DMA sends a location update request (LocUpdate) to the second DMA. Next, at block 814, the first DMA receives an acknowledgement from the second DMA. In an illustrative embodiment, the acknowledgement includes the current address of the second mobile subscriber within the second DMA. Continuing to block 816, the first DMA connects the first mobile subscriber to the second mobile subscriber via the first DMA and the second DMA by assigning an IP address at both the first DMA and the second DMA. The method then ends at state 818.

[0075] Referring to FIG. 9, a method of establishing communication between a first mobile subscriber and a second mobile subscriber that is roaming is shown and commences at block 900. At block 900, a first distributed mobile architecture (DMA) registers a first mobile subscriber within a home location register (HLR) of the first DMA. At block 902, a second DMA registers a second mobile subscriber within a home location register (HLR) of the second DMA. Moving to block 904, the first DMA receives the home location register (HLR) information from the second DMA and stores it within a second community location register (CLR) at the first DMA.

[0076] Proceeding to block 906, a third DMA registers the second mobile subscriber within a visitor location register (VLR) of the third DMA. In a particular embodiment, this indicates that the second mobile subscriber has roamed into a coverage area controlled by the third DMA. At block 908, the third DMA sends the registration information of the second mobile subscriber to the second DMA.

[0077] Moving to block 910, the first DMA receives a call from the first mobile subscriber to be routed to the second mobile subscriber. Thereafter, at block 912, the first DMA locates the first mobile subscriber within the home location register (HLR) of the first DMA. At block 914, the first DMA locates the second mobile subscriber within the second community location register (CLR) that is associated with the second DMA.

[0078] Proceeding to block 916, the first DMA sends a location update request (LocUpdate) to the second DMA. At block 918, the second DMA sends the location update (LocUpdate) to the third DMA. Then, at block 920, the second DMA receives an acknowledgement from the third DMA. In a particular embodiment, the acknowledgement includes a current address of the second mobile subscriber within the third DMA. For example, the third DMA can retrieve the current address of the second mobile subscriber from the VLR within the third DMA. Continuing to block 922, the first DMA receives the acknowledgement from the second DMA with the address of the second mobile subscriber. Next, at block 924, the first DMA connects the first mobile subscriber to the second mobile subscriber via the first DMA and the third DMA. For example, an IP address at the third DMA is assigned to the call and is used to route the

call over an IP network between the first DMA and the third DMA. The method then ends at state 926.

[0079] Referring to FIG. 10, an exemplary, non-limiting embodiment of a telecommunications system is shown and is generally designated 1000. As shown, the system includes one or more DMAs 1002 that are connected to a wireless carrier's central MSC 1004. The DMA(s) 1002 can be connected to the MSC 1004 via an E1 CCS (G.703, G732) connection, or any other applicable connection. The MSC 1004, in turn, is connected to a code division multiple access (CDMA) network 1006. FIG. 10 further shows that the DMA(s) 1002 can be connected to a switching transfer point (STP) 1008 of a stand-alone carrier. As shown, the DMA 1002 can be connected to the STP 1008 via an IS-41 + IS-880 (DS0) connection, or an ISUP ITU N7 connection.

[0080] As further depicted in FIG. 10, the STP 1008 can be connected to a short messaging service (SMS) server 1010 in order to provide text-messaging capabilities for the mobile communication devices using the system 1000 shown in FIG. 10. Additionally, the STP 1008 can be connected to a home location register (HLR) 1012, a pre-paid wireless server 1014 and an international roaming network 1016 in order to provide pre-paid services and roaming between multiple countries. FIG. 10 shows that the DMA(s) 1002 can be connected to the PTSN 1018 via an E1 CCS (G.703, G732) connection, or any other appropriate connection.

[0081] Referring to FIG. 11, a wireless local loop (WLL) system is portrayed and is generally designated 1100. As illustrated in FIG. 11, the system 1100 includes a DMA 1102 that is connected to a BTS 1104. The BTS 1104, in turn, is connected to an antenna 1106. The antenna 1106 provides cellular coverage for one or more subscribers 1108 within transmission distance of the antenna 1106. FIG. 11 indicates that the system 1100 can further include a data network connection 1110 from the DMA 1102. The data network connection 1110 can connect the DMA 1102 to the PSTN via an ISUP/ISDN signaling connection on an SS7 link set or a T1/E1 wireless connection. Further, the data network connection 1110 can be an IEEE 802.11 connection between the DMA 1102

depicted in FIG. 11 and other DMAs not shown. The DMA 1102 can beneficially utilize existing infrastructure used for cellular and SMS data services.

[0082] FIG. 12 shows a multi-WLL system, generally designated 1200. As shown, the system 1200 includes a plurality of WLLs 1202. Each WLL 1202 can include a DMA 1204 and an antenna 1206 connected thereto to provide a cellular coverage site around the antenna 1206. As illustrated in FIG. 12, the WLLs 1202 can be interconnected via a wireless local area network (WLAN), or a wide area network, such as a microwave connection. Moreover, a DMA 1204 within one of the WLLs 1202 can provide a back-haul connection 1208 to the PSTN 1210. This type of deployment scenario can greatly reduce the costs associated with a wireless system. Since the DMAs 1204 are connected to each other via the WLAN or microwave connections, the relatively expensive inter-site back-haul component is removed. Further, using the hand-off logic, the DMAs 1204 can enable roaming between the WLLs 1202 and can further provide roaming to an external wireless or other network.

[0083] Referring to FIG. 13, a telecommunications system is depicted and is designated 1300. As illustrated in FIG. 13, the system 1300 includes a DMA 1302 that can be connected to a plurality of BTSs 1304. Each BTS 1304 can provide cellular coverage for one or more mobile communication devices 1306, e.g., one or more mobile handsets configured to communicate via the DMA 1302. FIG. 13 further shows that the DMA 1302 can be connected to an MSC 1308, such as an MSC of an existing cellular system. The DMA 1302 can be connected to the MSC via an IS-41 subset or a MAP subset over a wireless E1/T1 connection. With this implementation, the DMA 1302 can extend an existing cellular network when connected to an existing cellular system MSC 1308.

[0084] FIG. 14 shows an additional telecommunications system, generally designated 1400. As shown, the system 1400 includes a city area coverage site 1402 and an urban fringe/nearby village coverage site 1404. In an exemplary, non-limiting embodiment, the city area coverage site 1402 includes a first MSC/BSC center 1406 connected to a second MSC/BSC center 1408. Also, a first representative BTS 1410 and a second representative BTS 1412 are connected to the first MSC/BSC center 1406. The particular

deployment of equipment is configured to provide adequate cellular coverage for mobile communication devices within the city area coverage site 1402.

[0085] As illustrated in FIG. 14, the urban fringe/nearby village coverage site 1404 includes a DMA 1414 having a plurality of BTSs 1416 connected thereto. The DMA 1414 can provide hand-off of calls between the BTSs 1416 and can switch calls made between the BTSs 1416 locally. However, the DMA 1414 within the urban fringe/nearby village coverage site 1404 can also connect telephony traffic to the first MSC/BSC center 1406 within the city area coverage site 1402 via a data network connection 1418. In one embodiment, the data network connection can be an E1 connection, a T1 connection, a microwave connection, or an 802.11 connection established via an IS-41 subset or MAP subset. The deployment of a DMA 1414 in a location such as that described above, i.e., in urban fringe or in a nearby village, and the connection of the DMA 1414 to an MSC/BSC center 1406 in a city area, can provide service to potential wireless customers that typically would not receive cellular coverage from the city area cellular coverage site 1402. Thus, new subscribers receive access to wireless communication service and can further communicate with wireless customers within the city area cellular coverage site 1402.

[0086] Referring now to FIG. 15, another telecommunications system is depicted and is designated 1500. As illustrated in FIG. 15, the system 1500 includes a DMA 1502 that can be connected to a plurality of BTSs 1504. Each BTS 1504 can provide cellular coverage for one or more mobile communication devices 1506. FIG. 15 further shows that the DMA 1502 can include a data network connection 1508 that provides a back-haul connection to the PSTN 1510. In one embodiment, the data network connection can be an E1 connection, a T1 connection, a cable connection, a microwave connection, or a satellite connection. Moreover, the system 1500 depicted in FIG. 15 can be deployed using CDMA IS-95, CDMA 1X, GSM/GPRS, W-CDMA, or other industry standard technologies.

[0087] Using a single back-haul connection greatly minimizes costs associated with the wireless communication network. Further, the system 1500 shown in FIG. 15 can be

deployed relatively rapidly and can be maintained remotely. Additionally, with the inclusion of the OAMP module 540 (FIG. 5) and the AAA module 528 (FIG. 5), subscriber accounts can be managed locally and billing can be performed locally, i.e., within the DMA 1502. Moreover, as the number of subscribers increase, the size of the system can be increased modularly, e.g., by adding DMAs, corresponding BTSs, and the appropriate connections.

[0088] FIG. 16 illustrates an in-building telecommunications network that is generally designated 1600. FIG. 16 depicts a structure 1602, e.g., an office building, a commercial building, a house, etc. An enterprise local area network (LAN) 1604 is installed within the building 1602. A micro-BTS 1606 is connected to the enterprise LAN 1604. Moreover, a voice mail server 1608 and plural enterprise services servers 1610 are connected to the enterprise LAN 1604. In an exemplary, non-limiting embodiment, the enterprise services servers 1610 can include a dynamic host configuration protocol (DHCP) server, a radius server, a domain name server (DNS), etc. As depicted in FIG. 16, a plurality of phones 1612, e.g., IP desk phones can be connected to the enterprise LAN 1604.

[0089] FIG. 16 further indicates that an office DMA 1614 can be connected to the enterprise LAN 1604. The office DMA 1614 can also be connected to the PSTN 1616, which, in turn, can be connected to a cellular voice and data network 1618. The enterprise LAN 1604 can also be connected to the cellular voice and data network 1618 via an Internet protocol (IP) network 1620. A signaling system seven (SS7) network 1622 can be connected to the cellular voice and data network 1618 and the IP network 1620. FIG. 16 also depicts an SS7 gateway 1624 between the SS7 network 1622 and the IP network 1620 and a firewall 1626 between the enterprise LAN 1604 and the IP network 1620. FIG. 16 shows a wireless communication device 1628 in communication with the cellular voice and data network 1618 and the micro-BTS 1606.

[0090] Referring to FIG. 17, a mobile in-field telecommunications system is depicted and is generally designated 1700. As depicted, the system 1700 includes a plurality of mobile cellular coverage sites 1702. Each mobile cellular coverage site 1702 includes a vehicle

1704 in which a field DMA 1706 is disposed. Moreover, a BTS 1708 is disposed within each vehicle 1704 and is in direct physical connection with the field DMA 1706, e.g., by a wire or cable connected there between. The field DMA 1706 and the BTS 1708 can be removably installed within the vehicle 1704 or permanently affixed therein. FIG. 17 further indicates that each BTS 1708 can include an antenna 1710 that is designed to communicate with mobile communication devices. Also, each field DMA 1706 includes an antenna 1712. In an exemplary, non-limiting embodiment, the field DMAs 1706 can communicate wirelessly with each other via the antennae 1712, e.g., via 802.11a, 802.11b, microwaves, or other wireless link.

[0091] The mobile cellular coverage sites 1702 can be deployed to provide a temporary web of cellular coverage for a plurality of mobile communication devices, e.g., devices carried by soldiers during a battle. The mobile in-field communications system 1700 can be recalled, moved, and re-deployed as necessary. Further, the system can include a wireless connection, e.g., 802.11a, 802.11b, microwaves, to the PSTN 1714.

[0092] Referring to FIG. 18, still another telecommunications system is illustrated and is generally designated 1800. As depicted in FIG. 18, the system 1800 includes a DMA 1802 that is connected to a BTS 1804. The BTS 1804, in turn, is connected to an antenna 1806. FIG. 18 further illustrates that a first satellite transceiver 1808 is also connected to the DMA 1802. The first satellite transceiver 1808 communicates with a second satellite transceiver 1810 via a satellite 1812. Additionally, the second satellite transceiver 1810 includes a data network connection 1814, e.g., a T1 connection, or an E1 connection. The satellite transceivers 1808, 1810 and the satellite 1812 can provide a backhaul connection for the DMA 1802. Or, the satellite transceivers 1808, 1810 and the satellite 1812 can connect the DMA 1802 to an additional DMA (not shown).

[0093] FIG. 19 shows yet another telecommunications system that is generally designated 1900. As illustrated in FIG. 19, the system includes a DMA 1902 that is connected to a first satellite transceiver 1904. Moreover, the DMA 1902 includes a primary network connection 1906, e.g., a T1 connection, or an E1 connection, and a secondary network connection 1908, e.g., an IP connection. FIG. 19 shows that the first

satellite transceiver 1904 communicates with a second satellite transceiver 1910 and a third satellite transceiver 1912 via a satellite 1914. Each of the second and third satellite transceivers 1910, 1912 is connected to an interworking unit (IWU) 1916 via a data network connection 1918, e.g., an IP connection. Each IWU 1916 is connected to a BTS 1920, which in turn, is connected to an antenna 1922. The satellite transceivers 1904, 1910, 1912 provide an IP network extension for the DMA 1902. Moreover, in the deployment illustrated in FIG. 19, the DMA 1902 can act as a centralized micro-switch for handling calls received at the antennas 1922 and transmitted via the second and third satellite transceivers 1910, 1912.

[0094] Referring to FIG. 20, another telecommunications system is depicted and is designated 2000. As shown, the system 2000 includes a DMA 2002 having a primary network connection 2004. Moreover, the DMA 2002 can be connected to a plurality of IWUs 2006. In an exemplary, non-limiting embodiment, the DMA 2002 can be connected to each IWU 2006 via a secondary network connection 2008, such as a category five (Cat 5) cable connection, a microwave connection, or a WLAN connection. Further, each IWU 2006 is connected to a BTS 2010 and each BTS 2010, in turn, is connected to an antenna 2012. Each BTS 2010 can be a 3-sector BTS. In the deployment depicted in FIG. 20, the DMA 2002 can act as a centralized micro-switch that can be used to handle telephony traffic received at the antennae 2012.

[0095] FIG. 21 illustrates yet another embodiment of a communications system, designated 2100. As shown, the system 2100 includes an airplane 2102 in which a DMA 2104 is installed. As shown, the DMA 2104 is coupled to a BTS 2106 and a first satellite transceiver 2108. FIG. 21 also shows a mobile communication device 2110 within the airplane 2102. The mobile communication device 2110 can be in wireless communication with the BTS 2106.

[0096] In a particular embodiment, the first satellite transceiver 2108 can communicate with a second satellite transceiver 2112 via a satellite 2114. As shown, the second satellite transceiver 2112 can be connected to a terrestrial server gateway 2116, e.g. a DMA gateway, that can provide connectivity to an operations and management platform

(OMP) 2118, a call detail record (CDR) 2120, and a visitor location register gateway (VLR-GW) 2122. The OMP 2118, the CDR 212, and the VRL-GW 2122 can be separate from or incorporated within the server gateway 2116. FIG. 21 further shows that the server gateway 2116 can be connected to a first mobile switching center (MSC) 2124 that is coupled to a second MSC 2126.

[0097] Accordingly, the system 2100 shown in FIG. 21 can allow a user in the airplane 2102 to communicate with a ground based telephone. For example, the mobile communication device 2110 can communicate with the BTS 2106, which, in turn, can communicate with the first satellite transceiver 2108 via the DMA 2104. Further, the first satellite transceiver 2108 can transmit the call to a ground based communication system via the second satellite transceiver 2112 and the satellite 2114.

[0098] FIG. 21 shows a single airplane, however, multiple airplanes can be configured as described herein to provide communication from multiple airplanes to ground based telephones. Further, airplane-to-airplane communication can be provided. Additionally, the system 2100 can include other airborne vehicles, e.g., blimps.

[0099] FIG. 22 illustrates yet another embodiment of a communications system, designated 2200. As shown, the system 2200 includes a ship 2202 in which a DMA 2204 is installed. As shown, the DMA 2204 is coupled to a BTS 2206 and a first satellite transceiver 2208. FIG. 22 also shows a mobile communication device 2210 within the ship 2202. The mobile communication device 2210 can be in wireless communication with the BTS 2206.

[00100] In a particular embodiment, the first satellite transceiver 2208 can communicate with a second satellite transceiver 2212 via a satellite 2214. As shown, the second satellite transceiver 2212 can be connected to a terrestrial server gateway 2216, e.g. a DMA gateway, that can provide connectivity to an operations and management platform (OMP) 2218, a call detail record (CDR) 2220, and a visitor location register gateway (VLR-GW) 2222. The OMP 2218, the CDR 222, and the VRL-GW 2222 can be separate from or incorporated within the server gateway 2216. FIG. 22 further shows that the

server gateway 2216 can be connected to a first mobile switching center (MSC) 2224 that is coupled to a second MSC 2226.

[00101] Accordingly, the system shown in FIG. 2200 can allow a user within the ship 2202 to communicate with a ground-based telephone. For example, the mobile communication device 2210 can communicate with the BTS 2206, which, in turn, can communicate with the first satellite transceiver 2208 via the DMA 2204. Further, the first satellite transceiver 2208 can transmit the call to a ground based communication system via the second satellite transceiver 2212 and the satellite 2214.

[00102] FIG. 22 shows a single ship, however, multiple ships can be configured as described herein to provide communication from multiple ships to ground based telephones. Further, ship-to-ship communication can be provided. Additionally, the system 2200 can include other waterborne vehicles.

[00103] Referring to FIG. 23, a method of deploying a distributed management architecture server is shown and commences at block 2300 wherein during deployment, the succeeding steps are performed. At block 2302, the DMA is moved to a desired location proximate to a BTS. Moving to block 2304, the DMA is opened. For example, if the DMA is the DMA shown in FIG. 1, the latch is unlocked and the lid is rotated about the hinges into the open position. Proceeding to block 2306, a physical connection is established between the DMA and the BTS, e.g., the BTS is coupled to the DMA via a wire.

[00104] Continuing to block 2308, the DMA is activated, e.g., powered on. At block 2310, a network connection is established with another remote DMA. In a particular embodiment, the network connection is a peer-to-peer connection between the DMAs. Moving to block 2312, DMA software within the DMA is activated. Thereafter, at decision step 2314, it is determined whether the system is operational. That decision can be performed by the DMA, e.g., by a self-diagnostic routine or module within the DMA. Alternatively, that decision can be determined manually by a technician. If the system is not operational, a system check is performed at block 2316. In a particular embodiment, the system check performed at block 2316 is performed by a self-diagnostic

routine or module within the DMA. On the other hand, a technician can perform the system check. After the system check, the logic then returns to decision step 2314 and continues as described herein. At decision step 2314, if the system is operational, the method proceeds to block 2318 and call transmission is allowed. The method then ends at state 2320.

[00105] Referring to FIG. 24, a method of deploying a distributed management architecture server is shown and commences at block 2400 wherein a direct physical connection between a first DMA and a base transceiver station is disconnected. At block 2402, the first DMA is removed. Proceeding to block 2404, a second DMA is moved to a location that is substantially proximate to the base transceiver station. At block 2406, the second DMA is opened. For example, if the DMA is the DMA shown in FIG. 1, the latch is unlocked and the lid is rotated about the hinges into the open position. Next, at block 2408, a direct physical connection is established between the second DMA and the base transceiver station.

[00106] Continuing to block 2410, the second DMA is activated. At block 2412, a network connection is established between the second DMA and another remote DMA. In a particular embodiment, the network connection is a peer-to-peer IP connection between the DMAs. Further, in a particular embodiment, the peer-to-peer connection is established via a private IP network. At block 2414, DMA software within the second DMA is activated.

[00107] Proceeding to decision step 2416, it is determined whether the system is operational. That decision can be performed by the second DMA, e.g., by a self-diagnostic routine or module within the second DMA. Alternatively, the decision can be determined manually by a technician. If the system is not operational, a system check is performed at block 2418. In a particular embodiment, the system check performed at block 2418 is performed by a self-diagnostic routine or module within the second DMA. On the other hand, a technician can perform the system check. After the system check, the logic then returns to decision step 2416 and continues as described herein. At

decision step 2416, if the system is operational, the method proceeds to block 2420 and call transmission is allowed via the second DMA. The method then ends at state 2422.

[00108] With the configuration of structure described above, the present disclosure provides a flexible telecommunications device, i.e., a DMA, that is distributive and associative, i.e., it can operate stand-alone or seamlessly within an existing cellular or other network. Moreover, the DMA can be integrated with virtually any third party base station. The DMA can operate with multiple air interfaces including CDMA IS-95, CDMA 1X, CDMA EVDO, GSM, GPRS, W-CDMA, 802.11 (Wi-fi), 802.16 (Wi-fi), etc. Further, the DMA can provide integrated prepaid billing, OAMP, network management, and AAA functionality. The DMA can include a Java based user interface and feature configuration system. Also, the DMA can provide real time call metering, call detail record (CDR) generation, and real time call provisioning. The DMA may be implemented in a relatively small footprint and has a relatively low power requirement. Further, the DMA may be implemented using inexpensive and widely available computer equipment.

[00109] With one or more of the deployment configurations described above, the present system provides mobile to landline calls from mobile handsets within a DMA cellular coverage area. Also, mobile to landline calls can be made from mobile handsets roaming into DMA coverage areas. Mobile to mobile calls can be made from home/roaming handsets to DMA handsets and vice versa. Further, mobile to IP calls and IP to mobile calls can be made from within a DMA coverage area. IP to IP calls can be made from any DMA handset to any IP phone. Additionally, IP to landline calls and landline to IP calls can be made from a DMA handset to any phone. Further, land-line to mobile calls to DMA handsets can be made.

[00110] The systems described above can support call forwarding, call waiting, 3-way calling caller ID, voice mail, and mobile to mobile SMS service, i.e., text messaging. Further, the systems described above can provide broadcast SMS service, mobile to land high-speed IP data (1X or GPRS) service and mobile-to-mobile high speed IP data (1X or GPRS) service. Also, the systems described above can provide IP-PBX capability.

[00111] Further, one or more of the illustrated systems can provide IP transport between distributed elements, e.g., DMAs. Packet back-haul from BTS to RAN can be provided. Further, the control logic within the DMAs can be distributed and associated. Associated systems can be redundant, self-healing, self-organizing, and scalable. Distributed systems can be “snap-together,” i.e., a DMA can be linked to a previously deployed DMA in order to broaden, or otherwise extend, cellular coverage. Further, distributed systems can be de-centralized to avoid single points of failure.

[00112] One or more of the systems described above can also provide soft and softer call handoffs on the same frequency interfaces. Also, soft handoffs can be provided on different systems. Further, a DMA based system can operate stand-alone with a billing system provided by a DMA and CDR generation. Or, a system can use the SS7 network to pass CDRs to a central switch for integrated billing and operation with an existing network.

[00113] The above-disclosed subject matter is to be considered illustrative, and not restrictive, and the appended claims are intended to cover all such modifications, enhancements, and other embodiments, which fall within the true spirit and scope of the present invention. Thus, to the maximum extent allowed by law, the scope of the present invention is to be determined by the broadest permissible interpretation of the following claims and their equivalents, and shall not be restricted or limited by the foregoing detailed description.

WHAT IS CLAIMED IS:

1. An authentication, authorization, and accounting module of a first distributed mobile architecture system, the module comprising:
a destination preference register, wherein the destination preference register includes at least one preferred call path for calls to be routed outside of a distributed mobile architecture network that is accessible to the first distributed mobile architecture system.
2. The module of claim 1, wherein the preferred call path is selected from a group comprising a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path.
3. The module of claim 1, wherein calls placed outside of the distributed mobile architecture network from the first distributed mobile architecture system are established via the preferred call path.
4. The module of claim 1, wherein calls routed outside of the distributed mobile architecture network from a mobile subscriber in communication with the first distributed mobile architecture system are established via the preferred call path.
5. The module of claim 1, wherein the destination preference register includes a first preferred call path, a second preferred call path, and a third preferred call path, and wherein at least some calls routed outside the distributed mobile architecture network are made via a first available preferred call path.

6. The module of claim 1, further comprising:
a home location register, the home location register including
information associated with one or more mobile subscribers
registered with the first distributed mobile architecture system, and
wherein the home location register provides information related to
a first community location register at a second distributed mobile
architecture system.
7. The module of claim 6, further comprising a second community location
register, wherein the second community location register includes information
associated with one or more mobile subscribers registered with the second
distributed mobile architecture system.
8. The module of claim 7, further comprising a third community location
register, wherein the third community location register includes information
associated with one or more mobile subscribers registered with a third distributed
mobile architecture system.
9. The module of claim 8, further comprising a visitor location register,
wherein the visitor location register includes information associated with one or
more roaming mobile subscribers that are temporarily registered with the first
distributed mobile architecture system.
10. A method of communication, comprising:
receiving a call directed to a destination mobile directory number that is
not available within a community location register within a
distributed mobile architecture; and
matching a prefix of the mobile directory number to a mobile directory
number prefix within a destination preference register.

11. The method of claim 10, further comprising determining a preferred call path by accessing the destination preference register.
12. The method of claim 11, further comprising determining whether the preferred call path is available to route the call.
13. The method of claim 12, further comprising determining a next preferred call path.
14. The method of claim 12, further comprising establishing the call via the preferred call path.
15. The method of claim 13, further comprising establishing the call via the next preferred call path after determining that the preferred call path is not available.
16. The method of claim 11, wherein the preferred call path is selected from a first preferred call path, a second preferred call path, and a third preferred call path.
17. The method of claim 16, wherein the first preferred call path is selected from the group comprising a voice over Internet protocol (VoIP) calling output, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path.
18. The method of claim 16, wherein the second preferred call path is selected from the group comprising a voice over Internet protocol (VoIP) calling output, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path.

19. A distributed mobile architecture device, comprising:
- a processor;
 - a computer readable medium accessible to the processor;
 - an authentication, authorization, and accounting module embedded within the computer readable medium, the authentication, authorization, and accounting module, comprising:
 - a destination preference register, wherein the destination preference register includes at least one preferred call path associated with calls to be placed outside a distributed mobile architecture network accessible from one or more distributed mobile architecture devices.

20. A system, comprising:
- a distributed mobile architecture network including:
 - a first distributed mobile architecture device;
 - a second distributed mobile architecture coupled to the first distributed mobile architecture;
 - a third distributed mobile architecture coupled to the first distributed mobile architecture and to the second distributed mobile architecture;
 - a voice over Internet protocol (VoIP) interface coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture;
 - an integrated services digital network (ISDN) interface coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture; and
 - a mobile switching center (MSC) interface coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture;
 - wherein the first distributed mobile architecture, the second distributed mobile architecture, and the third distributed mobile architecture each comprise:
 - a destination preference register, wherein the destination preference register includes at least one preferred interface supporting calls to be placed outside the distributed mobile architecture network.

21. The system of claim 20, wherein the preferred interface is one of the VoIP, the ISDN, or the MSC interfaces.

ABSTRACT OF THE DISCLOSURE

[00114] An authentication, authorization, and accounting module of a first distributed mobile architecture system is disclosed and includes a destination preference register. The destination preference register includes a preferred call path for calls to be routed outside of a distributed mobile architecture network that is accessible to the first distributed mobile architecture system. The preferred call path can be selected from a group comprising a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path. Further, calls that are placed outside of the distributed mobile architecture network from the first distributed mobile architecture system can be established via the preferred call path. Additionally, calls that are routed outside of the distributed mobile architecture network from a mobile subscriber in communication with the first distributed mobile architecture system can be established via the preferred call path.

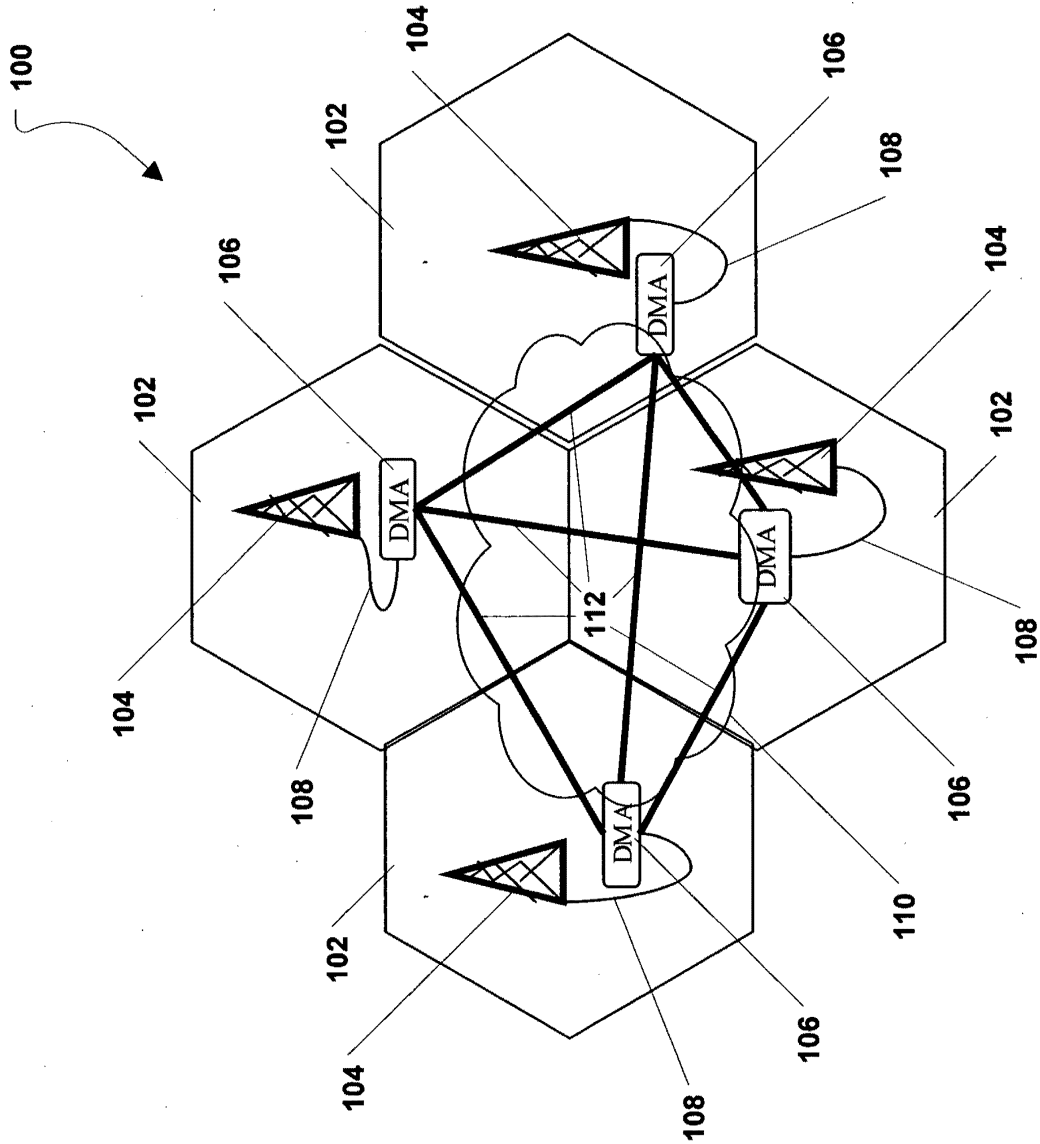


FIG. 1

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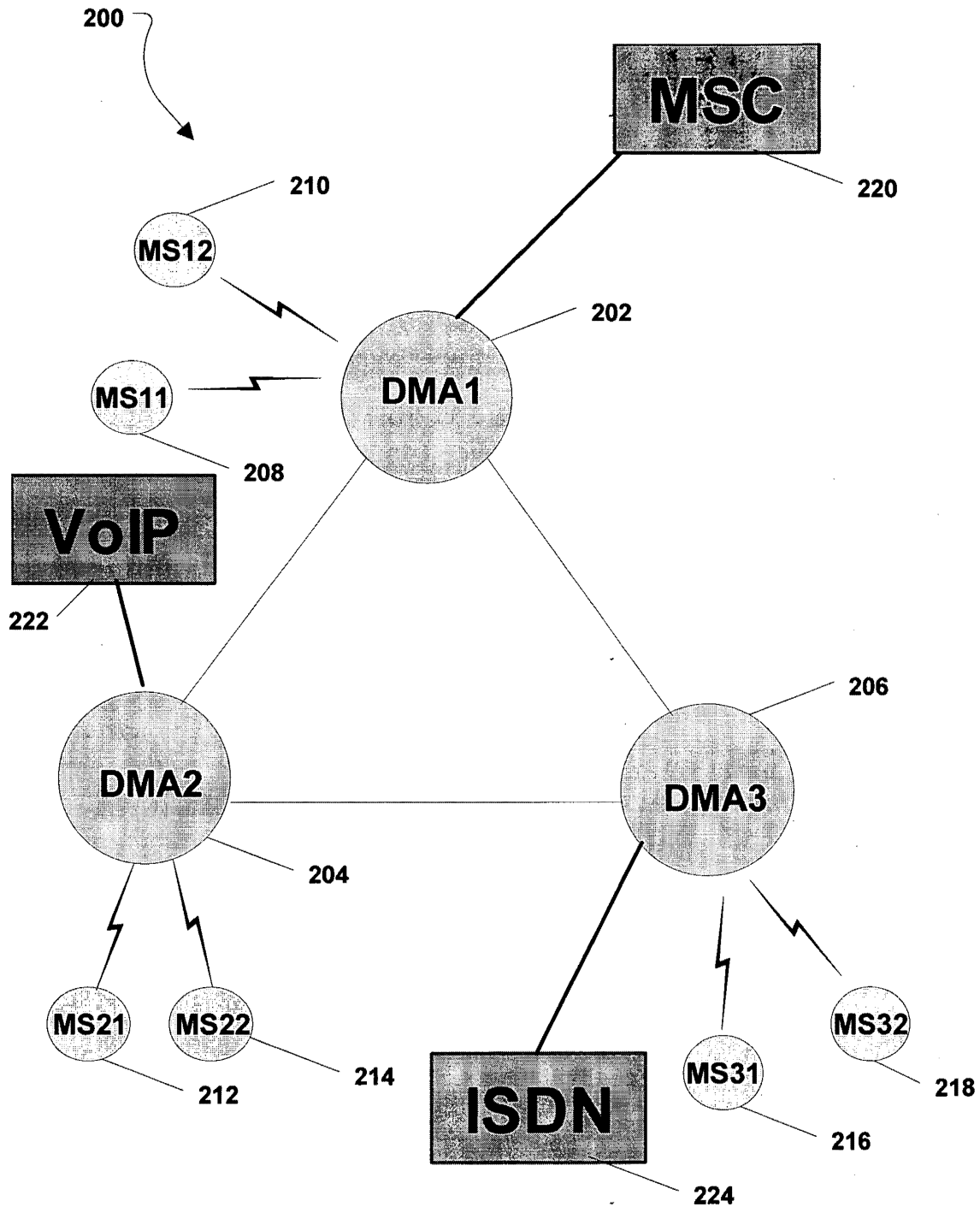


FIG. 2

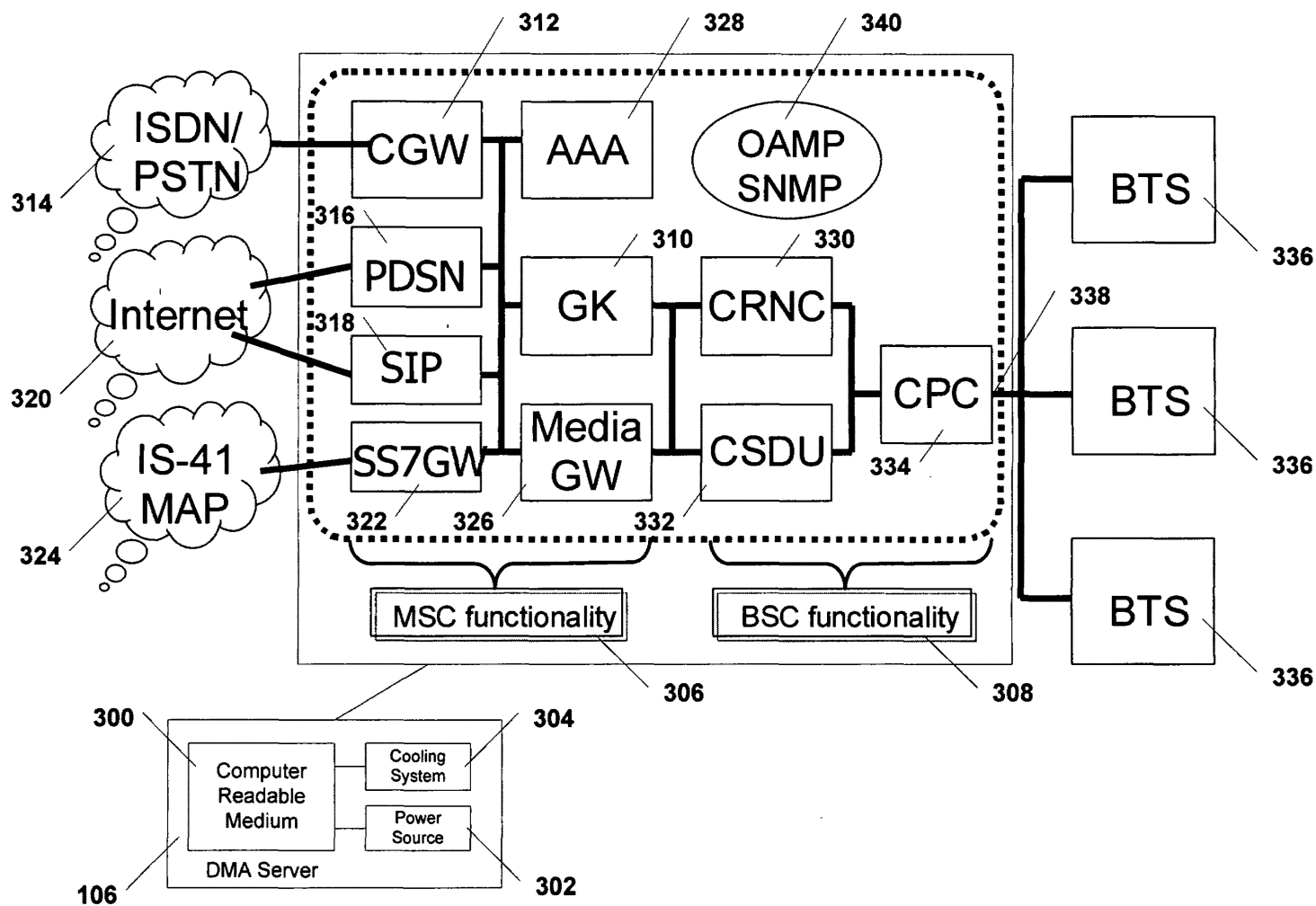


FIG. 3

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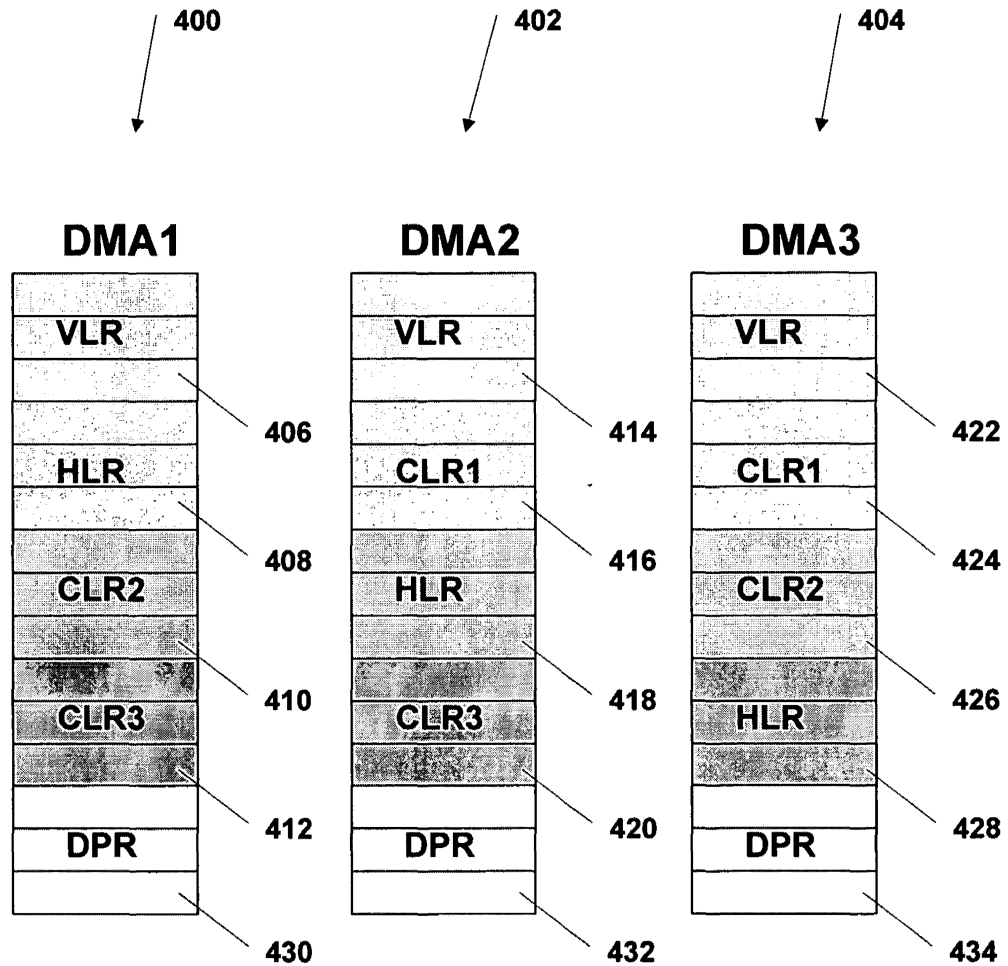


FIG. 4

500	510	512	514	516	518	520	522	524	526	528	530
	DMA1	IMSI	ESN	MDN	Loc	TLDN	Reg?	Timer	MSC1 Prefer	ISDN Prefer	VoIP Prefer
	HLR	IMSI11	ESN11	MDN11	@IP		y	4hr			
	IP Addr	IMSI12	ESN12	MDN12	@IP		y	4hr			
	GPS Loc	IMSI13	ESN13	MDN13		TLDN	y	4hr	@PC		
		IMSI14	ESN14	MDN14			n				
502	CLR2	IMSI21	ESN21	MDN21	NA	NA					
	IP Addr	IMSI22	ESN22	MDN22	NA	NA					
	GPS Loc	IMSI23	ESN23	MDN23	NA	NA					
	NB List	IMSI24	ESN24	MDN24	NA	NA					
504	CLR3	IMSI31	ESN31	MDN31	NA	NA					
	IP Addr	IMSI32	ESN32	MDN32	NA	NA					
	GPS Loc	IMSI33	ESN33	MDN33	NA	NA					
	NB List	IMSI34	ESN34	MDN34	NA	NA					
506	VLR	IMSIa	ESNa	NA	NA	TLDNa	y	4hr	@PC		
		IMSIb	ESNb	NA	NA	TLDNb	y	4hr	@PC		
		IMSIc	ESNc	NA	NA	TLDNc	y	4hr	@PC		
508		Partial	Prefer	Prefer	Prefer						
		MDN	1	2	3						
	DPR	P1-MDN	MSC	ISDN	VoIP						
		P2-MDN	ISDN	MSC	VoIP						
		P3-MDN	VoIP	ISDN	MSC						
530											
		532	534	536	538						

FIG. 5

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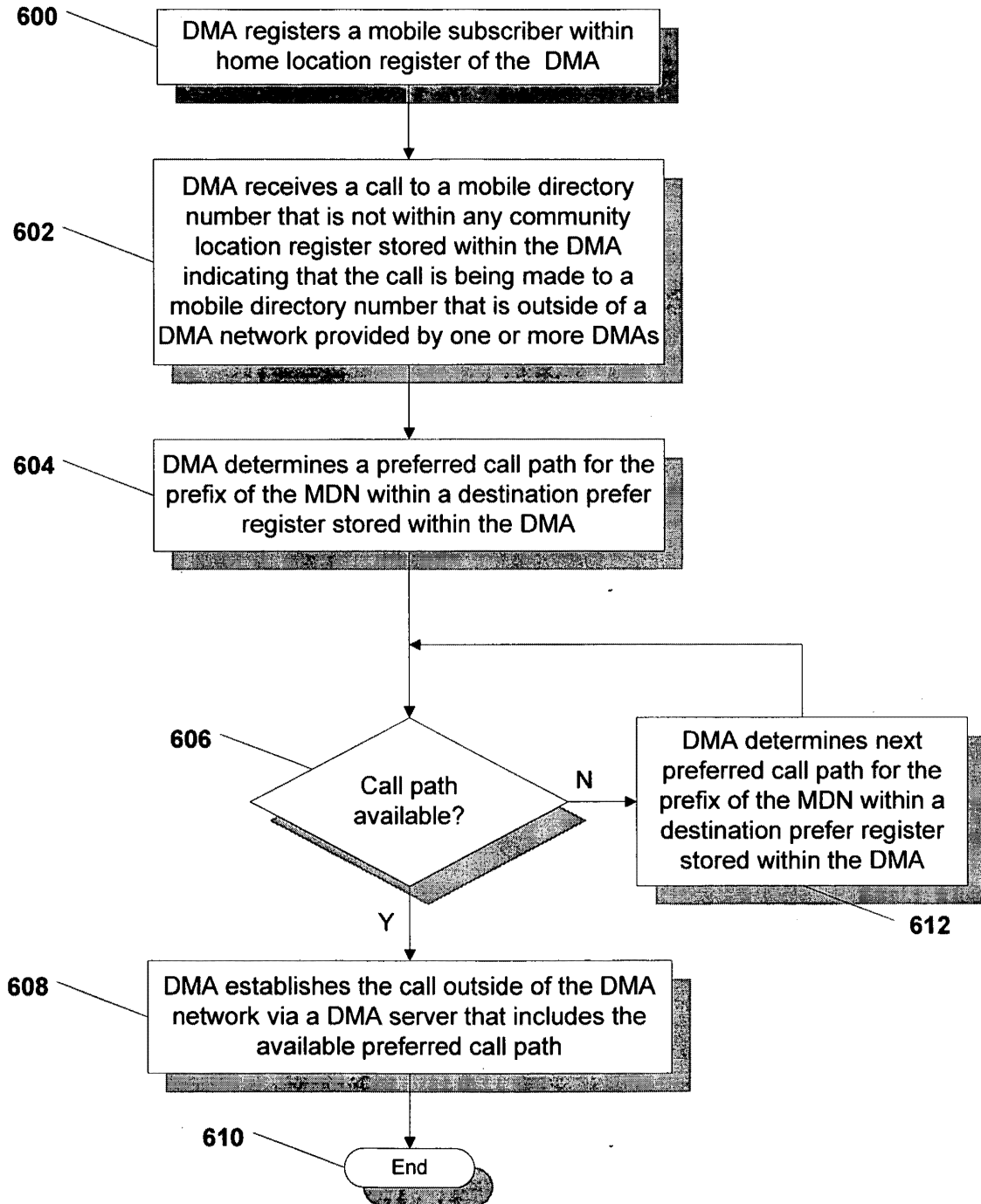


FIG. 6

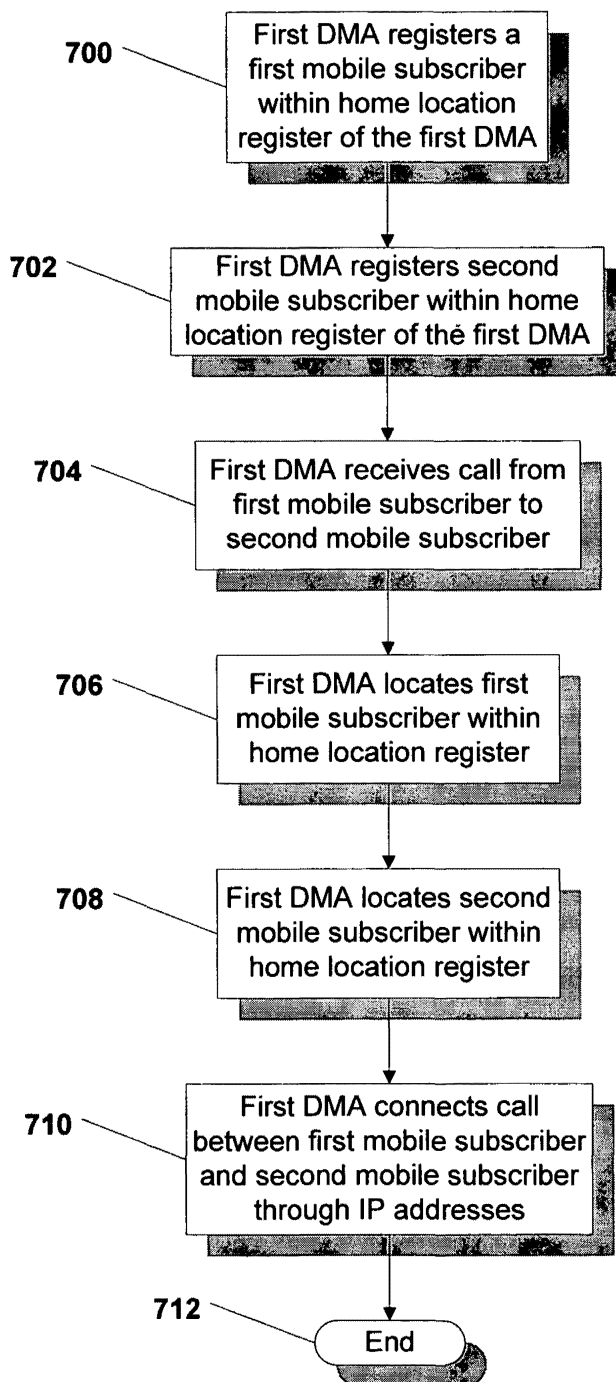


FIG. 7

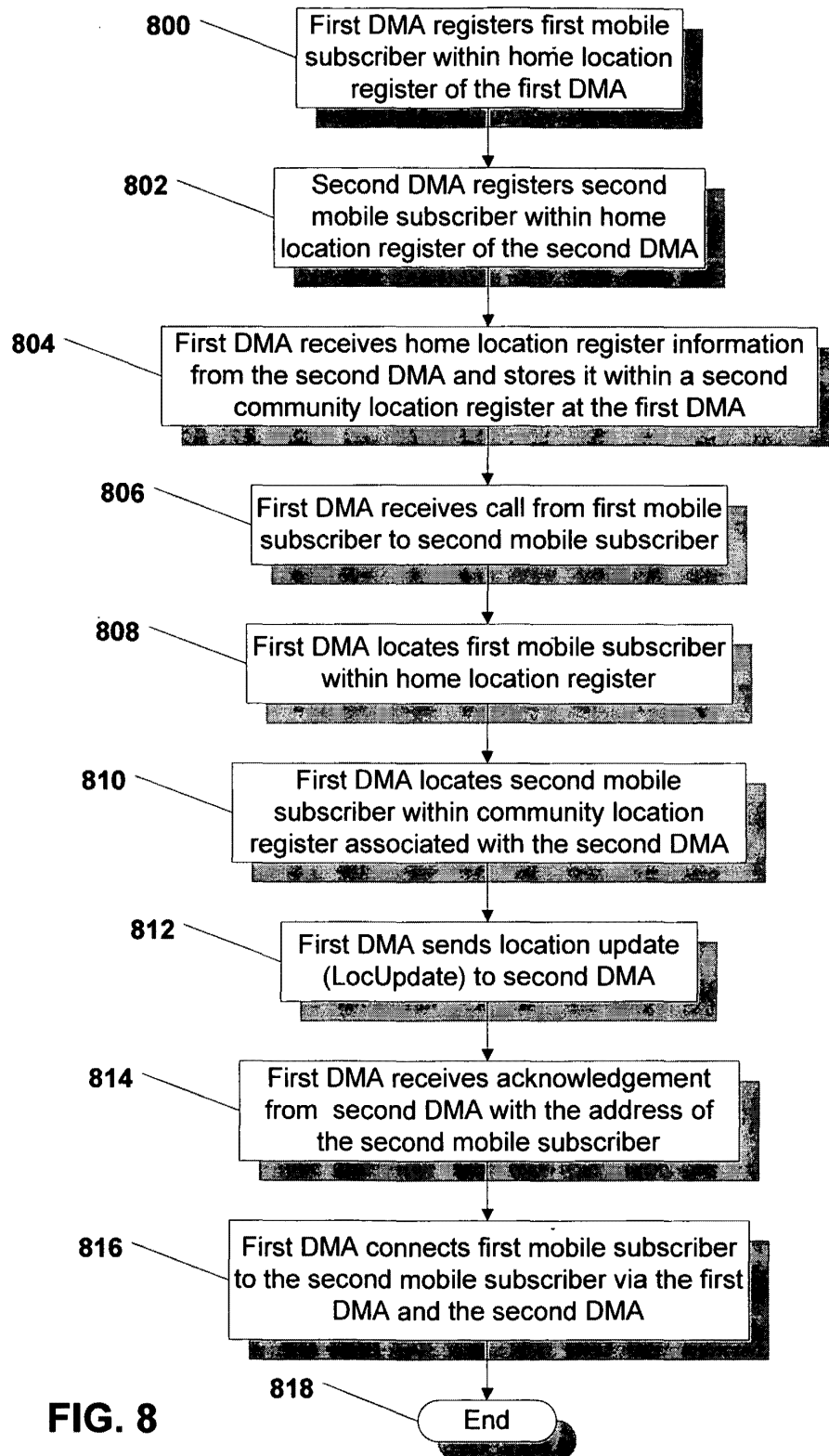
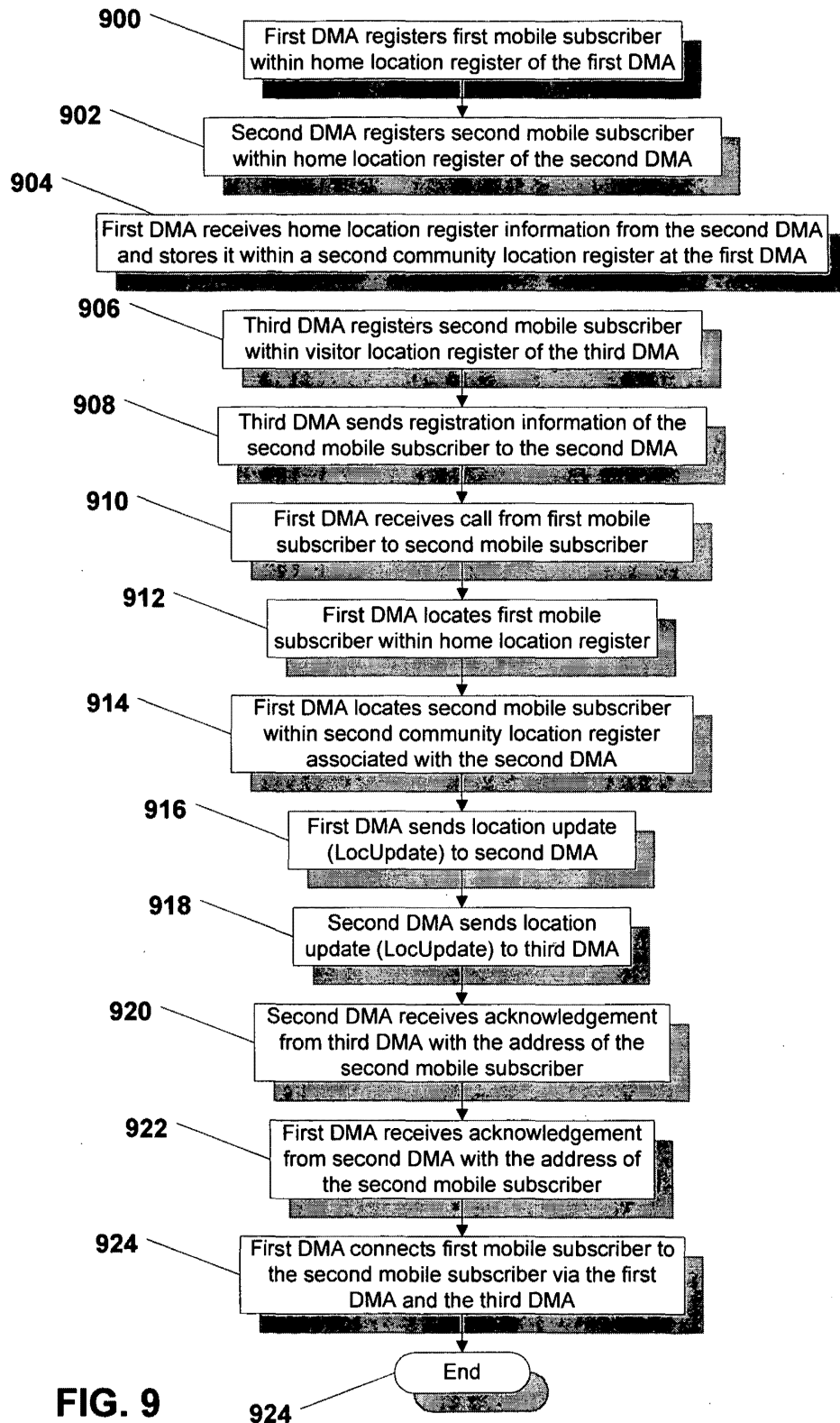


FIG. 8



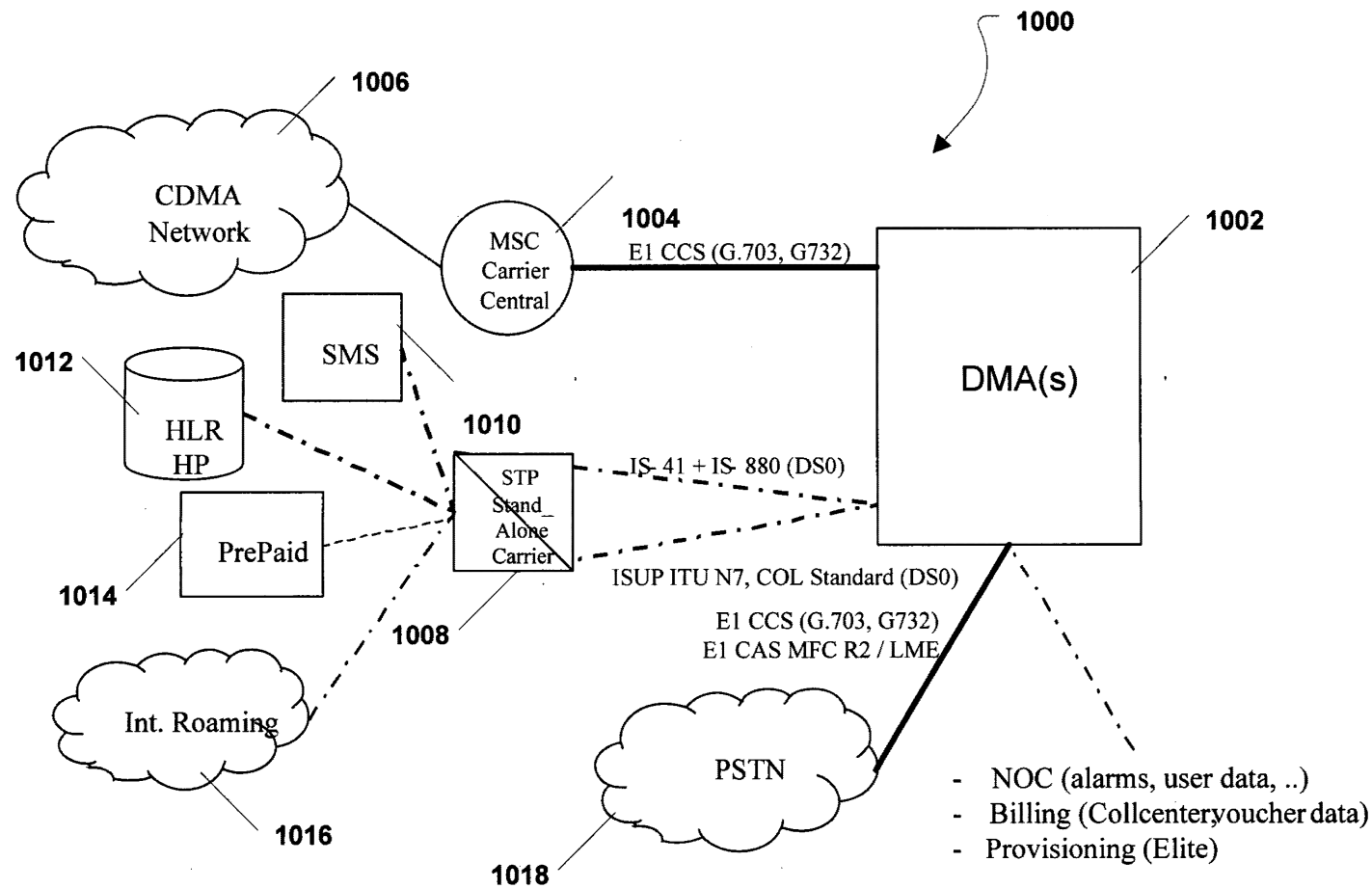


FIG. 10

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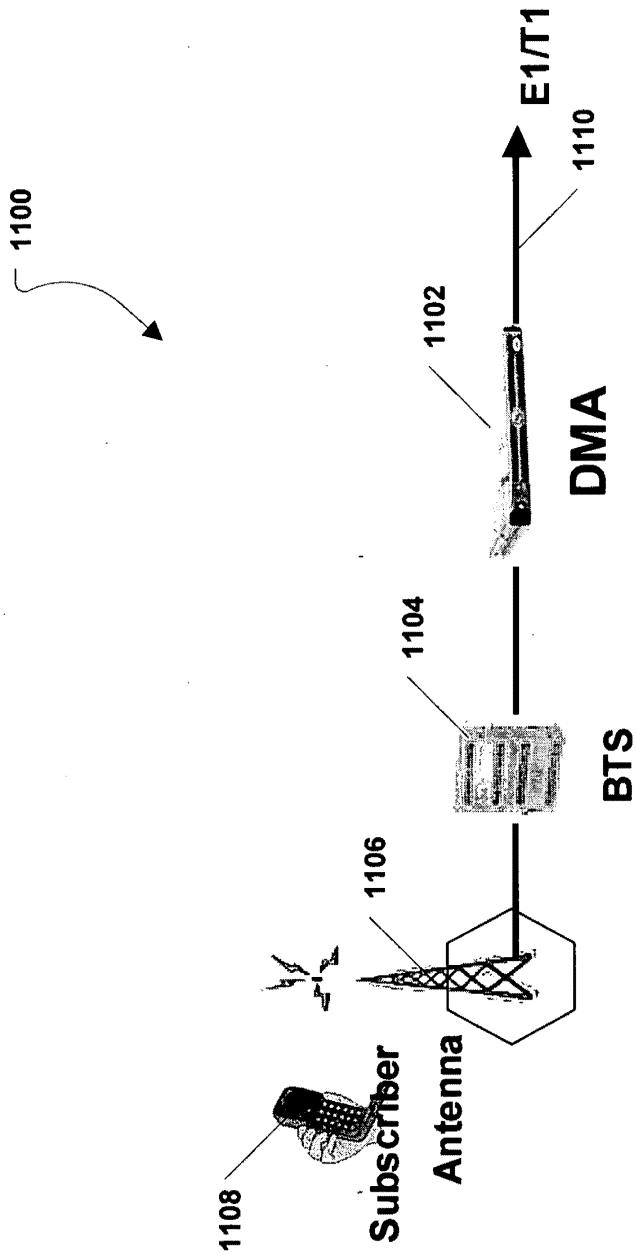


FIG. 11

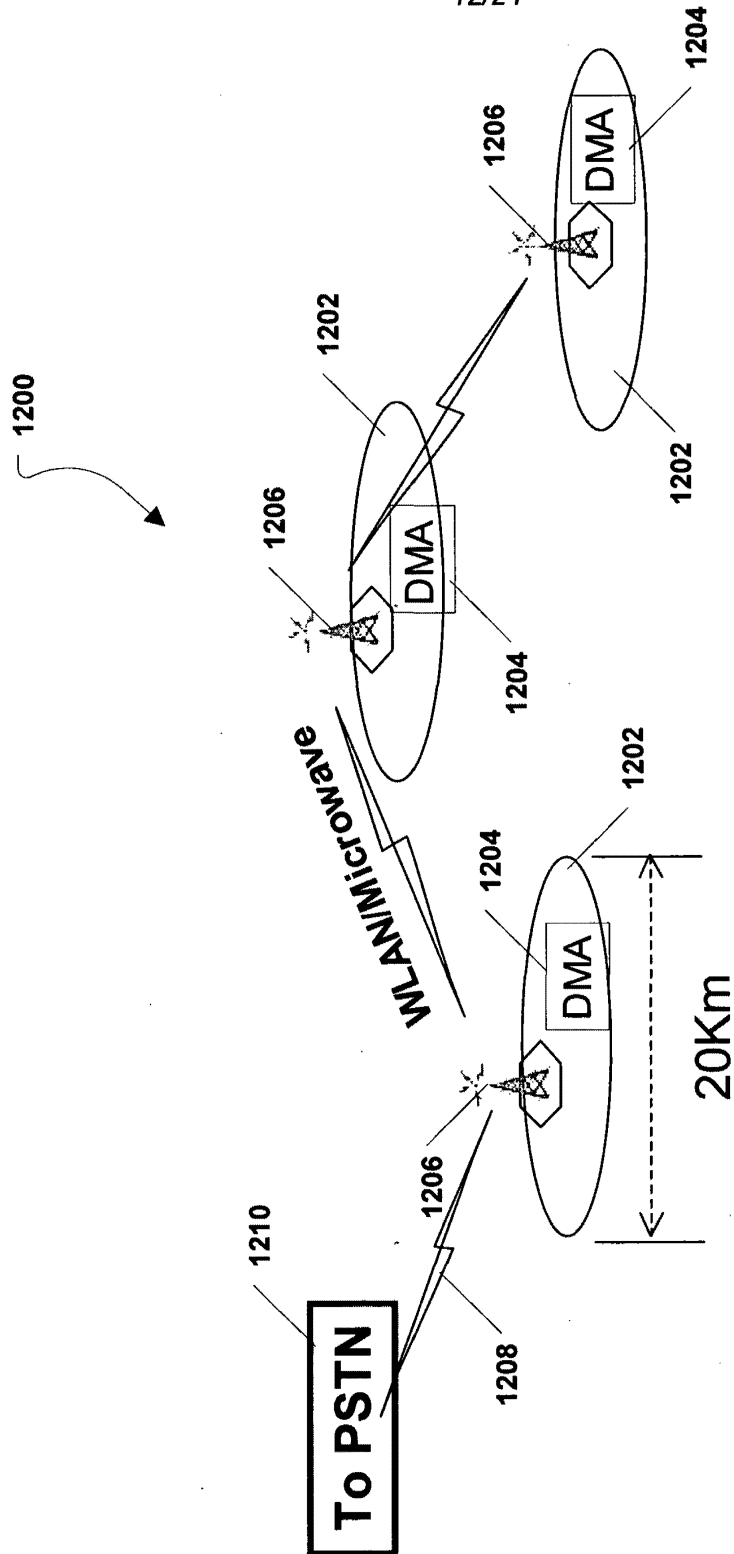


FIG. 12

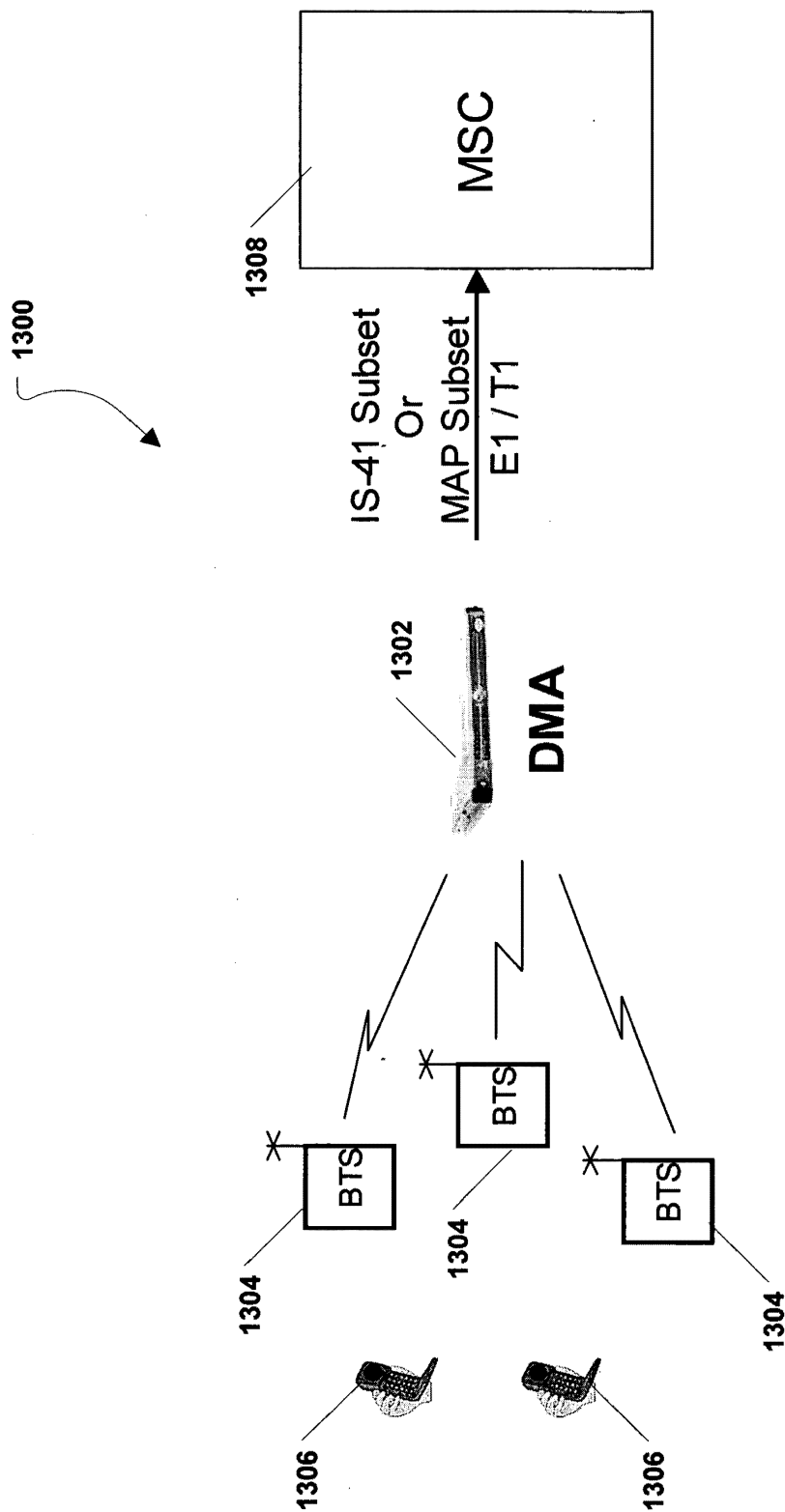
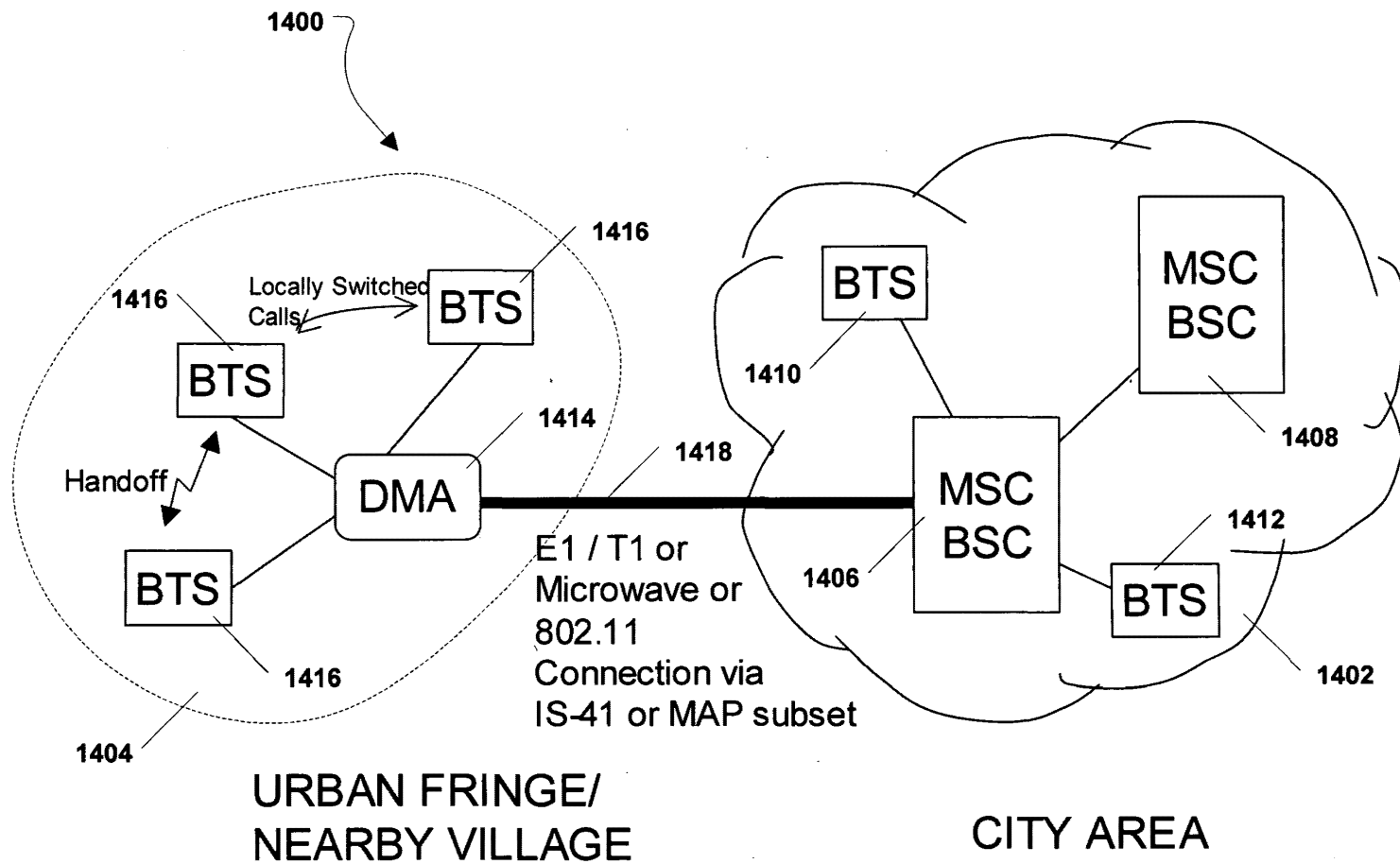


FIG. 13



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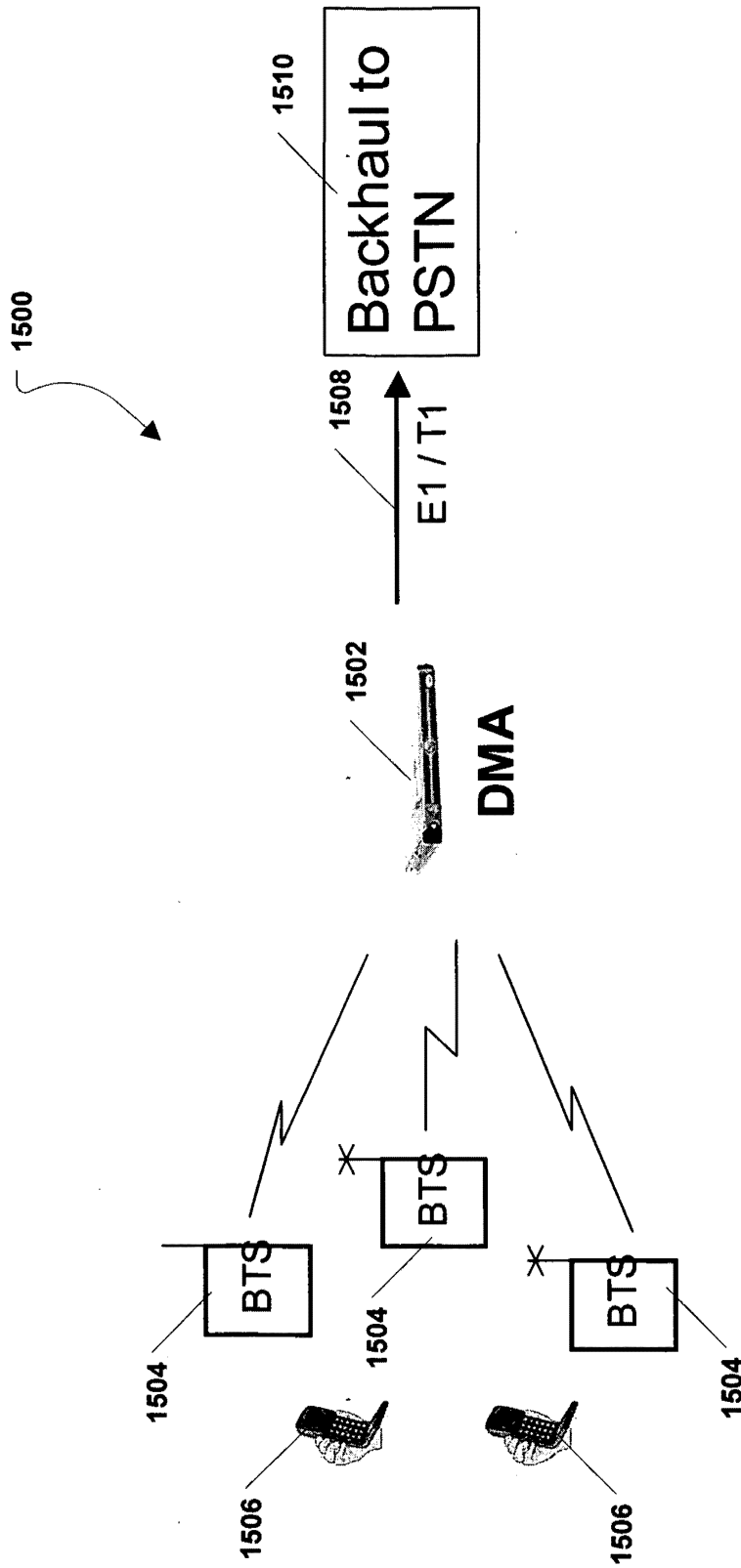


FIG. 15

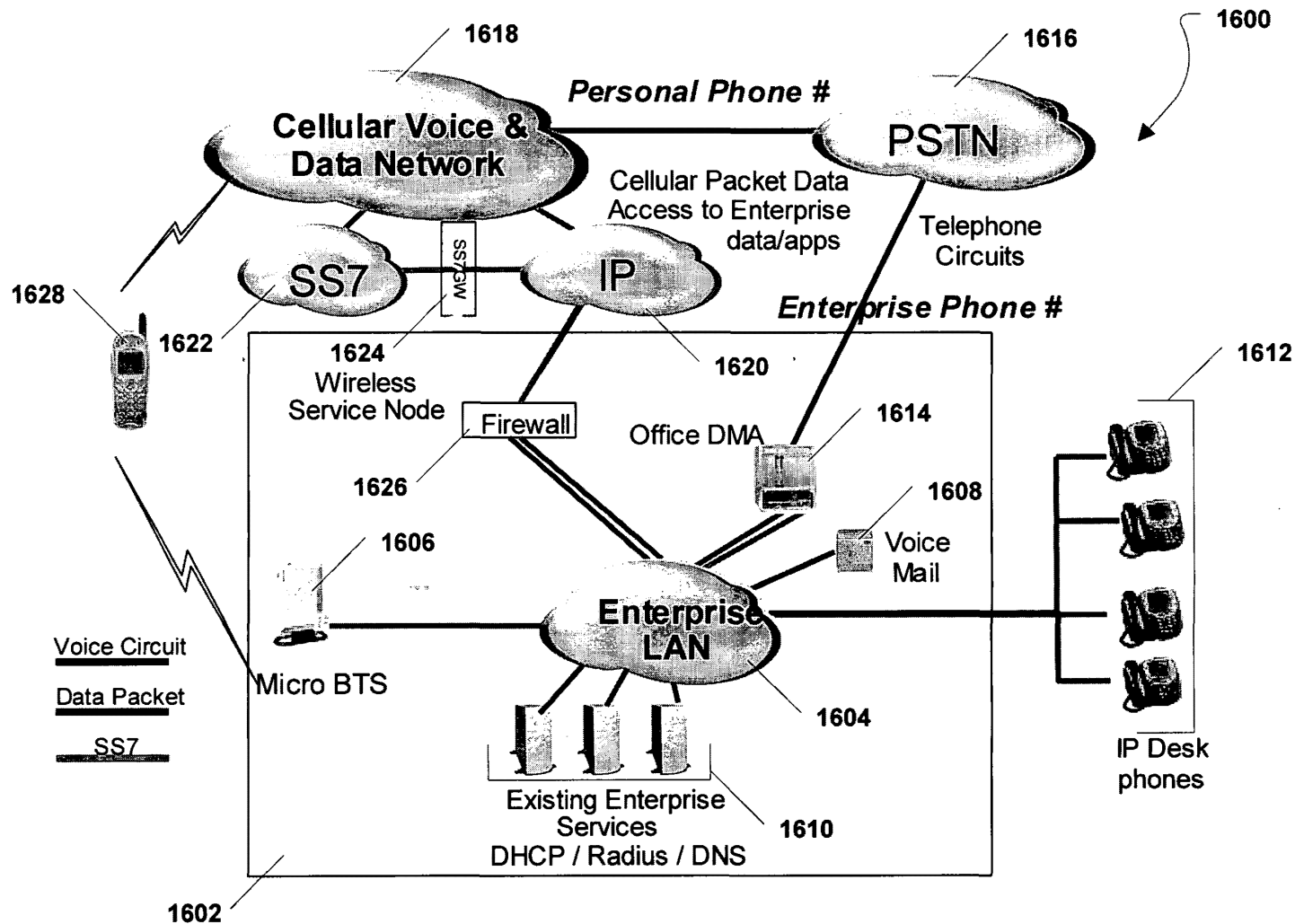


FIG. 16

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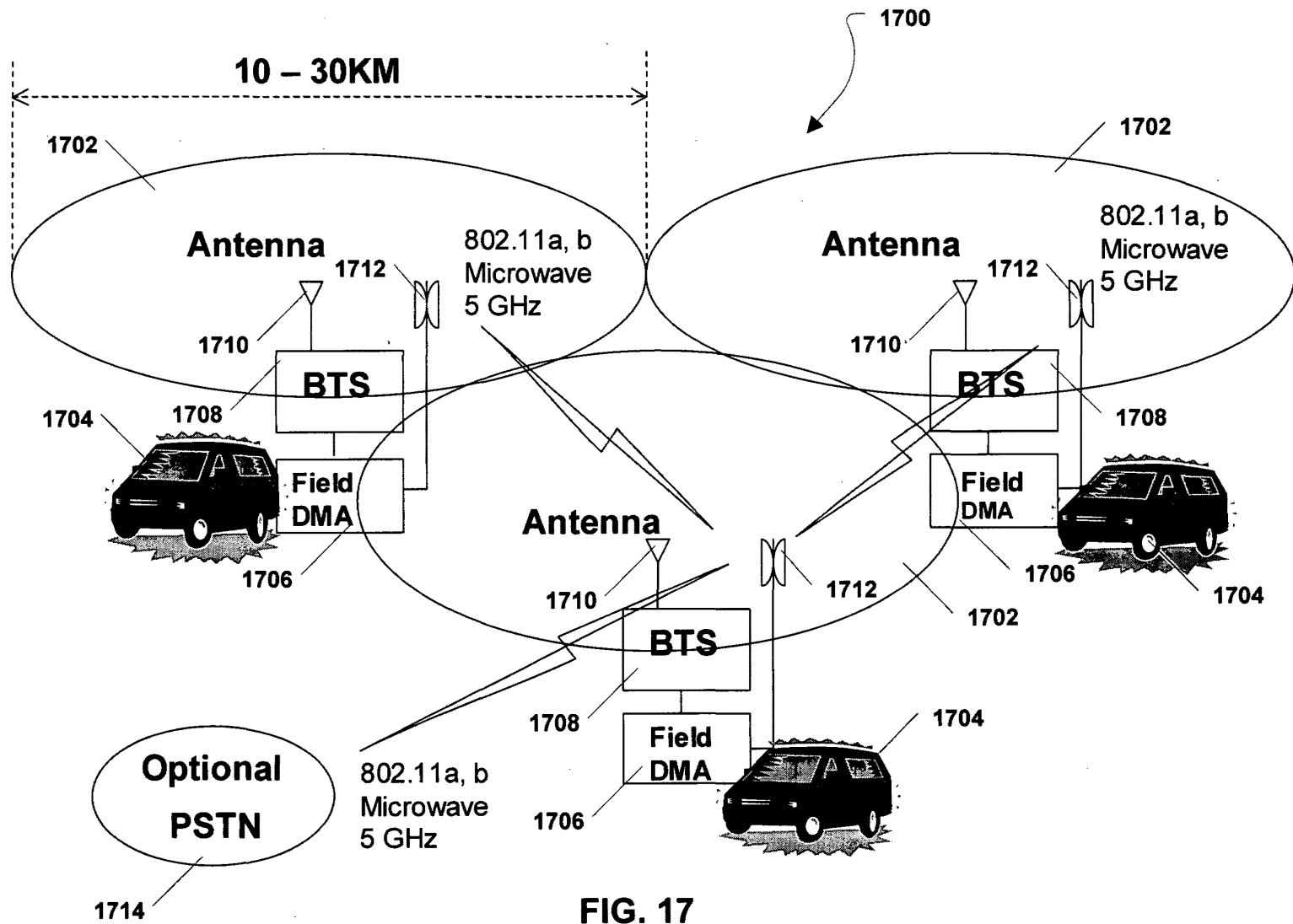


FIG. 17

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 Attorney: Jeffrey G. Toler (512) 327-5515
 17/24

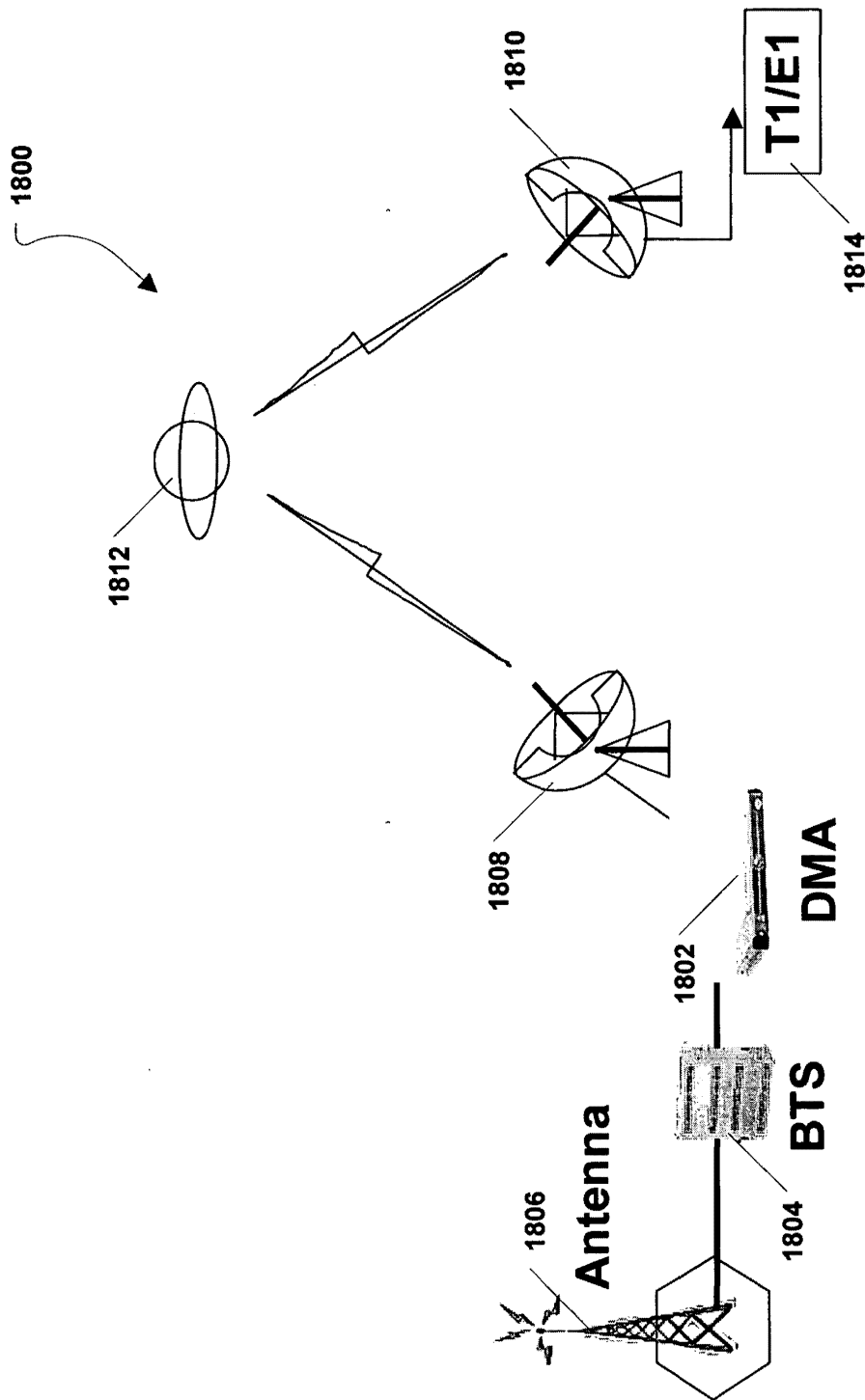


FIG. 18

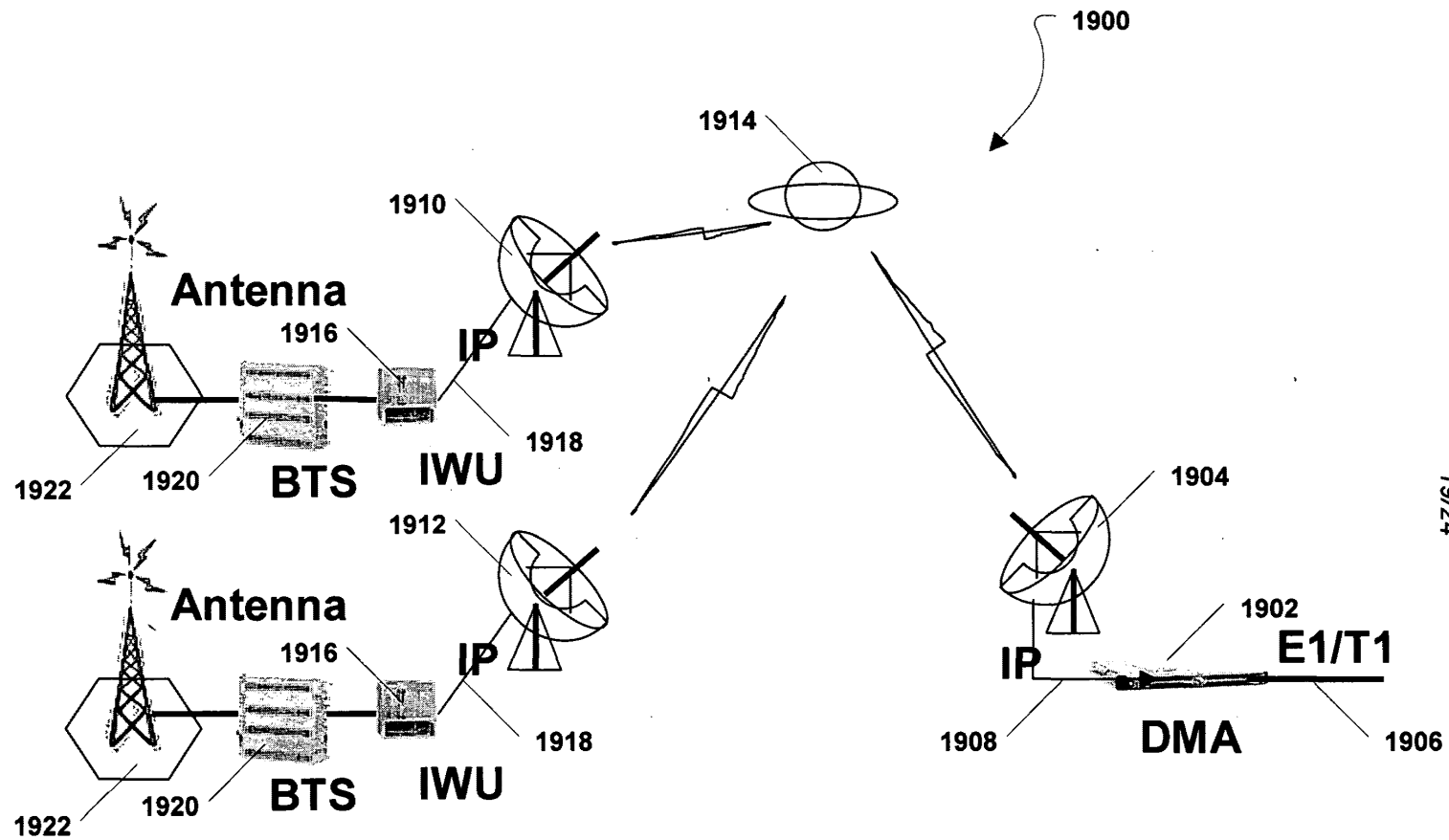


FIG. 19

Attorney Docket No.: 1082-0005
 Inventor(s): ShaoWei Pan
 Attorney: Jeffrey G. Toler (512) 327-5515
 19/24

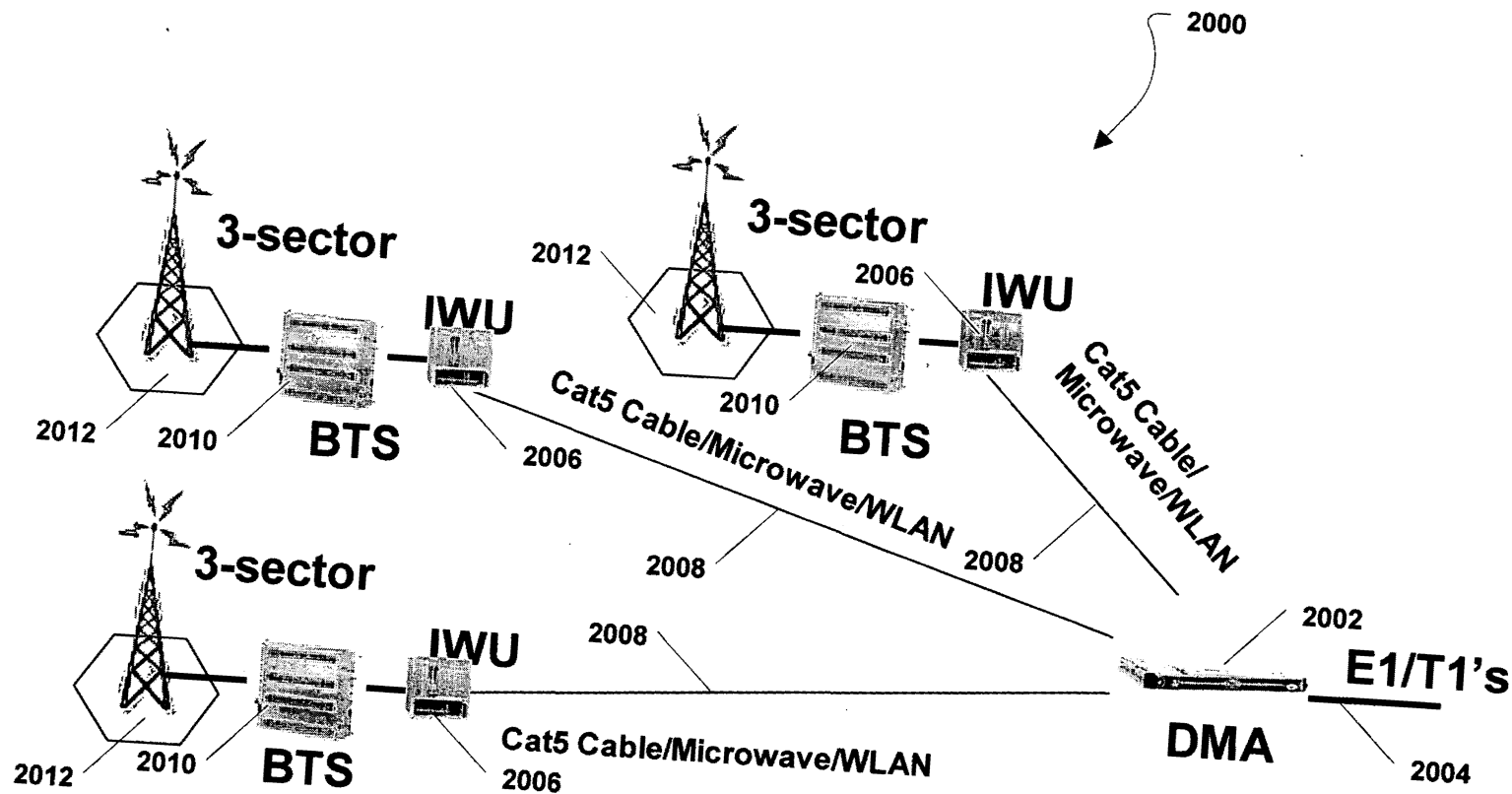


FIG. 20

Attorney Docket No.: 1082-005
 Inventor(s): Shaohui Pan
 Attorney: Jeffrey G. Toler (512) 327-5515
 20/24

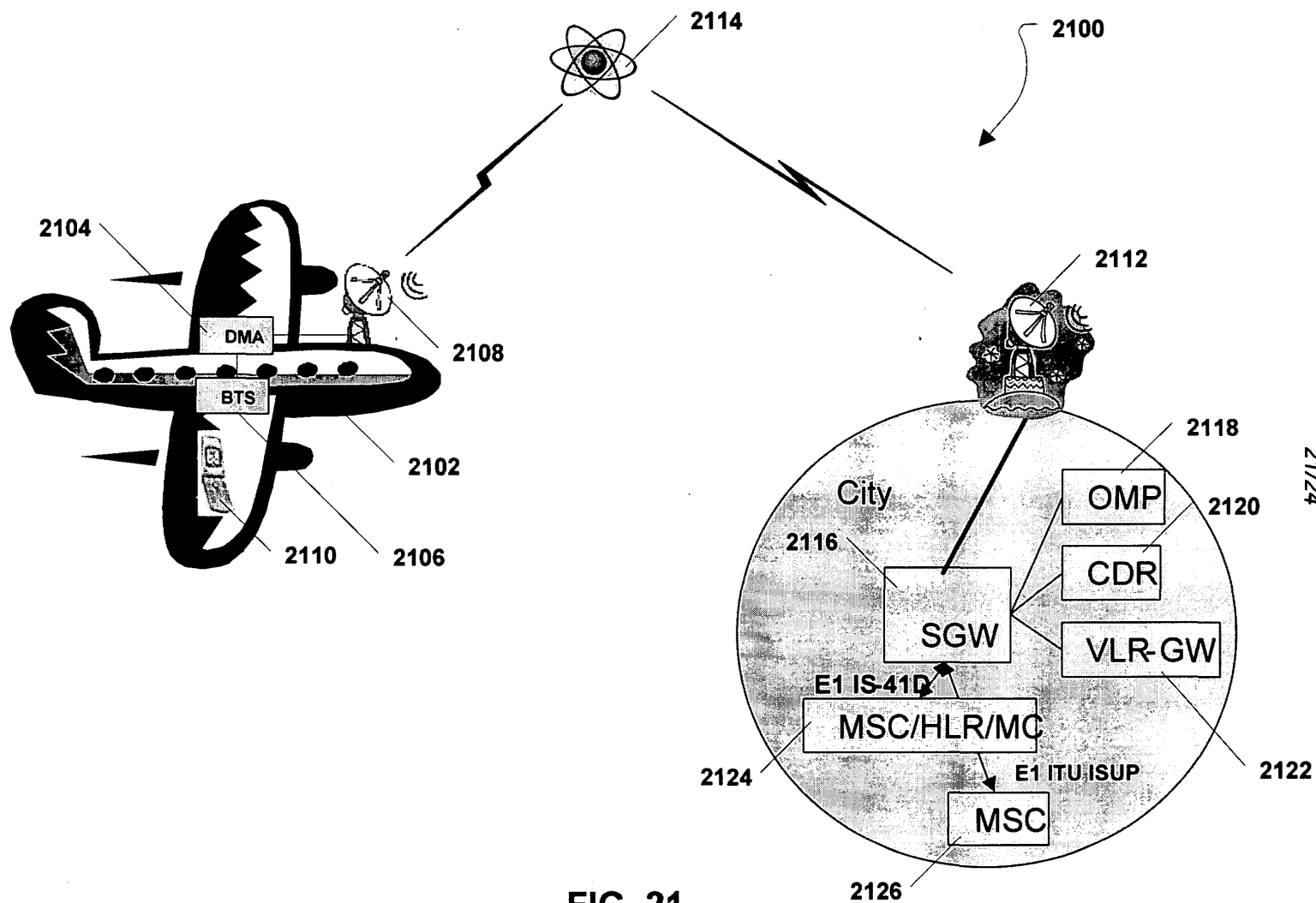


FIG. 21

Attorney Docket No.: 1082-0005
 Inventor(s): ShaoWei Pan
 Attorney: Jeffrey G. Toler (512) 327-5515
 21/24

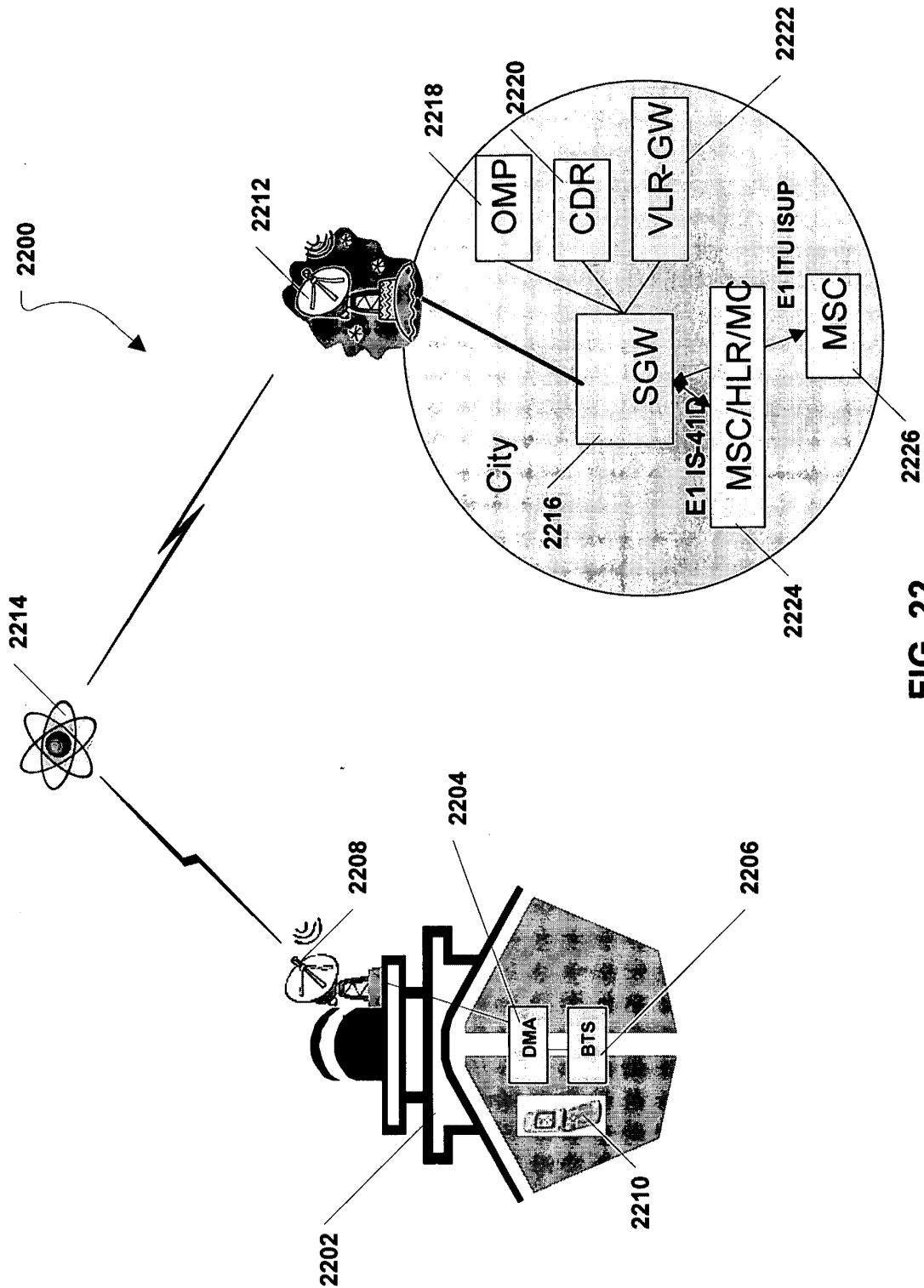


FIG. 22

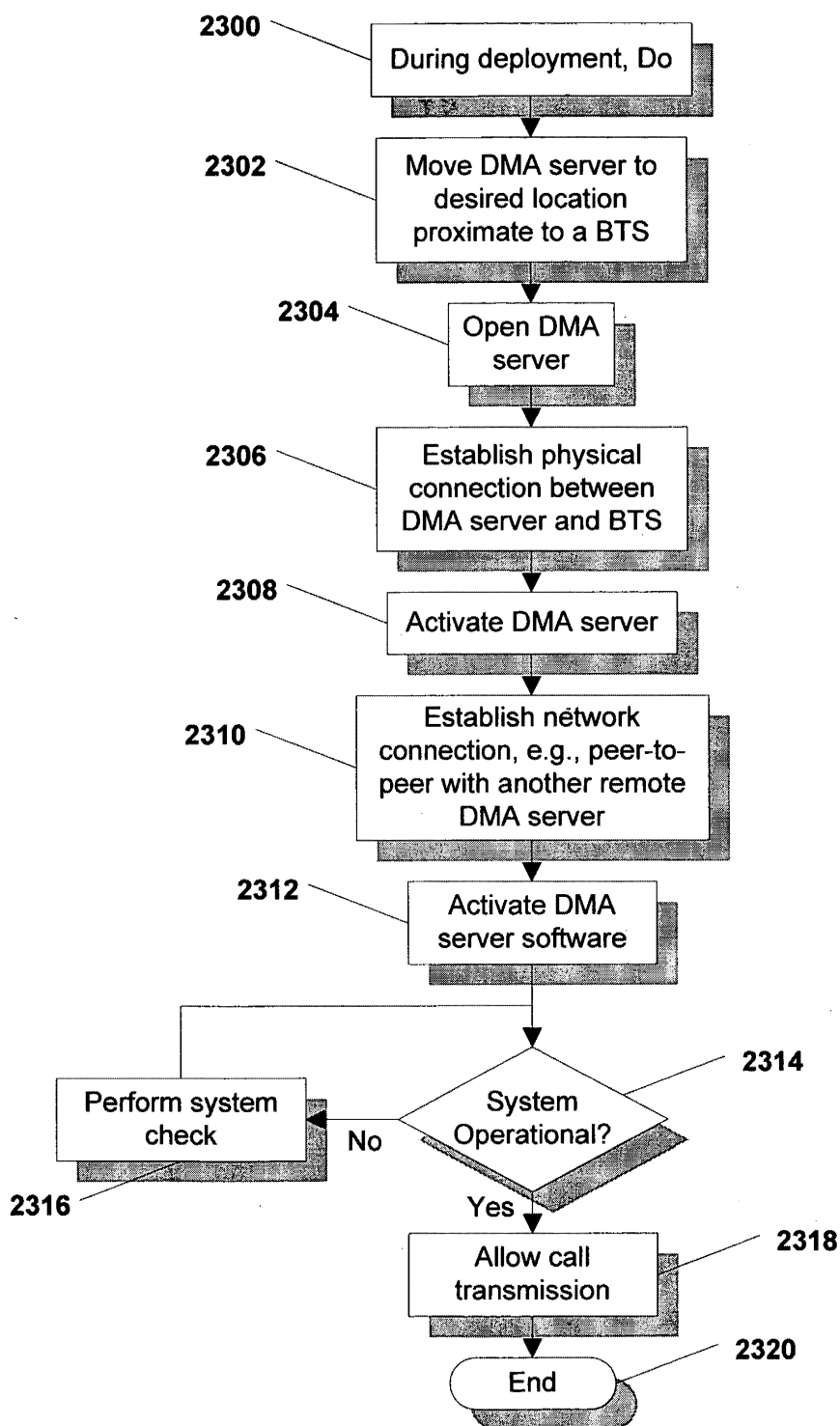
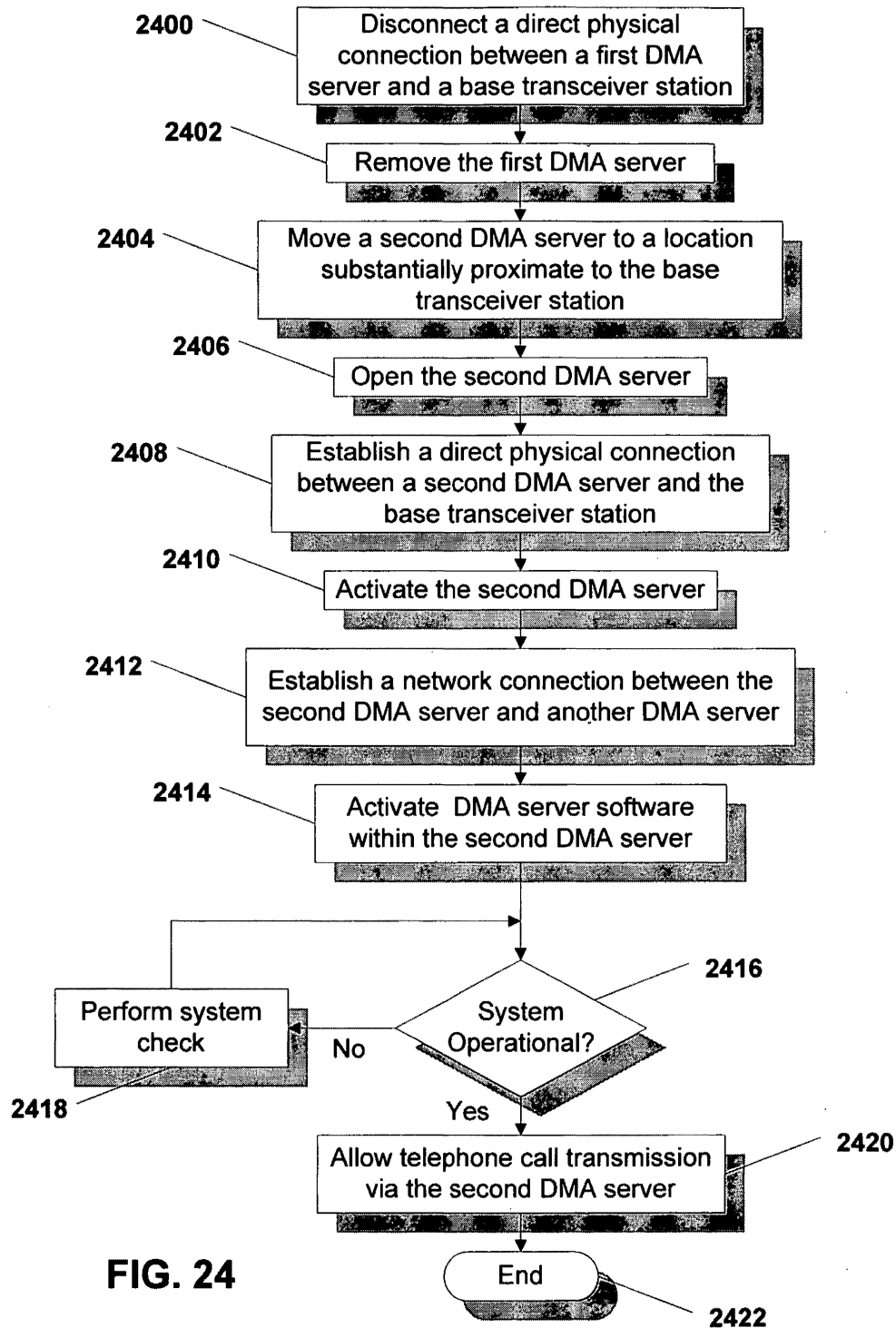


FIG. 23



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DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent 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 that is claimed and for which a patent is sought by way of the application entitled

SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE

which (check) ☒ is filed with this Declaration and Power of Attorney and marked with the above title and/or Attorney Docket Number, and which is the final application provided to me by
TOLER, LARSON & ABEL, L.L.P.
☐ and is amended by the Preliminary Amendment attached hereto.
☐ was filed on _____ as Application Serial No.
☐ and was amended on _____ (if applicable).

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

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

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

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

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

Application Number(s)	Filing Data (MM/DD/YYYY)

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT

international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U. S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

I hereby appoint the following attorney(s) and/or agent(s) associated with Customer No. 34456 to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith.

Customer No. 34456

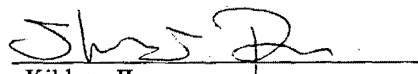
I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both,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

Please direct all correspondence concerning this application to the USPTO Customer Number, if provided, or otherwise to the firm named below:

Customer No. 34456
JEFFREY G. TOLER
TOLER, LARSON & ABEL, LLP
 5000 PLAZA ON THE LAKE, SUITE 265
 AUSTIN, TEXAS 78746

Telephone: 512-327-5515
 Facsimile: 512-327-5452

Full name of sole (or first joint) inventor: Shaowei Pan

Inventor's Signature: 

Residence: Kildeer, IL

Post Office Address: 21878 Tall Oaks Dr.
 Kildeer, IL 60047

Date: 2/20/2006

Citizenship: US

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PATENT APPLICATION FEE DETERMINATION RECORD					Application or Docket Number 11362395	
Substitute for Form PTO-875 Effective December 8, 2004						
APPLICATION AS FILED - PART I						
(Column 1)		(Column 2)		SMALL ENTITY		OR
OTHER THAN SMALL ENTITY						
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	150.00	N/A	300.00
SEARCH FEE (37 CFR 1.16(d), (e), or (m))	N/A	N/A	N/A	\$250	N/A	\$500
EXAMINATION FEE (37 CFR 1.16(d), (p), or (q))	N/A	N/A	N/A	\$100	N/A	\$200
TOTAL CLAIMS (37 CFR 1.16(i))	21 minus 20 =	1	X\$ 25 =	25	X\$50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	1	X100 =	100	X200 =	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).					
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			+180=		+360=	
			TOTAL	625	TOTAL	
* If the difference in column 1 is less than zero, enter "0" in column 2.						
APPLICATION AS AMENDED - PART II						
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY
OTHER THAN SMALL ENTITY						OR
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)
Total (37 CFR 1.16(i))	*	Minus **	=	X\$ 25 =		X\$50 =
Independent (37 CFR 1.16(h))	*	Minus ***	=	X100 =		X200 =
Application Size Fee (37 CFR 1.16(s))						
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				+180=		+360=
				TOTAL ADD'L FEE		TOTAL ADD'L FEE
1,10,19,20						
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY
OTHER THAN SMALL ENTITY						OR
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)
Total (37 CFR 1.16(i))	*	Minus **	=	X\$ 25 =		X\$50 =
Independent (37 CFR 1.16(h))	*	Minus ***	=	X100 =		X200 =
Application Size Fee (37 CFR 1.16(s))						
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				+180=		+360=
				TOTAL ADD'L FEE		TOTAL ADD'L FEE
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.						

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

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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

03/01/2006 STEUMEL1 00000015 502469 11362395

01 FC:2011	150.00 DA
02 FC:2111	250.00 DA
03 FC:2311	100.00 DA
04 FC:2202	25.00 DA
05 FC:2201	100.00 DA

PTO-1556
(5/87)

*U.S. Government Printing Office: 2002 — 496-267/80033

APPLICATION DATA SHEET**APPLICATION INFORMATION**

Application Type::	Regular
Subject Matter::	Utility
Suggested Classification::	
Suggested Group Art Unit::	
CD-ROM or CD-R?::	None
Title::	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
Attorney Docket Number::	1082-0005
Request for Early Publication?::	No
Request for Non-Publication?::	No
Suggested Drawing Figure::	1
Total Drawing Sheets::	24
Small Entity?::	Yes
Secrecy Order in Parent Appl.?::	No

APPLICANT INFORMATION

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name or Initial::	Shaowei
Middle Initial or Name::	
Family Name::	Pan
City of Residence::	Kildeer
State or Province of Residence::	IL
Country of Residence::	US
Street::	21878 Tall Oaks Drive

City:: Kildeer
State or Province:: IL
Country:: US
Postal or ZIP Code:: 60047

CORRESPONDENCE INFORMATION

Correspondence Customer Number:: 34456
Phone number:: (512) 327-5515
Fax number:: (512) 327-5452

REPRESENTATIVE INFORMATION

Representative Customer Number:: 34456

DOMESTIC PRIORITY INFORMATION

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	Continuation of		

FOREIGN PRIORITY INFORMATION

Country::	Application No::	Filing Date::	Priority Claimed::

ASSIGNEE INFORMATION

Assignee name:: Lemko, Corporation
Street:: 1501 E. Woodfield Rd.
City:: Schaumburg
State or Province:: IL
Country:: US
Postal or Zip Code:: 60173

JUL 12 2006 10:47AM

TOLER SCHAFFER

NO. 070 P. 1

TOLER SCHAFFER, LLP
5000 Plaza on the Lake, Suite 265
Austin, TX 78746
Ph. 512-327-5515
Fax 512-327-5575

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FACSIMILE COVER SHEET

DATE: July 11, 2006

TO: Examiner Unknown
USPTO GPAU 2182

FAX NO.: 571-273-8300

FROM: Jeffrey G. Toler
Reg. No.: 38,342

RE U.S. App. No.: 11/362,395, filed February 24, 2006

Applicant(s): Shaowei Pan, et al.

Atty Dkt No.: 1082-0005

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

NO. OF PAGES (including Cover Sheet): 4

MESSAGE:

Attached please find:

- ☒ Transmittal Form (1 pg)
- ☒ Revocation and Power of Attorney, Change of Correspondence Address,
and Appointment of New Power of Attorney (2 pgs)

5000 Plaza On The Lake
Suite 265
AUSTIN, TEXAS 78746

Tel: (512) 327-5515
Fax: (512) 327-5575

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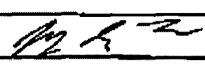
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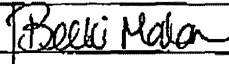
TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/362,395	
	Filing Date	February 24, 2006	
	First Named Inventor	Shaowei Pan	
	Art Unit	2182	
	Examiner Name	Unknown	
Total Number of Pages in This Submission	4	Attorney Docket Number	1082-0005

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☐ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/ Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☒ Power of Attorney, Revocation Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☐ Other Enclosure(s) (please identify below):
Remarks CUSTOMER NO.: 60533		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Tolcr Schaffer, L.L.P.		
Signature			
Printed name	Jeffrey G. Toler		
Date	7-12-2006	Reg. No.	38,342

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Signature	
Typed or printed name	Becki Malan
Date	7-12-06

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**REVOCATION AND POWER OF ATTORNEY, CHANGE OF CORRESPONDENCE
ADDRESS, AND APPOINTMENT OF NEW POWER OF ATTORNEY**

I hereby revoke all previous powers of attorney given in the following applications:

_____ A Power of Attorney is submitted herewith.
 X I hereby appoint the practitioners at Customer Number 60533.

CHANGE OF CORRESPONDENCE ADDRESS

Please change the correspondence address for the following applications to the address associated with Customer Number 60533.

I am the:

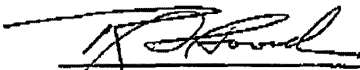
_____ Applicant/Inventor
 X Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed.

Attorney Docket No.	Application No. (Patent Number)	Application Date	Inventor
1082-0001	10/938,546	11-08-2004	Shaowei Pan
1082-0002	11/104,925	04-13-2005	Shaowei Pan
1082-0003	11/105,173	04-13-2005	Shaowei Pan
1082-0004	11/393,993	03-30-2006	Shaowei Pan
1082-0005	11/362,395	02-24-2006	Shaowei Pan

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

6-16-2006
Date

847-240-1990 x224
Telephone No.


Raymond Howell
Chief Financial Officer, LEMKO, Corp.

- 1 -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, VA 22313-1450

STATEMENT UNDER 37 CFR 3.73(b)

Dear Sir.:

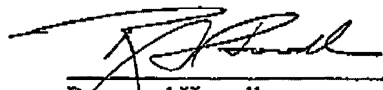
LEMKO, Corp., an Illinois Corporation states that it is the Assignee of the entire right, title and interest in the patent applications/patents identified above by virtue of an assignment from the inventors of the patent applications identified above recorded in the United States Patent and Trademark Office as follows:

Attorney Docket No.	Application No. (Patent Number)	Application Date	Reel/Frame
1082-0001	10/938,546	11-08-2004	015969/0850
1082-0002	11/104,925	04-13-2005	016509/0502
1082-0003	11/105,173	04-13-2005	016504/0589
1082-0004	11/393,993	03-30-2006	Assignment Attached
1082-0005	11/362,395	02-24-2006	Assignment Attached

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

6-22-2006
Date

847-290-1990 x 224
Telephone No.


Raymond Howell
Chief Financial Officer, LEMKO, Corp.



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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/362,395	02/24/2006	Shaowei Pan	1082-0005

34456
 LARSON NEWMAN ABEL
 POLANSKY & WHITE, LLP
 5914 WEST COURTYARD DRIVE
 SUITE 200
 AUSTIN, TX 78730

CONFIRMATION NO. 4781



OC000000019716638

Date Mailed: 07/21/2006

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/12/2006.

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

ZINASH RETTA
 PTOSS (703) 305-3006

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/362,395	02/24/2006	Shaowei Pan	1082-0005

60533
TOLER SCHAFFER, LLP
5000 PLAZA ON THE LAKES
SUITE 265
AUSTIN, TX 78746

CONFIRMATION NO. 4781



OC000000019716663

Date Mailed: 07/21/2006

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/12/2006.

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

ZINASH RETTA
PTOSS (703) 305-3006

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

Application No.: 11/362,395

Filed: February 24, 2006

Examiner: Unknown

Group Art Unit: Unknown

Atty. Docket No.: 1082-0005

COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings the patents, publications, applications or other information identified in the attached:

- ☒ Form(s) PTO/SB/08A and/or PTO/SB/08B or PTO/1449
☐ Other: n/a

to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

1. an admission that the information necessarily is, or corresponds to, prior art with respect to the instant invention;
2. a representation that a search has been made, other than as described below; or
3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance, such as through (i) an English language abstract, (ii) an English language equivalent application, (iii) reference to discussion in the application, or (iv) if cited in a search report or other action by a foreign patent office in a

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Elaine Balagia	<i>[Signature]</i>
Typed or Printed Name	Signature

4

counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

STATEMENT UNDER 37 C.F.R. § 1.704(d)

If the above-identified application is an original application filed on or after
May 29, 2000:

- ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement.

FEES DUE

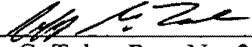
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Respectfully submitted,

7-18-2006
Date


Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
TOLER, SCHAFFER, L.L.P.
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(512) 327-5575 (fax)



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(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number	11/362,395
Filing Date	February 24, 2006
First Named Inventor	Shaowei Pan
Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	1082-0005

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A	US- 6,515,985 B2	02-04-2003	Shmulevich, et al.	
	B	US- 6,751,207 B1	06-15-2004	Lee, et al.	
	C	US- 6,760,325 B1	07-06-2004	Hameleers, et al.	
	D	US- 2001/0036173 A1	11-01-2001	Shmulevich, et al.	
	E	US- 2001/0055298 A1	12-27-2001	Baker, et al.	
	F	US- 2002/0058502 A1	05-16-2002	Stanforth	
	G	US- 2003/0153343 A1	08-14-2003	Crockett, et al.	
	H	US- 2004/0018829 A1	01-29-2004	Raman, et al.	
	I	US-			
	J	US-			
	K	US-			
	L	US-			
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FOREIGN PATENT DOCUMENTS

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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
	T					
	U					
	V					
	W					
	X					
	Y					

Examiner
Signature

Date
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TOLER SCHAFFER

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5000 Plaza on the Lake, Suite 265
Austin, TX 78746
Ph. 512-327-5515
Fax 512-327-5575

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DATE: October 9, 2006

TO: USPTO GPAU 2182

FAX NO.: 571-273-8300

FROM: Jeffrey G. Toler
Reg. No.: 38,342

RE U.S. App. No.: 11/362,395, filed February 24, 2006

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0005

Title: System, Method, and Device for Providing Communications Using a
Distributed Mobile Architecture

NO. OF PAGES (including Cover Sheet): 5

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Attached please find:

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- ☒ IDS Form 1449/PTO (1 pg)

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Suite 265
AUSTIN, TEXAS 78746

Tel: (512) 327-5515
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

Application No.: 11/362,395

Filed: February 24, 2006

Examiner: Unknown

Group Art Unit: 2182

Atty. Docket No.: 1082-0005

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INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

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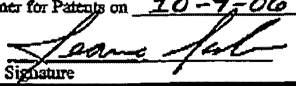
Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings the patents, publications, applications or other information identified in the attached:

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☐ Other: n/a

to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

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2. a representation that a search has been made, other than as described below; or
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For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance, such as through (i) an English language abstract, (ii) an English language equivalent application, (iii) reference to discussion in the application, or (iv) if cited in a search report or other action by a foreign patent office in a

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PATENT

counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

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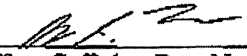
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PATENT

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Respectfully submitted,

10-9-2006
Date


Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
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5000 Plaza On The Lake, Suite 265
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(512) 327-5515 (phone)
(512) 327-5575 (fax)

- 3 -

Application No.: 11/362,395

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STATEMENT BY APPLICANT**

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Sheet 1 of 1

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Application Number	11/362,395
Filing Date	February 24, 2006
First Named Inventor	Shaowei Pan
Art Unit	2182
Examiner Name	Unknown
Attorney Docket Number	1082-0005

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	US- 6,411,825 B1	06-25-2002	Csapo, et al.	
	B1	US- 6,807,432 B2	10-19-2004	Sayers, et al.	
	C1	US- H1, 918	11-07-2000	Hoffpauir, et al.	
	D1	US-			
	E1	US-			
	F1	US-			
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	M1	US-			
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	O1	US-			
	P1	US-			
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	R1	US-			
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		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			
	T1				
	U1				
	V1				
	W1				
	X1				
	Y1				

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8500 Bluffstone Cove, Suite A201
Austin, Texas 78759
Phone 512-327-5515
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DATE: April 10, 2007

TO: Examiner TROST IV, William George **FAX NO.:** 571-273-8300
USPTO GPAU 2617

FROM: Jeffrey G. Toler
Reg. No.: 38,342

RE U.S. App. No.: 11/362,395, filed February 24, 2006

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0005

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

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- ☒ Transmittal Form (1 pg)
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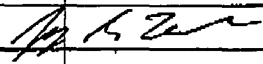
PTO/SB/21 (09-06)

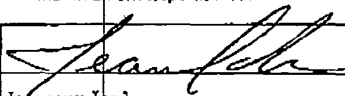
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/362,395	
	Filing Date	February 24, 2006	
	First Named Inventor	Shaowei Pan	
	Art Unit	2617	
	Examiner Name	TROST IV, William George	
Total Number of Pages in This Submission	6	Attorney Docket Number	1082-0005

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☒ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation ☐ Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☐ Other Enclosure(s) (please identify below):
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm Name	Toler Schaffer, LLP
Signature	
Printed name	Jeffrey G. Toler
Date	4-9-2007
Reg. No.	38,342

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Attorney Docket No.: 1082-0005

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Applicant(s): Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

App. No.: 11/362,395

Filed: February 24, 2006

Examiner: TROST IV, William George Group Art Unit: 2617

Atty. Dkt. No.: 1082-0005

Confirmation No.: 4781

MS: Amendment
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☐ Other: n/a

to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

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<u>Jeaneaux Jordan</u> Typed or Printed Name	<u>[Signature]</u> Signature

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counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

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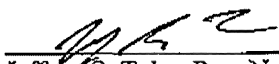
NO. 144 P. 5

Attorney Docket No.: 1082-0005

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Respectfully submitted,

4-9-2007
Date


Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
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Austin, Texas 78759
(512) 327-5515 (phone)
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- 3 -

U.S. Application No.: 11/562,395

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number	11/362,395
Filing Date	February 24, 2006
First Named Inventor	Shaowei Pan
Art Unit	2617
Examiner Name	TROST IV, William George
Attorney Docket Number	1082-0005

U. S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If Known)				
	A1	US-	6,807,431 B2	10-19-2004	Sayers, et al.	
	B1	US-				
	C1	US-				
	D1	US-				
	E1	US-				
	F1	US-				
	G1	US-				
	H1	US-				
	I1	US-				
	J1	US-				
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FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴ Kind Code ⁵ (If known)				
	T1						
	U1						
	V1						
	W1						
	X1						
	Y1						

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

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PAGE 6/6 * RCVD AT 4/10/2007 11:13:28 AM (Eastern Daylight Time) * SVR:USPTO-EF-XRF-2/15 * DNIS:2738300 * CSID:5123275575 * DURATION (mm:ss):01:52

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APPLICATION NUMBER	FILING OR 371(c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/362,395	02/24/2006	Shaowei Pan	1082-0005

CONFIRMATION NO. 4781

60533
TOLER SCHAFFER, LLP
8500 BLUFFSTONE COVE
SUITE A201
AUSTIN, TX 78759

Title: System, method, and device for providing communications using a distributed mobile architecture

Publication No. US-2007-0202847-A1

Publication Date: 08/30/2007

NOTICE OF PUBLICATION OF APPLICATION

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

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

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

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

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Pre-Grant Publication Division, 703-605-4283



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781

60533	7590	12/19/2008
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SUITE A201		
AUSTIN, TX 78759		

EXAMINER
MAGLOIRE, VLADIMIR

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
12/19/2008	PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	11/362,395	PAN, SHAOWEI	
	Examiner	Art Unit	
	VLADIMIR MAGLOIRE	2617	

-- 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 24 February 2006.

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

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

Disposition of Claims

4) ☒ Claim(s) 1-21 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) 1-21 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 24 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

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

Priority under 35 U.S.C. § 119

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

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

Attachment(s)

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

Claim Rejections - 35 USC § 102

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

A person shall be entitled to a patent unless –

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

2. Claims 1-4, 6-9, 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hohnstein (US 6,816,706 B1).

Regarding claim 1, Hohnstein discloses an authentication, authorization, and accounting module of a first distributed mobile architecture system, the module comprising: a destination preference register, wherein the destination preference register includes at least one preferred call path for calls to be routed outside of a distributed mobile architecture network that is accessible to the first distributed mobile architecture system (**see Hohnstein, fig. 1 items 40, fig. 4 item 400, Col 5 lines 42 to 57, Col 6 lines 5 to 15, lines 34 to 67, Col 9 lines 35 to 52, Col 12 lines 12 to 39**).

Consider claim 19, Hohnstein discloses a distributed mobile architecture device, comprising: a processor; a computer readable medium accessible to the processor; an authentication, authorization, and accounting module embedded within the computer readable medium, the authentication, authorization, and accounting module (**see Hohnstein, Fig. 2 item 114, fig. 5 item 300, Col 11 lines 20 to 49, Col 7 lines 20 to 55, Fig. 1 item 56**), comprising: a destination preference register, wherein the destination preference register includes at least one preferred call path associated with

calls to be placed outside a distributed mobile architecture network accessible from one or more distributed mobile architecture devices **(see Hohnstein, fig. 1 items 40, fig. 4 item 400, Col 5 lines 42 to 57, Col 6 lines 5 to 15, lines 34 to 67, Col 9 lines 35 to 52, Col 12 lines 12 to 39).**

Consider claim 2, the module of claim 1, Hohnstein discloses wherein the preferred call path is selected from a group comprising a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path **(see Hohnstein, Fig. 7 discloses different routing paths which include ISDN, VOIP paths).**

Consider claim 3, the module of claim 1, Hohnstein discloses wherein calls placed outside of the distributed mobile architecture network from the first distributed mobile architecture system are established via the preferred call path **(see Hohnstein, fig. 7 item 402).**

Consider claim 4, the module of claim 1, Hohnstein discloses wherein calls routed outside of the distributed mobile architecture network from a mobile subscriber in communication with the first distributed mobile architecture system are established via the preferred call path **(see Hohnstein, fig. 7 items 400, all calls are routed according to the preferred call path in the FEC).**

Consider claim 6, the module of claim 1, Hohnstein discloses further comprising: a home location register, the home location register including information associated with one or more mobile subscribers registered with the first distributed mobile architecture system, and wherein the home location register provides information

related to a first community location register at a second distributed mobile architecture system **(see Hohnstein, Col 7 lines 20 to 46, Fig. 3 item 200)**.

Consider claim 7, the module of claim 6, Hohnstein discloses further comprising a second community location register, wherein the second community location register includes information associated with one or more mobile subscribers registered with the second distributed mobile architecture system **(see Hohnstein, fig. 7 items 400)**.

Consider claim 8, the module of claim 7, Hohnstein discloses further comprising a third community location register, wherein the third community location register includes information associated with one or more mobile subscribers registered with a third distributed mobile architecture system **(see Hohnstein, fig. 7 items 400, fig. 3 item 200)**.

Consider claim 9, the module of claim 8, Hohnstein discloses further comprising a visitor location register, wherein the visitor location register includes information associated with one or more roaming mobile subscribers that are temporarily registered with the first distributed mobile architecture system **(see Hohnstein, fig. 7 items 400, fig. 3 item 200)**.

Claim Rejections - 35 USC § 103

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

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

3. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meche (6,871,072 B1) in view of Hohnstein.

Regarding claim 10, Meche discloses a method of communication **(see Meche, Abstract)**, comprising: receiving a call directed to a destination mobile directory number that is not available within a community location register within a mobile system **(see Meche, fig. 3 steps A to C)**; and matching a prefix of the mobile directory number to a mobile directory number prefix within a destination preference register **(see Meche, fig. 4 step C and E, Col 4 lines 5 to 22, Col 5 lines 25 to 48)**.

Meche does not specifically disclose a distribute mobile architecture, however, Hohnstein teaches a distribute mobile architecture **(see Hohnstein, Col 5 lines 42 to 57)**.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meche by incorporating a distribute mobile architecture, as taught by Hohnstein, thereby creating an adaptable and flexible system (see Hohnstein, Col 2, lines 6 to 11).

Consider claim 11, the method of claim 10, Hohnstein discloses further comprising determining a preferred call path by accessing the destination preference register **(see Meche, fig. 3 steps B to G, discloses determining which call path based on the presence of the dialed number in the VLR)**.

4. Claims 20-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Hohnstein.

Consider claim 20, Hohnstein discloses a system, comprising: a distributed mobile architecture network **(see Hohnstein, Col 3 lines 10 to 25)** including: a first distributed mobile architecture device; a second distributed mobile architecture coupled to the first distributed mobile architecture; a third distributed mobile architecture coupled to the first distributed mobile architecture and to the second distributed mobile architecture **(see Hohnstein, fig. 1 items 40, discloses multiple interconnected distribution points 40)**; a voice over Internet protocol (VoIP) interface coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture **(see Hohnstein, Col 9 lines 65 to 67, Col 10 lines 1 to 8)**; an integrated services digital network (ISDN) interface coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture **(see Hohnstein, fig. 1 item 30 and 22, Col 4 lines 38 to 67, discloses a ISDN interface coupled to the distribution architectures)**; and a ATM switch interface coupled to the first distributed mobile architecture, the second distributed mobile architecture, or the third distributed mobile architecture **(see Hohnstein, Col 8 lines 49 to 67, fig. 5 item 56, discloses a switch interface coupled to the item 40 of fig. 1)**; wherein the first distributed mobile architecture, the second distributed mobile architecture, and the third distributed mobile architecture each comprise: a destination preference register, wherein the destination preference register includes at least one preferred interface supporting calls to be placed outside the distributed mobile architecture network **(see Hohnstein, fig. 7 items 400, discloses a**

destination preference register, which destination paths for routing packets outside the distribution point).

Hohnstein does specifically disclose a MSC interface, however, since Hohnstein discloses an ATM switch interface and Hohnstein discloses a supervising controller interface **(see Hohnstein, Col 7 lines 20 to 46)**, it would have been obvious to one of ordinary skill in the art to specify a mobile switching center.

Consider claim 21, the system of claim 20, wherein the preferred interface is one of the VoIP, the ISDN, or the MSC interfaces **(see Hohnstein, Col 4 lines 63 to 67, Col 9 lines 65 to 67, Col 10 lines 1 to 8, Col 13 lines 12 to 40, discloses preferred paths for routing calls wherein the path are through VoIP or ISDN).**

5. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hohnstein in view of Frost (US 4,284,848).

Consider claim 5, the module of claim 1, Hohnstein discloses wherein the destination preference register includes a first preferred call path and wherein at least some calls routed outside the distributed mobile architecture network are made via a first available preferred call path **(see Hohnstein, fig. 7 item 402, Col 13 lines 12 to 40).**

Hohnstein does not specifically disclose a second preferred call path, and a third preferred call path, Frost discloses a second and third preferred call path **(see Frost, see Frost, fig. 3 and 4 dashed lines, Col 3 lines 47 to 67, discloses multiple alternative paths).**

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hohnstein by specifying a second preferred call path, and a third preferred call path, as taught by Frost, thereby creating a more efficient system (see Frost, Col 1 lines 25 to 41).

6. Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meche and Hohnstein in view of Frost.

Consider claim 12, the method of claim 11, the combination of Hohnstein and Meche do not disclose determining whether the preferred call path is available to route the call. Frost discloses further comprising determining whether the preferred call path is available to route the call **(see Frost, Col 3 lines 60 to 67, Col 4 lines 1 to 4)**.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Meche and Hohnstein by specifying determining whether the preferred call path is available to route the call, as taught by Frost, thereby creating a more efficient system (see Frost, Col 1 lines 25 to 41).

Consider claim 13, the method of claim 12, the combination of Meche, Hohnstein and Frost discloses further comprising determining a next preferred call path **(see Frost, Col 3 lines 60 to 67, Col 4 lines 1 to 4)**.

Consider claim 14, the method of claim 12, the combination Meche, Hohnstein and Frost discloses further comprising establishing the call via the preferred call path **(see Frost, Col 3 lines 47 to 67, Col 4 lines 1 to 4)**.

Consider claim 15, the method of claim 13, the combination of Meche, Hohnstein and Frost discloses further comprising establishing the call via the next preferred call

path after determining that the preferred call path is not available **(see Frost, Col 3 lines 60 to 67, Col 4 lines 1 to 4).**

Regarding claim 16 the limitations have been analyzed in the claim 5.

Consider claim 17, the method of claim 16, the combination of Meche, Hohnstein and Frost discloses wherein the first preferred call path is selected from the group comprising a voice over Internet protocol (VoIP) calling output, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path **(see Frost, Col 21 lines 5 to 20, discloses a central switch for routing calls).**

Consider claim 18, the method of claim 16, the combination of Meche, Hohnstein and Frost discloses wherein the second preferred call path is selected from the group comprising a voice over Internet protocol (VoIP) calling output, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path **(Hohnstein discloses multiple routes available for ISDN and VoIP calls, and Frost discloses secondary routes if the first route is not available, therefore Hohnstein and Frost combined disclose the limitations of claim 18).**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VLADIMIR MAGLOIRE whose telephone number is (571)270-5144. The examiner can normally be reached on Monday to Thursday, 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617

/Vladimir Magloire/
Examiner, Art Unit 2617 12/17/08

Notice of References Cited	Application/Control No. 11/362,395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI	
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,871,072 b1	03-2005	Meche, Paul S	455/445
*	B	US-6,816,706 b1	11-2004	Hohnstein et al.	455/25
*	C	US-4,284,848	08-1981	Frost, Edward G.	455/465
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
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	N					
	O					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	38	((SHAOWEI) near2 (PAN)).INV.	US-PGPUB; USPAT	OR	ON	2008/10/21 15:35
S2	12	("20010036173" "20010055298" "20020058502" "20030153343" "20040018829" "6411825" "6515985" "6751207" "6760325" "6807431" "6807432" "H001918").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/10/21 16:49
S3	1	("6996086").PN.	USPAT; USOCR; EPO	OR	OFF	2008/12/08 22:55
S4	7	("6064891" "6122263" "6167271" "6167279" "6816706").PN. OR ("6996086").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 08:31
S5	1	"10849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:47
S6	0	"09849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S7	0	"9849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S8	0	"9849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S9	1	us-20020089994-\$.did.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:49
S10	1	"11362395"	US-PGPUB; USPAT	OR	ON	2008/12/12 12:40
S11	1	("6816706").PN.	USPAT; USOCR; EPO	OR	OFF	2008/12/12 15:12

S12	2872	455/ 445.ccls. 455/ 428.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:55
S13	0	S12 and (preferred adj route)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:57
S14	0	S12 and (preferred adj rout)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:57
S15	0	S12 and (preferred adj routing)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:57
S16	0	S12 and (preferred adj call)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:58
S17	10	S12 and (optimum adj path)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:59
S18	2876	455/ 445.ccls. 455/ 428.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:04
S19	0	S18 and (preferred adj path)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:04
S20	0	S18 and (preferred adj rout\$4)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:05
S21	30	S18 and (best adj rout \$4)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:05
S22	539	S18 and distribution	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:20

S23	31	S22 and voip	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:20
S24	2324	455/445.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S25	1308	S24 and (busy or alternative)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S26	320	S25 and ISDN	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S27	188	S26 and MSC	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S29	34	S27 and VOIP	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S30	0	S29 and (alternat\$3 adj (rout\$3 path))	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:54
S31	127	S24 and (alternat\$3 adj (rout\$3 path))	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:55
S32	2876	455/445.ccls. 455/428. ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03
S33	0	S32 and (matching adj prefix)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03
S34	0	S32 and (match adj prefix)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03

S35	0	S32 and (match\$3 adj prefix)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03
S36	2	S32 and (match\$3 adj area adj code)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:04

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Austin, Texas 78759
Phone 512-327-5515
Fax 512-327-5575

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DATE: April 10, 2007

TO: Examiner TROST IV, William George **FAX NO.:** 571-273-8300
USPTO GPAU 2617

FROM: Jeffrey G. Toler
Reg. No.: 38,342

RE U.S. App. No.: 11/362,395, filed February 24, 2006

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0005

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

NO. OF PAGES (including Cover Sheet): 6

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Attached please find:

- ☒ Transmittal Form (1 pg)
- ☒ Information Disclosure Statement (4 pgs)

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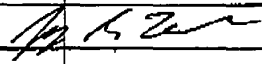
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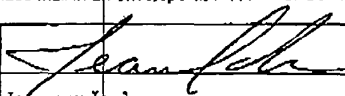
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	11/362,395	
	Filing Date	February 24, 2006	
	First Named Inventor	Shaowei Pan	
	Art Unit	2617	
	Examiner Name	TROST IV, William George	
Total Number of Pages in This Submission	6	Attorney Docket Number	1082-0005

ENCLOSURES (Check all that apply)		
☐ Fee Transmittal Form ☐ Fee Attached ☐ Amendment/Reply ☐ After Final ☐ Affidavits/declaration(s) ☐ Extension of Time Request ☐ Express Abandonment Request ☒ Information Disclosure Statement ☐ Certified Copy of Priority Document(s) ☐ Reply to Missing Parts/Incomplete Application ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53	☐ Drawing(s) ☐ Licensing-related Papers ☐ Petition ☐ Petition to Convert to a Provisional Application ☐ Power of Attorney, Revocation ☐ Change of Correspondence Address ☐ Terminal Disclaimer ☐ Request for Refund ☐ CD, Number of CD(s) _____ ☐ Landscape Table on CD	☐ After Allowance Communication to TC ☐ Appeal Communication to Board of Appeals and Interferences ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) ☐ Proprietary Information ☐ Status Letter ☐ Other Enclosure(s) (please identify below):
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm Name	Toler Schaffer, LLP
Signature	
Printed name	Jeffrey G. Toler
Date	4-9-2007
Reg. No.	38,342

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Signature	
Typed or printed name	Jeanneaux Jordan
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Attorney Docket No.: 1082-0005

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Applicant(s): Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

App. No.: 11/362,395 Filed: February 24, 2006

Examiner: TROST IV, William George Group Art Unit: 2617

Atty. Dkt. No.: 1082-0005 Confirmation No.: 4781

MS: Amendment
COMMISSIONER FOR PATENTS
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INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings the patents, publications, applications or other information identified in the attached:

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to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

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counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

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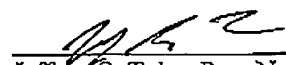
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Respectfully submitted,

Date

4-9-2007


Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
TOLER SCHAFFER, L.L.P.
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Austin, Texas 78759
(512) 327-5515 (phone)
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- 3 -

U.S. Application No.: 11/562,395

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Sheet 1 of 1

Complete if Known

Application Number	11/362,395
Filing Date	February 24, 2006
First Named Inventor	Shaowei Pan
Art Unit	2617
Examiner Name	TROST IV, William George
Attorney Docket Number	1082-0005

U. S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (If known)				
/V.M./	A1	US-	6,807,431 B2	10-19-2004	Sayers, et al.	
	B1	US-				
	C1	US-				
	D1	US-				
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		Country Code ³	Number ⁴ Kind Code ⁵ (If known)				
	T1						
	U1						
	V1						
	W1						
	X1						
	Y1						

Examiner Signature	/Vladimir Magloire/	Date Considered	12/17/2008
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Search Notes 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

SEARCHED			
Class	Subclass	Date	Examiner
455	428, 445	12/17/2008	Vladimir Magloire

SEARCH NOTES		
Search Notes	Date	Examiner
Consulted with Nick Corsaro, inventor search, limited text search	12/17/2008	Vladimir Magloire

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

--	--

<i>Index of Claims</i> 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

✓	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	12/17/2008								
	1	✓								
	2	✓								
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	18	✓								
	19	✓								
	20	✓								
	21	✓								

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Reg. No.: 38,342

RE U.S. App. No.: 11/362,395, filed February 24, 2006

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0005

Title: System, Method, and Device for Providing Communications Using a
Distributed Mobile Architecture

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Applicant(s): Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

Application No.: 11/362,395

Filed: February 24, 2006

Examiner: Unknown

Group Art Unit: 2182

Atty. Docket No.: 1082-0005

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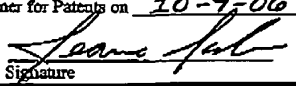
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Application No.: 11/362,395

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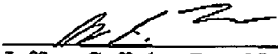
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Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
TOLER SCHAFFER, L.L.P.
5000 Plaza On The Lake, Suite 265
Austin, Texas 78746
(512) 327-5515 (phone)
(512) 327-5575 (fax)

- 3 -

Application No.: 11/362,395

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STATEMENT BY APPLICANT**

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Application Number	11/362,395
Filing Date	February 24, 2006
First Named Inventor	Shaowei Pan
Art Unit	2182
Examiner Name	Unknown
Attorney Docket Number	1082-0005

Sheet 1 of 1

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (# known)			
/V.M./	A1	US- 6,411,825 B1	06-25-2002	Csapo, et al.	
/V.M./	B1	US- 6,807,432 B2	10-19-2004	Sayers, et al.	
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	E1	US-			
	F1	US-			
	G1	US-			
	H1	US-			
	I1	US-			
	J1	US-			
	K1	US-			
	L1	US-			
	M1	US-			
	N1	US-			
	O1	US-			
	P1	US-			
	Q1	US-			
	R1	US-			
	S1	US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁵
		Country Code ³ Number ⁴ Kind Code ⁶ (# known)				
	T1					
	U1					
	V1					
	W1					
	X1					
	Y1					

Examiner Signature	/Vladimir Magloire/	Date Considered	12/17/2008
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting this completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PAGE 5/5 * RCVD AT 10/9/2006 6:23:13 PM (Eastern Daylight Time) * SVR:USPTO-EFXXF-5/0 * DNIS:2738300 * CSID:5123275575 * DURATION (mm:ss):01:24

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BIB DATA SHEET

CONFIRMATION NO. 4781

SERIAL NUMBER 11/362,395	FILING or 371(c) DATE 02/24/2006 RULE	CLASS 710	GROUP ART UNIT 2617	ATTORNEY DOCKET NO. 1082-0005		
APPLICANTS Shaowei Pan, Kildeer, IL; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** * SMALL ENTITY ** 03/23/2006						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /VLADIMIR MAGLOIRE/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY IL	SHEETS DRAWINGS 24	TOTAL CLAIMS 21	INDEPENDENT CLAIMS 4
ADDRESS TOLER LAW GROUP 8500 BLUFFSTONE COVE SUITE A201 AUSTIN, TX 78759 UNITED STATES						
TITLE System, method, and device for providing communications using a distributed mobile architecture						
FILING FEE RECEIVED 625	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			

Receipt date: 07/24/2006



11362395 - GAB-2617
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

Application No.: 11/362,395

Filed: February 24, 2006

Examiner: Unknown

Group Art Unit: Unknown

Atty. Docket No.: 1082-0005

COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the undersigned brings the patents, publications, applications or other information identified in the attached:

- ☒ Form(s) PTO/SB/08A and/or PTO/SB/08B or PTO/1449
☐ Other: n/a

to the Examiner's attention in the above-identified application. Citation of such information shall not be construed as:

1. an admission that the information necessarily is, or corresponds to, prior art with respect to the instant invention;
2. a representation that a search has been made, other than as described below; or
3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

For each item of information listed that is not in the English language, the undersigned has provided a concise explanation of the relevance, such as through (i) an English language abstract, (ii) an English language equivalent application, (iii) reference to discussion in the application, or (iv) if cited in a search report or other action by a foreign patent office in a

CERTIFICATE OF TRANSMISSION/MAILING	
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as either First Class Mail or Express Mail, in an envelope addressed to the Commissioner for Patents on <u>July 18, 2006</u> .	
Elaine Balagia Typed or Printed Name	<u>Elaine Balagia</u> Signature

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counterpart foreign application, an English language version of the search report or action that indicates the degree of relevance found by the foreign office.

STATEMENT UNDER 37 C.F.R. § 1.704(d)

If the above-identified application is an original application filed on or after
May 29, 2000:

- ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement.

FEES DUE

This Information Disclosure Statement is being filed:

- ☐ within three months of the filing date of a national application or within three months of entry of the national stage as set forth in § 1.491 in an international application. Therefore, no fee is required.
- ☒ before the mailing date of a first Office action on the merits or before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114. Therefore, no fee is believed required.
- ☐ during the period specified in § 1.97(c). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application not more than three months prior to the filing of this Information Disclosure Statement.
- ☐ during the period specified in § 1.97(c). Accordingly, the fee set forth in § 1.17(p) is required and provided as shown on the attached Fee Transmittal.
- ☐ during the period specified in § 1.97(d). Accordingly, the fee set forth in § 1.17(p) is required and provided as shown on the attached Fee Transmittal. Additionally, each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application not more than three months prior to the filing of this Information Disclosure Statement.

Receipt date: 07/24/2006

11362395 - GAU: 2617

PATENT

Should any PTO fees be necessary for entry of this Information Disclosure Statement, the undersigned hereby authorizes the Commissioner to charge Deposit Account 50-2469.

Respectfully submitted,

7-18-2006
Date


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- 3 -

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Ref ID: A57
 Receipt date: 07/24/2006

11362395 - GAU: 2617



PTO/SB/08A (08-03)
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Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	11/362,395
		Filing Date	February 24, 2006
		First Named Inventor	Shaowei Pan
		Art Unit	Unknown
		Examiner Name	Unknown
Sheet 1	of 1	Attorney Docket Number	1082-0005

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/V.M./	A	US- 6,515,985 B2	02-04-2003	Shmulevich, et al.	
/V.M./	B	US- 6,751,207 B1	06-15-2004	Lee, et al.	
/V.M./	C	US- 6,760,325 B1	07-06-2004	Hameleers, et al.	
/V.M./	D	US- 2001/0036173 A1	11-01-2001	Shmulevich, et al.	
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/V.M./	G	US- 2003/0153343 A1	08-14-2003	Crockett, et al.	
/V.M./	H	US- 2004/0018829 A1	01-29-2004	Raman, et al.	
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FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
	T				
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	X				
	Y				

Examiner Signature	/Vladimir Magloire/	Date Considered	12/17/2008
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /V.M./

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

App. No.: 11/362,395 Filed: February 24, 2006

Examiner: MAGLOIRE, Vladimir Group Art Unit: 2617

Customer No.: 60533 Confirmation No.: 4781

Atty. Dkt. No.: 1082-0005

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

RESPONSE TO NON-FINAL OFFICE ACTION

Dear Sir:

In response to the Non-Final Office Action mailed December 19, 2008 (the "Office Action"), please reconsider the above-identified application in light of the following amendments and remarks.

CLAIM AMENDMENTS:

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

1. (Currently Amended) ~~An authentication, authorization, and accounting module of a first distributed mobile architecture system, the module comprising:~~ A first distributed mobile architecture system, comprising:
 - a base transceiver station; and
 - a computer readable storage medium, comprising:
 - a mobile switching center (MSC) module embedded within the computer readable storage medium;
 - a base station controller (BSC) module embedded within the computer readable storage medium;
 - a call detail record (CDR) generation program embedded within the computer readable storage medium, the CDR generation program adapted to store a set of call detail records; and
 - an authentication, authorization, and accounting (AAA) module embedded within the computer readable storage medium, the AAA module comprising a destination preference register, wherein the destination preference register includes at least one preferred call path for calls to be routed outside of a distributed mobile architecture network that is accessible to the first distributed mobile architecture system[.].
 - wherein the first distributed mobile architecture system is operable to provide a communication path for use by one or more mobile handsets via the base transceiver station.
-
2. (Currently Amended) ~~The module~~ first distributed mobile architecture system of claim 1, wherein the preferred call path ~~is selected from a group comprising~~ includes one of a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path.

3. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 1, wherein calls placed outside of the distributed mobile architecture network from the first distributed mobile architecture system are established via the preferred call path.

4. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 1, wherein calls routed outside of the distributed mobile architecture network from a mobile subscriber in communication with the first distributed mobile architecture system are established via the preferred call path.

5. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 1, wherein the destination preference register includes a first preferred call path, a second preferred call path, and a third preferred call path, and wherein at least some calls routed outside the distributed mobile architecture network are made via a first available preferred call path.

6. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 1, further comprising: a home location register (HLR) module embedded within the computer readable storage medium, the ~~home location register~~ HLR module including information associated with one or more mobile subscribers registered with the first distributed mobile architecture system, and wherein the ~~home location register~~ HLR module provides information related to a first community location register at a second distributed mobile architecture system.

7. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 6, further comprising a second community location register, wherein the second community location register includes information associated with one or more mobile subscribers registered with the second distributed mobile architecture system.

8. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 7, further comprising a third community location register, wherein the third community location register includes information associated with one or more mobile subscribers registered with a third distributed mobile architecture system.

9. (Currently Amended) The ~~module~~ first distributed mobile architecture system of claim 8, further comprising a visitor location register (VLR) module embedded within the computer readable storage medium, wherein the ~~visitor location register~~ VLR module includes information associated with one or more roaming mobile subscribers that are temporarily registered with the first distributed mobile architecture system.

10. (Currently Amended) A method of communication, comprising:

receiving, at a distributed mobile architecture system, a call directed to a destination

mobile directory number that is not available within a community location register within a ~~distributed mobile architecture system~~; and a computer readable storage medium of the distributed mobile architecture system, the computer readable storage medium further comprising:

a mobile switching center (MSC) module embedded within the computer readable storage medium;

a base station controller (BSC) module embedded within the computer readable storage medium;

a call detail record (CDR) generation program embedded within the computer readable storage medium, the CDR generation program adapted to store a set of call detail records; and

a destination preference register embedded within the computer readable storage medium,

wherein the distributed mobile architecture system further comprises a base transceiver station, and wherein the distributed mobile architecture system is operable to provide a communication path for use by one or more mobile handsets via the base transceiver station; and

the method further comprising matching a prefix of the mobile directory number to a mobile directory number prefix within [[a]] the destination preference register.

11. (Original) The method of claim 10, further comprising determining a preferred call path by accessing the destination preference register.

12. (Original) The method of claim 11, further comprising determining whether the preferred call path is available to route the call.

13. (Original) The method of claim 12, further comprising determining a next preferred call path.

14. (Original) The method of claim 12, further comprising establishing the call via the preferred call path.

15. (Original) The method of claim 13, further comprising establishing the call via the next preferred call path after determining that the preferred call path is not available.

16. (Currently Amended) The method of claim 11, wherein the preferred call path is ~~selected from~~ includes one of a first preferred call path, a second preferred call path, and a third preferred call path.

17. (Currently Amended) The method of claim 16, wherein the first preferred call path is ~~selected from the group comprising~~ includes one of a voice over Internet protocol (VoIP) ~~calling output call path~~, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path.

18. (Currently Amended) The method of claim 16, wherein the second preferred call path ~~is selected from the group comprising~~ includes one of a voice over Internet protocol (VoIP) ~~calling output call path~~, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path.

19. (Currently Amended) A distributed mobile architecture device, comprising:

- a processor;
- a computer readable medium accessible to the processor;
- a mobile switching center (MSC) module embedded within the computer readable medium;
- a base station controller (BSC) module embedded within the computer readable medium;
- a home location register (HLR) module embedded within the computer readable medium;
- a visitor location register (VLR) module embedded within the computer readable medium;
- a call detail record (CDR) generation program embedded within the computer readable medium, the CDR generation program adapted to store a set of call detail records;
- and
- an authentication, authorization, and accounting module embedded within the computer readable medium, the authentication, authorization, and accounting module[[.]] comprising:
 - a destination preference register, wherein the destination preference register includes at least one preferred call path associated with calls to be placed outside a distributed mobile architecture network accessible from one or more distributed mobile architecture devices.

20. (Currently Amended) A system, comprising:
a distributed mobile architecture network including:
 a first distributed mobile architecture device;
 a second distributed mobile architecture device coupled to the first distributed mobile architecture device;
 a third distributed mobile architecture device coupled to the first distributed mobile architecture device and to the second distributed mobile architecture device;
 a voice over Internet protocol (VoIP) interface coupled to one of the first distributed mobile architecture device, the second distributed mobile architecture device, [[or]] and the third distributed mobile architecture device;
 an integrated services digital network (ISDN) interface coupled to one of the first distributed mobile architecture device, the second distributed mobile architecture device, [[or]] and the third distributed mobile architecture device; and
 a mobile switching center (MSC) interface coupled to one of the first distributed mobile architecture device, the second distributed mobile architecture device, [[or]] and the third distributed mobile architecture device;
wherein the first distributed mobile architecture device, the second distributed mobile architecture device, and the third distributed mobile architecture device each comprise:
 a base transceiver station; and
 a computer readable storage medium, comprising:
 a mobile switching center (MSC) module embedded within the computer readable storage medium;
 a base station controller (BSC) module embedded within the computer readable storage medium;
 a call detail record (CDR) generation program embedded within the computer readable storage medium, the CDR

generation program adapted to store a set of call detail records; and
a destination preference register embedded within the computer readable storage medium, wherein the destination preference register includes at least one preferred interface supporting calls to be placed outside the distributed mobile architecture network.

21. (Currently Amended) The system of claim 20, wherein the preferred interface is one of the VoIP interface, the ISDN interface, ~~[[or]]~~ and the MSC ~~interfaces~~ interface.

REMARKS

Claims 1-21 are pending. Claims 1-10 and 16-21 have been amended. No new matter has been added. Support for the claim amendments may be found in the specification, drawings, and claims as originally filed.

Claims 1-4, 6-9, and 19 are Allowable

The Office has rejected claims 1-4, 6-9, and 19, under 35 U.S.C. §102(b), as being anticipated by U.S. Patent No. 6,816,706 ("Hohnstein"). Applicant respectfully traverses the rejections.

The cited portions of Hohnstein do not disclose or suggest the specific combination of claim 1. For example, the cited portions of Hohnstein fail to disclose or suggest a distributed mobile architecture (DMA) system that includes a call detail record (CDR) generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 1.

In contrast to claim 1, Hohnstein discloses a distribution point 40 that communicates with a supervisor 56. *See* Hohnstein, col. 7, lines 21-22, referring to FIG. 1. The supervisor 56 may further include or interface with billing and authentication services. *See* Hohnstein, col. 7, lines 29-31. The distribution point 40 includes back end communication interfaces 106 for connecting the distribution point 40 with the supervisor 56. *See* Hohnstein, col. 8, lines 50-52, referring to FIG. 2. A separate supervisor 56, connected via a back end communication interface as shown in FIG. 2, may include billing services. Thus, in Hohnstein, billing records are not stored at the distribution point 40. The cited portions of Hohnstein do not disclose or suggest a CDR generation program that stores a set of call detail records at a DMA system. Since the DMA system includes call record storage capability, the DMA system can continue to store billing records even when a communication link is disrupted. The DMA system continues to track and store call records so that a network operator can later bill for calls when the DMA system is detached from the network (e.g., a link to a PSTN goes down). The call records can be stored at the DMA system (rather than at another site). Therefore, the cited portions of Hohnstein fail to disclose or suggest a CDR generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 1. For at least this reason, claim 1 is allowable.

In further contrast to claim 1, the cited portions of Hohnstein fail to disclose or suggest a mobile switching center (MSC) module and a base station controller (BSC) module embedded within the computer readable storage medium, as in claim 1. Hohnstein indicates that problems are associated with a traditional layout of a wireless system. Because all calls are processed by an MSC, the MSC can become a bottleneck limiting the number of users supported. If the MSC fails, the system becomes inoperative. Also, the BSC and BTS architecture is fairly rigid, requiring manual reconfiguration in the MSC when components are added or deleted. *See* Hohnstein, col. 1, line 66 to col. 2, line 5. Thus, Hohnstein teaches away from use of the MSC module and BSC module of claim 1. For at least this additional reason, claim 1 is allowable.

Claims 2-4 and 6-9 depend from claim 1, which Applicant has shown to be allowable. Therefore, claims 2-4 and 6-9 are allowable, at least by virtue of their dependence from claim 1. Further, the dependent claims disclose additional elements not disclosed or suggested by the cited portions of Hohnstein.

For example, the cited portions of Hohnstein fail to disclose or suggest a home location register (HLR) module embedded within the computer readable storage medium of the DMA system, as in claim 6. The Office asserts that col. 7, lines 20 to 46 and FIG. 3, item 200 of Hohnstein discloses a home location register. *See* Office Action, pp. 3-4. In Hohnstein, each distribution point 40 communicates with supervisor 56. Supervisor 56 tracks the locations of subscriber units 26 within communication system 20, identifying with which distribution point 40 each subscriber unit 26 is currently communicating. *See* Hohnstein, col. 7, lines 21-25. Supervisor 56 determines which wireless service location register (WSLR) 200 will provision services based on the distribution point 40 through which subscriber unit 26 requesting services is currently communicating. *See* Hohnstein, col. 9, lines 43-47, referring to FIG. 3. As shown in FIG. 3, the supervisor 56 of Hohnstein is separate from the distribution point 40. Therefore, the cited portions of Hohnstein fail to disclose or suggest an HLR module embedded within the computer readable storage medium of the DMA system, as in claim 6. For at least this additional reason, claim 6 is allowable.

The cited portions of Hohnstein do not disclose or suggest the specific combination of claim 19. For example, the cited portions of Hohnstein fail to disclose or suggest a call detail record (CDR) generation program embedded within a computer readable medium, the CDR generation program adapted to store a set of call detail records, as in claim 19.

In contrast to claim 19, Hohnstein discloses a distribution point 40 that communicates with a supervisor 56. *See* Hohnstein, col. 7, lines 21-22, referring to FIG. 1. The supervisor 56 may further include or interface with billing and authentication services. *See* Hohnstein, col. 7, lines 29-31. The distribution point 40 includes back end communication interfaces 106 for connecting the distribution point 40 with the supervisor 56. *See* Hohnstein, col. 8, lines 50-52, referring to FIG. 2. A separate supervisor 56, connected via a back end communication interface as shown in FIG. 2, may include billing services. Thus, in Hohnstein, billing records are not stored at the distribution point 40. The cited portions of Hohnstein do not disclose or suggest a CDR generation program that stores a set of call detail records at a DMA device. Since the DMA device includes call record storage capability, the DMA device can continue to store billing records even when a communication link is disrupted. The DMA device continues to track and store call records so that a network operator can later bill for calls when the DMA device is detached from the network (e.g., a link to a PSTN goes down). The call records can be stored at the DMA device (rather than at another site). Therefore, the cited portions of Hohnstein fail to disclose or suggest a CDR generation program embedded within a computer readable medium, the CDR generation program adapted to store a set of call detail records, as in claim 19. For at least this reason, claim 19 is allowable.

In further contrast to claim 19, the cited portions of Hohnstein fail to disclose or suggest a mobile switching center (MSC) module and a base station controller (BSC) module embedded within the computer readable medium, as in claim 19. Hohnstein indicates that problems are associated with a traditional layout of a wireless system. Because all calls are processed by an MSC, the MSC can become a bottleneck limiting the number of users supported. If the MSC fails, the system becomes inoperative. Also, the BSC and BTS architecture is fairly rigid, requiring manual reconfiguration in the MSC when components are added or deleted. *See* Hohnstein, col. 1, line 66 to col. 2, line 5. Thus, Hohnstein teaches away from use of the MSC module and BSC module of claim 19. For at least this additional reason, claim 19 is allowable.

Further, the cited portions of Hohnstein fail to disclose or suggest a home location register (HLR) module and a visitor location register (VLR) module embedded within the computer readable medium of the DMA device, as in claim 19. The Office asserts that col. 7, lines 20 to 46 and FIG. 3, item 200 of Hohnstein discloses a home location register. *See* Office Action, pp. 3-4. Further, the Office asserts that FIG. 7 item 400 and FIG. 3 item 200 of

Hohnstein discloses a visitor location register. *See* Office Action, p. 4. In Hohnstein, each distribution point 40 communicates with supervisor 56. Supervisor 56 tracks the locations of subscriber units 26 within communication system 20, identifying with which distribution point 40 each subscriber unit 26 is currently communicating. *See* Hohnstein, col. 7, lines 21-25. Supervisor 56 determines which wireless service location register (WSLR) 200 will provision services based on the distribution point 40 through which subscriber unit 26 requesting services is currently communicating. *See* Hohnstein, col. 9, lines 43-47, referring to FIG. 3. As shown in FIG. 3, the supervisor 56 of Hohnstein is separate from the distribution point 40. Therefore, the cited portions of Hohnstein fail to disclose or suggest an HLR module and a VLR module embedded within the computer readable medium of the DMA device, as in claim 19. For at least this additional reason, claim 19 is allowable.

Claims 10 and 11 are Allowable

The Office has rejected claims 10 and 11, under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,871,072 ("Meche"), in view of Hohnstein. Applicant respectfully traverses the rejections.

The cited portions of Meche and Hohnstein, individually or in combination, do not disclose or suggest the specific combination of claim 10. For example, the cited portions of Meche and Hohnstein fail to disclose or suggest a call detail record (CDR) generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 10.

In contrast to claim 10, Meche discloses methods for operating a wireless terminal or mobile station in a wireless telecommunications system. *See* Meche, Abstract. In Meche, an identifier is provided to the mobile station that allows a mobile switching center (MSC) to automatically determine if a received telephone number is one that is associated with a potential roamer. *See* Meche, Abstract. The cited portions of Meche fail to disclose or suggest a CDR generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 10.

In further contrast to claim 10, Hohnstein discloses a distribution point 40 that communicates with a supervisor 56. *See* Hohnstein, col. 7, lines 21-22, referring to FIG. 1. The supervisor 56 may further include or interface with billing and authentication services. *See* Hohnstein, col. 7, lines 29-31. The distribution point 40 includes back end communication

interfaces 106 for connecting the distribution point 40 with the supervisor 56. *See* Hohnstein, col. 8, lines 50-52, referring to FIG. 2. A separate supervisor 56, connected via a back end communication interface as shown in FIG. 2, may include billing services. Thus, in Hohnstein, billing records are not stored at the distribution point 40. The cited portions of Hohnstein do not disclose or suggest a CDR generation program that stores a set of call detail records at a DMA system. Since the DMA system includes call record storage capability, the DMA system can continue to store billing records even when a communication link is disrupted. The DMA server continues to track and store call records so that a network operator can later bill for calls when the DMA system is detached from the network (e.g., a link to a PSTN goes down). The call records can be stored at the DMA system (rather than at another site). Therefore, the cited portions of Hohnstein fail to disclose or suggest a CDR generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 10.

Therefore, the cited portions of Meche and Hohnstein, individually or in combination, fail to disclose or suggest at least one element of claim 10. Hence, claim 10 is allowable. Claim 11 depends from claim 10. Therefore, claim 11 is allowable, at least by virtue of its dependence from claim 10.

Claims 20-21 are Allowable

The Office has rejected claims 20-21, under 35 U.S.C. §103(a), as being unpatentable over Hohnstein. Applicant respectfully traverses the rejections.

The cited portions of Hohnstein do not disclose or suggest the specific combination of claim 20. For example, the cited portions of Hohnstein fail to disclose or suggest a first distributed mobile architecture (DMA) device, a second DMA device, and a third DMA device that each include a call detail record (CDR) generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 20.

In contrast to claim 20, Hohnstein discloses a distribution point 40 that communicates with a supervisor 56. *See* Hohnstein, col. 7, lines 21-22, referring to FIG. 1. The supervisor 56 may further include or interface with billing and authentication services. *See* Hohnstein, col. 7, lines 29-31. The distribution point 40 includes back end communication interfaces 106 for connecting the distribution point 40 with the supervisor 56. *See* Hohnstein, col. 8, lines 50-52,

referring to FIG. 2. A separate supervisor 56, connected via a back end communication interface as shown in FIG. 2, may include billing services. Thus, in Hohnstein, billing records are not stored at the distribution point 40. The cited portions of Hohnstein do not disclose or suggest a CDR generation program that stores a set of call detail records at a DMA device. Since the DMA device includes call record storage capability, the DMA device can continue to store billing records even when a communication link is disrupted. The DMA device continues to track and store call records so that a network operator can later bill for calls when the DMA system is detached from the network (e.g., a link to a PSTN goes down). The call records can be stored at the DMA device (rather than at another site). Therefore, the cited portions of Hohnstein fail to disclose or suggest a first distributed mobile architecture (DMA) device, a second DMA device, and a third DMA device that each include a call detail record (CDR) generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 20. For at least this reason, claim 20 is allowable.

In further contrast to claim 20, the cited portions of Hohnstein fail to disclose or suggest a mobile switching center (MSC) module and a base station controller (BSC) module embedded within the computer readable storage medium, as in claim 20. Hohnstein indicates that problems are associated with a traditional layout of a wireless system. Because all calls are processed by an MSC, the MSC can become a bottleneck limiting the number of users supported. If the MSC fails, the system becomes inoperative. Also, the BSC and BTS architecture is fairly rigid, requiring manual reconfiguration in the MSC when components are added or deleted. *See* Hohnstein, col. 1, line 66 to col. 2, line 5. Thus, Hohnstein teaches away from use of the MSC module and BSC module of claim 20. For at least this additional reason, claim 20 is allowable.

Claim 21 depends from claim 20. Therefore, claim 21 is allowable, at least by virtue of its dependence from claim 20.

Claim 5 is Allowable

The Office has rejected claim 5, under 35 U.S.C. §103(a), as being unpatentable over Hohnstein, in view of U.S. Patent No. 4,284,848 ("Frost"). Applicant respectfully traverses the rejection.

Claim 5 depends from claim 1. As noted above, the cited portions of Hohnstein fail to disclose or suggest at least one element of claim 1. The cited portions of Frost do not disclose or suggest the elements of claim 1 not disclosed or suggested by the cited portions of Hohnstein.

For example, the cited portions of Frost fail to disclose or suggest a distributed mobile architecture (DMA) system that includes a call detail record (CDR) generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 1. Instead, Frost discloses subscriber stations having two frequency-agile, multi-channel duplex transceivers for communicating with a central station having one duplex transceiver for each channel. *See* Frost, Abstract. Further, Frost discloses that a central station may include means for calculating metering and billing information for calls. *See* Frost, col. 34, lines 65-69. The cited portions of Frost do not disclose or suggest that a subscriber station includes a CDR generation program adapted to store a set of call detail records. Therefore, the cited portions of Hohnstein and Frost, individually or in combination, fail to disclose or suggest at least one element of claim 1, from which claim 5 depends. Hence, claim 5 is allowable, at least by virtue of its dependence from an allowable claim.

Claims 12-18 are Allowable

The Office has rejected claims 12-18, under 35 U.S.C. §103(a), as being unpatentable over Meche and Hohnstein, in view of Frost. Applicant respectfully traverses the rejections.

Claims 12-18 depend from claim 10. As noted above, the cited portions of Meche and Hohnstein fail to disclose or suggest a call detail record (CDR) generation program embedded within a computer readable storage medium, the CDR generation program adapted to store a set of call detail records, as in claim 10. The cited portions of Frost do not disclose or suggest the elements of claim 10 not disclosed or suggested by the cited portions of Meche and Hohnstein. Instead, Frost discloses subscriber stations having two frequency-agile, multi-channel duplex transceivers for communicating with a central station having one duplex transceiver for each channel. *See* Frost, Abstract. Further, Frost discloses that a central station may include means for calculating metering and billing information for calls. *See* Frost, col. 34, lines 65-69. The cited portions of Frost do not disclose or suggest that a subscriber station includes a CDR generation program adapted to store a set of call detail records. Therefore, the cited portions of Meche, Hohnstein, and Frost, individually or in combination, fail to disclose or suggest at least one element of claim 10, from which claims 12-18 depend. Hence, claims 12-18 are allowable, at least by virtue of their dependence from an allowable claim.

CONCLUSION

Applicant has pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the cited portions of the references as applied in the Office Action. Accordingly, Applicant respectfully requests reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

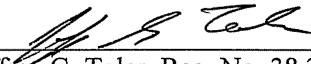
Any changes to the claims in this amendment, which have not been specifically noted to overcome a rejection based upon the cited art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

3-18-2009
Date


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Electronic Acknowledgement Receipt	
EFS ID:	4992594
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	System, method, and device for providing communications using a distributed mobile architecture
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	60533
Filer:	Jeffrey G. Toler/Genevieve Williams
Filer Authorized By:	Jeffrey G. Toler
Attorney Docket Number:	1082-0005
Receipt Date:	18-MAR-2009
Filing Date:	24-FEB-2006
Time Stamp:	17:38:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		amendmenttononfinalofficeaction.pdf	1723104 09699aecd0c5355c14944ba4e3b06e7cf83269501	yes	16

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	8
	Applicant Arguments/Remarks Made in an Amendment	9	16
Warnings:			
Information:			
Total Files Size (in bytes):		1723104	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

Notice of References Cited	Application/Control No. 11/362,395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI	
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,136,651 b2	11-2006	Kalavade, Asawaree	455/445
*	B	US-5,734,979	03-1998	Lu et al.	455/445
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

<i>Index of Claims</i> 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

✓	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	12/17/2008	06/03/2009												
	1	✓	✓												
	2	✓	✓												
	3	✓	✓												
	4	✓	✓												
	5	✓	✓												
	6	✓	✓												
	7	✓	✓												
	8	✓	✓												
	9	✓	✓												
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	18	✓	✓												
	19	✓	✓												
	20	✓	✓												
	21	✓	✓												

Search Notes 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

SEARCHED			
Class	Subclass	Date	Examiner
455	428, 445	12/17/2008	Vladimir Magloire
455	560-561	6/4/2009	VM

SEARCH NOTES		
Search Notes	Date	Examiner
Consulted with Nick Corsaro, inventor search, limited text search	12/17/2008	Vladimir Magloire
limited text search	6/4/2009	VM

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	38	((SHAOWEI) near2 (PAN)).INV.	US-PGPUB; USPAT	OR	ON	2008/10/21 15:35
S2	12	("20010036173" "20010055298" "20020058502" "20030153343" "20040018829" "6411825" "6515985" "6751207" "6760325" "6807431" "6807432" "H001918").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/10/21 16:49
S3	1	("6996086").PN.	USPAT; USOCR; EPO	OR	OFF	2008/12/08 22:55
S4	7	("6064891" "6122263" "6167271" "6167279" "6816706").PN. OR ("6996086").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 08:31
S5	1	"10849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:47
S6	0	"09849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S7	0	"9849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S8	0	"9849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S9	1	us-20020089994-\$.did.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:49
S10	1	"11362395"	US-PGPUB; USPAT	OR	ON	2008/12/12 12:40
S11	1	("6816706").PN.	USPAT; USOCR; EPO	OR	OFF	2008/12/12 15:12

S12	2872	455/ 445.ccls. 455/ 428.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:55
S13	0	S12 and (preferred adj route)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:57
S14	0	S12 and (preferred adj rout)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:57
S15	0	S12 and (preferred adj routing)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:57
S16	0	S12 and (preferred adj call)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:58
S17	10	S12 and (optimum adj path)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/12 16:59
S18	2876	455/ 445.ccls. 455/ 428.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:04
S19	0	S18 and (preferred adj path)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:04
S20	0	S18 and (preferred adj rout\$4)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:05
S21	30	S18 and (best adj rout \$4)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:05
S22	539	S18 and distribution	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:20

S23	31	S22 and voip	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:20
S24	2324	455/445.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S25	1308	S24 and (busy or alternative)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S26	320	S25 and ISDN	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S27	188	S26 and MSC	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S29	34	S27 and VOIP	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S30	0	S29 and (alternat\$3 adj (rout\$3 path))	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:54
S31	127	S24 and (alternat\$3 adj (rout\$3 path))	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:55
S32	2876	455/445.ccls. 455/428. ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03
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S34	0	S32 and (match adj prefix)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03

S35	0	S32 and (match\$3 adj prefix)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:03
S36	2	S32 and (match\$3 adj area adj code)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/17 12:04
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S38	0	S37 and (smart adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 10:49
S39	11	S37 and (intelligent adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 10:49
S40	3041	455/560-561.ccls.	US-PGPUB; USPAT	OR	ON	2009/05/23 20:23
S41	35	S40 and (integrated adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 20:23
S42	11	S40 and (intelligent adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 20:24
S43	35	S41 not S42	US-PGPUB; USPAT	OR	ON	2009/05/23 20:24
S44	1	("5734979").PN.	USPAT; USOCR; EPO	OR	OFF	2009/05/27 11:54
S45	0	"11037063"	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2009/05/27 13:00
S46	2	11/037063	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2009/05/27 13:00
S47	64	("20010036173" "20010046859" "20010055298" "20020058502" "20020015392" "20020045444" "20020169887" "20030153343" "20030063721" "20030100342" "20030198325" "20040018829" "20040014466" "20040019539"	US-PGPUB; USPAT	OR	ON	2009/05/31 19:31

		"20040156495" "20040204097" "20040253949" "20040259556" "20050176413" "20060046760" "20060203746" "20060234747" "20060234774" "20070202847" "20070232267" "20070287452" "20080039144" "20080146158" "5623495" "6411825" "6515985" "6704409" "6751207" "6760325" "6807431" "6807432" "6122499" "6141564" "6421325" "6539237" "6584098" "6611533" "6614784" "6647426" "6678155" "6694134" "6763226" "6763233" "6791988" "6795444" "6819652" "6831903" "6839356" "6859652" "6879582" "6879677" "6917813" "7120435" "7324478" "7349412" "7050414" "7072650" "7313399" "H001918").PN.				
S48	1	("7136651").PN.	USPAT; USOCR; EPO	OR	OFF	2009/06/01 09:03
S49	2302	match\$3 near prefix	US-PGPUB; USPAT	OR	ON	2009/06/01 17:04
S50	23	S49 and hlr	US-PGPUB; USPAT	OR	ON	2009/06/01 17:04

6/ 4/ 2009 8:50:31 PM

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781

60533 7590 06/08/2009
TOLER LAW GROUP
8500 BLUFFSTONE COVE
SUITE A201
AUSTIN, TX 78759

EXAMINER

MAGLOIRE, VLADIMIR

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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06/08/2009

PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	11/362,395	PAN, SHAOWEI	
	Examiner	Art Unit	
	VLADIMIR MAGLOIRE	2617	

-- 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 18 March 2009.

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

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

Disposition of Claims

4) ☒ Claim(s) 1-21 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) 1-21 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 _____ 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: _____.
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Response to Arguments

1. Examiner acknowledges receipt of amended claims and arguments filed on 3/18/2009.
2. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.
3. Examiner notes that claim 1 does not disclose where the computer readable medium is located within the distributed mobile architecture system.

Claim Rejections - 35 USC § 102

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

A person shall be entitled to a patent unless –

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

4. Claims 1-4, 6-9, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kalavade (US 7,136,651 B2).

Consider claim 1, Kalavade discloses a first distributed mobile architecture system (**see Kalavade, fig. 1 discloses a distributed mobile architecture system**), comprising: a base transceiver station (**see Kalavade, fig. 1 “BS” and “AP” discloses base station transceivers**); and a computer readable storage medium (**see Kalavade, Col 15 lines 19 to 31**), comprising: a mobile switching center (MSC) module embedded within the computer readable storage medium (**see Kalavade, fig. 6 item 610, Col 3**

lines 60 to 65, Col 4 lines 63 to 67, Col 6 lines 56 to 67, Col 7 lines 1 to 18); a base station controller (BSC) module embedded within the computer readable storage medium **(see Kalavade, Col 4 lines 63 to 67)**; a call detail record (CDR) generation program embedded within the computer readable storage medium, the CDR generation program adapted to store a set of call detail records **(see Kalavade, fig. 13 “non-real time modules”, fig. 11 “WLAN/voice charging”)**; and an authentication, authorization, and accounting (AAA) module embedded within the computer readable storage medium, the AAA module comprising a destination preference register, wherein the destination preference register includes at least one preferred call path for calls to be routed outside of a distributed mobile architecture network that is accessible to the first distributed mobile architecture system **(see Kalavade, fig. 11 “WLAN AAA Server”, Col 7 lines 10 to 18, discloses a preferred path for authorized users)**, wherein the first distributed mobile architecture system is operable to provide a communication path for use by one or more mobile handsets via the base transceiver station **(see Kalavade, Col 6 lines 4 to 16)**.

Regarding claim 19, the limitations have been analyzed in claim 1.

Consider claim 20, Kalavade discloses a system **(see Kalavade, fig. 1)**, comprising: a distributed mobile architecture network **(see Kalavade, fig. 1 discloses a distributed mobile architecture system)** including: a first distributed mobile architecture device; a second distributed mobile architecture device coupled to the first distributed mobile architecture device; a third distributed mobile architecture device coupled to the first distributed mobile architecture device and to the second distributed

mobile architecture device **(see Kalavade, fig. 1, discloses three CWG device couple to each other via the GPRS network)**; a voice over Internet protocol (VoIP) interface coupled *to one of* the first distributed mobile architecture device, the second distributed mobile architecture device, and the third distributed mobile architecture device **(see Kalavade, fig. 6 item 608)**; an integrated services digital network (ISDN) interface coupled to one of the first distributed mobile architecture device, the second distributed mobile architecture device, and the third distributed mobile architecture device **(see Kalavade, Col 3 lines 60 to 65, Col 4 lines 60 to 67)**; and a mobile switching center (MSC) interface coupled to one of the first distributed mobile architecture device, the second distributed mobile architecture device, and the third distributed mobile architecture device **(see Kalavade, fig. 6 item 610, Col 3 lines 60 to 65, Col 4 lines 63 to 67, Col 6 lines 56 to 67, Col 7 lines 1 to 18)**; wherein the first distributed mobile architecture device, the second distributed mobile architecture device, and the third distributed mobile architecture device each comprise: a base transceiver station **(see Kalavade, fig. 1 “BS” and “AP” discloses base station transceivers)**; and a computer readable storage medium, comprising: a mobile switching center (MSC) module embedded within the computer readable storage medium **(see Kalavade, Col 15 lines 19 to 31, Col 7 lines 11 to 18, fig. 5 “MSC/VLR”)**; a base station controller (BSC) module embedded within the computer readable storage medium **(see Kalavade, Col 4 lines 63 to 67)**; a call detail record (CDR) generation program embedded within the computer readable storage medium, the CDR generation program adapted to store a set of call detail records **(see Kalavade, fig. 13 “non-real time**

modules”, fig. 11 “WLAN/voice charging”); and a destination preference register embedded within the computer readable storage medium, wherein the destination preference register includes at least one preferred interface supporting calls to be placed outside the distributed mobile architecture network (see Kalavade, fig. 11 “WLAN AAA Server”, Col 7 lines 10 to 18, discloses a preferred path for authorized users, furthermore, Col 7 lines 10 to 17 and fig. 6 item 610 also discloses a destination preference register supporting calls outside the distributes mobile architecture network).

Consider claim 2, the first distributed mobile architecture system of claim 1, Kalavade discloses wherein the preferred call path includes one of a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path **(see Kalavade, fig. 18).**

Consider claim 3, the first distributed mobile architecture system of claim 1, Kalavade discloses wherein calls placed outside of the distributed mobile architecture network from the first distributed mobile architecture system are established via the preferred call path **(see Kalavade, fig. 18).**

Consider claim 4, the first distributed mobile architecture system of claim 1, Kalavade discloses wherein calls routed outside of the distributed mobile architecture network from a mobile subscriber in communication with the first distributed mobile architecture system are established via the preferred call path **(see Kalavade, fig. 18).**

Consider claim 6, the first distributed mobile architecture system of claim 1, further comprising: a home location register (HLR) module embedded within the

computer readable storage medium **(see Kalavade, fig. 5 item 500, 504)**, the HLR module including information associated with one or more mobile subscribers registered with the first distributed mobile architecture system, and wherein the HLR module provides information related to a first community location register at a second distributed mobile architecture system **(the function an HLR is to provide subscriber information throughout an associated network, therefore the HLR in Kalavade, fig. 2 contains subscriber information in each CWG).**

Consider claim 7, the first distributed mobile architecture system of claim 6, Kalavade discloses further comprising a second community location register, wherein the second community location register includes information associated with one or more mobile subscribers registered with the second distributed mobile architecture system **(see Kalavade, each CWG of fig. 1 contains a VLR module as shown fig. 6).**

Consider claim 8, the first distributed mobile architecture system of claim 7, Kalavade discloses further comprising a third community location register, wherein the third community location register includes information associated with one or more mobile subscribers registered with a third distributed mobile architecture system **(see Kalavade, each CWG of fig. 1 contains a VLR module as shown fig. 6).**

Consider claim 9, the first distributed mobile architecture system of claim 8, Kalavade discloses further comprising a visitor location register (VLR) module embedded within the computer readable storage medium, wherein the VLR module includes information associated with one or more roaming mobile subscribers that are

temporarily registered with the first distributed mobile architecture system (**see Kalavade, each CWG of fig. 1 contains a VLR module as shown fig. 6).**

Consider claim 21, the system of claim 20, Kalavade discloses wherein the preferred interface is one of the VoIP interface, the ISDN interface, and the MSC interface (**see Kalavade, fig. 17, fig. 2 items 1, 2, 3, Col 6 lines 4 to 16, Col 7 lines 11 to 17).**

Claim Rejections - 35 USC § 103

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

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

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalavade (US 7,136,651 B2) in view of Lu (US 5,734,979).

Consider claim 10, Kalavade discloses a method of communication (**see Kalavade, abstract**), comprising: receiving, at a distributed mobile architecture system, a call directed to a mobile directory number that is not available within a community location register within a computer readable storage medium of the distributed mobile architecture system (**see Kalavade, fig. 18, discloses a call made to a device outside of the wireless network to a phone in a PSTN**), the computer readable storage medium further comprising: a mobile switching center (MSC) module embedded within the computer readable storage medium (**see Kalavade, fig. 6 item 610, Col 3 lines 60 to 65, Col 4 lines 63 to 67, Col 6 lines 56 to 67, Col 7 lines 1 to 18**); a base

station controller (BSC) module embedded within the computer readable storage medium **(see Kalavade, Col 4 lines 63 to 67)**; a call detail record (CDR) generation program embedded within the computer readable storage medium, the CDR generation program adapted to store a set of call detail records **(see Kalavade, fig. 13 “non-real time modules”, fig. 11 “WLAN/voice charging”)**; and a destination preference register embedded within the computer readable storage medium **(see Kalavade, fig. 6 item 610)**, wherein the distributed mobile architecture system further comprises a base transceiver station **(see Kalavade, fig. 1 “BS” and “AP” discloses base station transceivers)**, and wherein the distributed mobile architecture system is operable to provide a communication path for use by one or more mobile handsets via the base transceiver station **(see Kalavade, fig. 18 steps 1 to 4)**;

Kalavade does not specifically disclose matching a prefix of the mobile directory number to a mobile directory number prefix within the destination preference register.

However, matching mobile prefixes was a well known technique in the art at the time of the invention, for example consider Lu, Col 3 lines 32 to 47, where Lu discloses matching a prefix of the mobile directory number to a mobile directory number prefix within the destination preference register.

Given that the inventions of Kalavade and Lu both relate to distribution of mobile phone calls in wireless networks and that the technique of matching prefixes in a register was well known, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosed technique of Lu with the invention of

Kalavade and derive at the limitation “matching a prefix of the mobile directory number to a mobile directory number prefix within the destination preference register”.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalavade (US 7,136,651 B2) in view of Frost (US 4,284,848).

Consider claim 5, Kalavade discloses the destination preference register includes a first preferred call path wherein at least some calls routed outside the distributed mobile architecture network are made via a first available preferred call path (**see Kalavade, fig. 2, fig. 7, fig. 17 steps 1 to 4**).

Frost discloses a second and third preferred call path (**see Frost, see Frost, fig. 3 and 4 dashed lines, Col 3 lines 47 to 67, discloses multiple alternative paths**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kalavade by specifying a second preferred call path, and a third preferred call path, as taught by Frost, thereby creating a more efficient system (see Frost, Col 1 lines 25 to 41).

7. Claims 12 to 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalavade (US 7,136,651 B2) in view of Lu (US 5,734,979) further in view of Frost (US 4,284,848).

Consider claim 12, the method of claim 11, the combination of Kalavade and Lu do not specifically disclose determining whether the preferred call path is available to route the call.

Frost discloses further comprising determining whether the preferred call path is available to route the call (**see Frost, Col 3 lines 60 to 67, Col 4 lines 1 to 4**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kalavade and Lu by specifying determining whether the preferred call path is available to route the call, as taught by Frost, thereby creating a more efficient system (see Frost, Col 1 lines 25 to 41).

Consider claim 13, the method of claim 12, the combination of Kalavade, Lu and Frost discloses further comprising determining a next preferred call path **(see Frost, Col 3 lines 60 to 67, Col 4 lines 1 to 4).**

Consider claim 14, the method of claim 12, the combination Kalavade, Lu and Frost discloses further comprising establishing the call via the preferred call path **(see Frost, Col 3 lines 47 to 67, Col 4 lines 1 to 4).**

Consider claim 15, the method of claim 13, the combination of Kalavade, Lu and Frost discloses further comprising establishing the call via the next preferred call path after determining that the preferred call path is not available **(see Frost, Col 3 lines 60 to 67, Col 4 lines 1 to 4).**

Regarding claim 16 the limitations have been analyzed in the claim 5.

Consider claim 17, the method of claim 16, the combination of Kalavade, Lu and Frost discloses wherein the first preferred call path is selected from the group comprising a voice over Internet protocol (VoIP) call path, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path **(see Frost, Col 21 lines 5 to 20, discloses a central switch for routing calls, see Kalavade, Col 6 lines 4 to 16).**

Consider claim 18, the method of claim 16, the combination of Kalavade, Lu and Frost discloses wherein the second preferred call path is selected from the group comprising a voice over Internet protocol (VoIP) calling output, a mobile switching center (MSC) call path, and an integrated services digital network (ISDN) call path (**see Kalavade, Col 6 lines 4 to 16**).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VLADIMIR MAGLOIRE whose telephone number is (571)270-5144. The examiner can normally be reached on Monday to Thursday, 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617

/Vladimir Magloire/
Examiner, Art Unit 2617 6/3/09



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781

60533	7590	09/01/2009
TOLER LAW GROUP		
8500 BLUFFSTONE COVE		
SUITE A201		
AUSTIN, TX 78759		

EXAMINER	
MAGLOIRE, VLADIMIR	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
09/01/2009	PAPER

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

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

Interview Summary	Application No. 11/362,395	Applicant(s) PAN, SHAOWEI	
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617	

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

(1) VLADIMIR MAGLOIRE. (3)_____.

(2) Roy Salvagio (Reg No. 59983). (4)_____.

Date of Interview: 29 August 2009.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

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

Claim(s) discussed: 1.

Identification of prior art discussed: Kalavade (US 7,136,751).

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The examiner agreed that the proposed amendments would require a new search to determine allowability.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

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. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/Vladimir Magloire/ Examiner, Art Unit 2617	/NICK CORSARO/ Supervisory Patent Examiner, Art Unit 2617
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Doc code: RCEX

PTO/SB/30EFS (07-09)

Doc description: Request for Continued Examination (RCE)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	11/362,395	Filing Date	2006-02-24	Docket Number (if applicable)	1082-0005	Art Unit	2617
First Named Inventor	Shaowei Pan			Examiner Name	MAGLOIRE, Vladimir		
This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).							
☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.							
☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____							
☐ Other _____							
☒ Enclosed							
☒ Amendment/Reply							
☐ Information Disclosure Statement (IDS)							
☐ Affidavit(s)/ Declaration(s)							
☐ Other _____							
MISCELLANEOUS							
☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)							
☐ Other _____							
FEES							
The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.							
☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No <u>502469</u>							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
☒ Patent Practitioner Signature							
☐ Applicant Signature							

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Jeffrey G. Toler/	Date (YYYY-MM-DD)	2009-09-04
Name	Jeffrey G. Toler	Registration Number	38342

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

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

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Shaowei Pan

Title: SYSTEM, METHOD, AND DEVICE FOR PROVIDING
COMMUNICATIONS USING A DISTRIBUTED MOBILE
ARCHITECTURE

App. No.: 11/362,395 Filed: February 24, 2006

Examiner: MAGLOIRE, Vladimir Group Art Unit: 2617

Customer No.: 60533 Confirmation No.: 4781

Atty. Dkt. No.: 1082-0005

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

**SUBMISSION ACCOMPANYING REQUEST FOR CONTINUED
EXAMINATION PURSUANT TO 37 CFR § 1.114**

Dear Sir:

In response to the Final Office Action mailed June 8, 2009 (the "Office Action"), please reconsider the above-identified application in light of the following amendments and remarks. Applicant is filing a Request for Continued Examination (RCE) in order to have the present response considered.

CLAIM AMENDMENTS:

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

1.-21. (Cancelled).

22. (New) A method, comprising:

receiving, at a first distributed mobile architecture (DMA) system of a DMA network, a call from a first mobile subscriber to a second mobile subscriber, wherein the DMA network includes at least the first DMA system and a second DMA system; determining whether the second mobile subscriber is located within a first wireless coverage area of the DMA network that is associated with the first DMA system based on information stored at a home location register (HLR) of the first DMA system and a visitor location register (VLR) of the first DMA system; when the second mobile subscriber is located within the first wireless coverage area, connecting the call to the second mobile subscriber via the first DMA system; when the second mobile subscriber is not located within the first wireless coverage area, determining whether the second mobile subscriber is located within a second wireless coverage area of the DMA network that is associated with the second DMA system based on information stored at a community location register (CLR) associated with the second DMA system, wherein the CLR associated with the second DMA system is stored at the first DMA system; and when the second mobile subscriber is not located within the first wireless coverage area and is not located within the second wireless coverage area, determining a preferred call path to route the call outside of the DMA network based on information stored at a destination preference register (DPR), wherein the DPR is stored at the first DMA system.

23. (New) The method of claim 22, further comprising:
routing the call outside of the DMA network via the preferred call path when the second mobile subscriber is not located within the first wireless coverage area and is not located within the second wireless coverage area.

24. (New) The method of claim 22, further comprising:
connecting the call via an Internet Protocol (IP) peer-to-peer connection between the first DMA system and the second DMA system when the second mobile subscriber is located within the second wireless coverage area.

25. (New) The method of claim 22, wherein the CLR associated with the second DMA system includes information associated with a second HLR that is stored at the second DMA system.

26. (New) The method of claim 22, wherein the preferred call path includes one of a first preferred Voice over Internet Protocol (VoIP) call path of a plurality of VoIP call paths, a first preferred mobile switching center (MSC) call path of a plurality of MSC call paths, and a first preferred Integrated Services Digital Network (ISDN) call path of a plurality of ISDN call paths.

27. (New) The method of claim 22, wherein the preferred call path is determined based on information provided by the first mobile subscriber.

28. (New) The method of claim 22, wherein the first DMA system is associated with a first preferred call path, and wherein the second DMA system is associated with a second preferred call path.

29. (New) A method, comprising:

receiving, at a first distributed mobile architecture (DMA) system of a DMA network, a call from a first mobile subscriber to a second mobile subscriber, wherein the DMA network includes at least the first DMA system, a second DMA system, and a third DMA system;

determining whether the second mobile subscriber is located within a first wireless coverage area of the DMA network that is associated with the first DMA system based on information stored at a home location register (HLR) of the first DMA system and a visitor location register (VLR) of the first DMA system;

when the second mobile subscriber is located within the first wireless coverage area, connecting the call to the second mobile subscriber via the first DMA system;

when the second mobile subscriber is not located within the first wireless coverage area, determining whether the second mobile subscriber is located within a second wireless coverage area of the DMA network that is associated with the second DMA system based on information stored at a community location register (CLR) associated with the second DMA system, wherein the CLR associated with the second DMA system is stored at the first DMA system;

when the second mobile subscriber is not located within the first wireless coverage area and is not located within the second wireless coverage area, determining whether the second mobile subscriber is located within a third wireless coverage area of the DMA network that is associated with the third DMA system based on information stored at a CLR associated with the third DMA system, wherein the CLR associated with the third DMA system is stored at the first DMA system;

and

when the second mobile subscriber is not located within any of the first wireless coverage area, the second wireless coverage area, and the third wireless coverage area, determining a preferred call path to route the call outside of the DMA network based on information stored at a destination preference register (DPR), wherein the DPR is stored at the first DMA system.

30. (New) The method of claim 29, further comprising:
routing the call outside of the DMA network via the preferred call path when the second mobile subscriber is not located within any of the first wireless coverage area, the second wireless coverage area, and the third wireless coverage area.

31. (New) The method of claim 29, further comprising:
connecting the call via an Internet Protocol (IP) peer-to-peer connection between the first DMA system and the second DMA system when the second mobile subscriber is located within the second wireless coverage area; and
connecting the call via an IP peer-to-peer connection between the first DMA system and the third DMA system when the second mobile subscriber is located within the third wireless coverage area.

32. (New) A distributed mobile architecture (DMA) system, comprising:

- a housing;
- a base transceiver station coupled to the housing, the base transceiver station operable to receive a call from a mobile subscriber;
- a computer readable storage medium within the housing, the computer readable storage medium comprising:
 - an authentication, authorization, and accounting (AAA) module embedded within the computer readable storage medium, the AAA module comprising:
 - a home location register (HLR) that stores information associated with one or more mobile subscriber devices that are registered with the DMA system;
 - a visitor location register (VLR) that stores information associated with one or more roaming mobile subscriber devices that are temporarily registered with the DMA system;
 - a community location register (CLR) that stores information associated with a second HLR of a second DMA system, wherein the second HLR stores information associated with one or more mobile subscriber devices that are registered with the second DMA system; and
 - a destination preference register (DPR) that stores one or more preferred call paths for calls to be routed outside of a DMA network that is accessible to the DMA system, wherein the DMA network includes at least the first DMA system and the second DMA system,

wherein the call is routed via a particular preferred call path of the one or more preferred call paths stored at the DPR when the AAA module determines that the call is directed to a destination device that is outside of the DMA network.

33. (New) The DMA system of claim 32, wherein the AAA module determines that the destination device is outside of the DMA network based on the information stored at the HLR, the information stored at the VLR, and the information stored at the CLR.

34. (New) The DMA system of claim 32, further comprising a mobile switching center (MSC) interface that provides communication access to a mobile telephone network.

35. (New) The DMA system of claim 32, further comprising a Voice over Internet Protocol (VoIP) interface that provides communication access to a VoIP network.

36. (New) The DMA system of claim 32, further comprising an Integrated Services Digital Network (ISDN) interface that provides communication access to an ISDN network.

37. (New) The DMA system of claim 32, wherein the particular preferred call path includes one of a Voice over Internet Protocol (VoIP) call path, a mobile switching center (MSC) call path, and an Integrated Services Digital Network (ISDN) call path.

38. (New) The DMA system of claim 37, wherein the call is directed to a mobile directory number (MDN), and wherein the particular preferred call path is determined based on an MDN prefix.

39. (New) The DMA system of claim 38, wherein the MDN prefix includes the first three digits of the MDN.

40. (New) The DMA system of claim 38, wherein a first set of MDN prefixes is associated with the VoIP call path, a second set of MDN prefixes is associated with the MSC call path, and a third set of MDN prefixes is associated with the ISDN call path.

41. (New) The DMA system of claim 32, wherein the AAA module further comprises:
a second CLR that stores information associated with a third HLR of a third DMA system
of the DMA network, wherein the third HLR stores information associated with
one or more mobile subscriber devices that are registered with the third DMA
system.

42. (New) The DMA system of claim 32, further comprising:
a mobile switching center (MSC) module embedded within the computer readable
storage medium;
a base station controller (BSC) module embedded within the computer readable storage
medium; and
a call detail record (CDR) generation program embedded within the computer readable
storage medium, the CDR generation program adapted to store a set of call detail
records.

REMARKS

Claims 22-42 are pending. Claims 1-21 have been cancelled without prejudice or disclaimer. Claims 22-42 have been added. No new matter has been added. Support for the new claims may be found in the specification, drawings, and claims as originally filed.

Applicant thanks Examiner Magloire for the interview conducted on August 28, 2009 (“the interview”). During the interview, proposed new claims were discussed and agreement was reached.

Claims 1-4, 6-9, and 19-21

The Office has rejected claims 1-4, 6-9, and 19-21, under 35 U.S.C. §102(e), as being anticipated by U.S. Patent No. 7,136,651 (“Kalavade”). Claims 1-4, 6-9, and 19-21 have been cancelled without prejudice or disclaimer, rendering the rejections moot.

Claim 10

The Office has rejected claim 10, under 35 U.S.C. §103(a), as being unpatentable over Kalavade, in view of U.S. Patent No. 5,734,979 (“Lu”). Claim 10 has been cancelled without prejudice or disclaimer, rendering the rejection moot.

Claim 5

The Office has rejected claim 5, under 35 U.S.C. §103(a), as being unpatentable over Kalavade, in view of U.S. Patent No. 4,284,848 (“Frost”). Claim 5 been cancelled without prejudice or disclaimer, rendering the rejection moot.

Claims 12-18

The Office has rejected claims 12-18, under 35 U.S.C. §103(a), as being unpatentable over Kalavade in view of Lu and further in view of Frost. Claims 12-18 have been cancelled without prejudice or disclaimer, rendering the rejections moot.

New Claims 22-42 are Allowable

Applicant thanks the Examiner for indicating in the interview that the references cited in the Office Action fail to disclose or suggest that when a mobile subscriber is not located within a

particular wireless coverage area of a distributed mobile architecture (DMA) network, determining a preferred call path to route a call outside of the DMA network based on information stored at a destination preference register (DPR). Therefore, the references cited in the Office Action do not disclose or suggest that when a second mobile subscriber is not located within a first wireless coverage area of a DMA network or a second wireless coverage area of the DMA network, determining a preferred call path to route a call outside of the DMA network based on information stored at a DPR, as in claim 22. Hence, claim 22 is allowable. Claims 23-28 are also allowable, at least by virtue of their dependence from claim 22.

Applicant thanks the Examiner for indicating in the interview that the references cited in the Office Action fail to disclose or suggest that when a mobile subscriber is not located within a particular wireless coverage area of a DMA network, determining a preferred call path to route a call outside of the DMA network based on information stored at a DPR. Therefore, the references cited in the Office Action do not disclose or suggest that when a second mobile subscriber is not located within a first wireless coverage area of a DMA network, a second wireless coverage area of the DMA network, or a third wireless coverage area of the DMA network, determining a preferred call path to route a call outside of the DMA network based on information stored at a DPR, as in claim 29. Hence, claim 29 is allowable. Claims 30 and 31 are also allowable, at least by virtue of their dependence from claim 29.

Applicant thanks the Examiner for indicating in the interview that the references cited in the Office Action fail to disclose or suggest that a call is routed via a particular preferred call path of one or more preferred call paths stored at a DPR when an authentication, authorization, and accounting (AAA) module determines that the call is directed to a destination device that is outside of a DMA network, as in claim 32. Hence, claim 32 is allowable. Claims 33-42 are also allowable, at least by virtue of their dependence from claim 32.

CONCLUSION

Applicant has pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the cited portions of the references as applied in the Office Action. Accordingly, Applicant respectfully requests reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

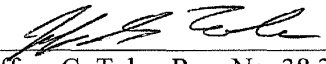
Any changes to the claims in this response, which have not been specifically noted to overcome a rejection based upon the cited art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

9-4-2009
Date


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Electronic Patent Application Fee Transmittal				
Application Number:		11362395		
Filing Date:		24-Feb-2006		
Title of Invention:		System, method, and device for providing communications using a distributed mobile architecture		
First Named Inventor/Applicant Name:		Shaowei Pan		
Filer:		Jeffrey G. Toler/Jason D. Smith		
Attorney Docket Number:		1082-0005		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	1801	1	810	810
Total in USD (\$)				810

Electronic Acknowledgement Receipt	
EFS ID:	6016896
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	System, method, and device for providing communications using a distributed mobile architecture
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	60533
Filer:	Jeffrey G. Toler/Jason D. Smith
Filer Authorized By:	Jeffrey G. Toler
Attorney Docket Number:	1082-0005
Receipt Date:	04-SEP-2009
Filing Date:	24-FEB-2006
Time Stamp:	11:47:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$810
RAM confirmation Number	7877
Deposit Account	502469
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees) Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	1082-0005_RCE_xmit.pdf	697848 48f7515817fc86a825ef21691896668bb8f7da51	no	3
Warnings:					
Information:					
2		1082-0005_RCE.pdf	192428 2b70f246f132e661da6e6ffdb7ba6ee2a6e5748f	yes	11
	Multipart Description/PDF files in .zip description				
	Document Description	Start	End		
	Amendment Submitted/Entered with Filing of CPA/RCE	1	1		
	Claims	2	8		
	Applicant Arguments/Remarks Made in an Amendment	9	11		
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	30246 df6247fa1f0f2761450ad813e99833f9e31715c2	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			920522		
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 11/362,395		Filing Date 02/24/2006		☐ To be Mailed							
APPLICATION AS FILED – PART I																
(Column 1)			(Column 2)			SMALL ENTITY ☒		OR		OTHER THAN SMALL ENTITY						
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)		RATE (\$)						
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A				N/A						
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))		N/A		N/A		N/A				N/A						
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A				N/A						
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 =		*		X \$ =				X \$ =						
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =				X \$ =						
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).														
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))																
* If the difference in column 1 is less than zero, enter "0" in column 2.																
APPLICATION AS AMENDED – PART II																
(Column 1)			(Column 2)			(Column 3)			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY			
AMENDMENT	09/04/2009		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(o))		* 10		Minus ** 20		= 0		X \$26 =		0		OR X \$ =			
	Independent (37 CFR 1.16(h))		* 2		Minus *** 3		= 0		X \$110 =		0		OR X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))															
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))															
										TOTAL ADD'L FEE		0		OR		TOTAL ADD'L FEE
(Column 1)			(Column 2)			(Column 3)			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY			
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(o))		*		Minus **		=		X \$ =				OR X \$ =			
	Independent (37 CFR 1.16(h))		*		Minus ***		=		X \$ =				OR X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))															
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))															
										TOTAL ADD'L FEE				OR		TOTAL ADD'L FEE
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.												Legal Instrument Examiner: /ANTHONY WILLIAMS/				
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".																
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".																
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.																

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

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NOTICE OF ALLOWANCE AND FEE(S) DUE

60533 7590 11/16/2009

TOLER LAW GROUP
8500 BLUFFSTONE COVE
SUITE A201
AUSTIN, TX 78759

EXAMINER

MAGLOIRE, VLADIMIR

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 11/16/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781
TITLE OF INVENTION: SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	02/16/2010

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

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

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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.

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

60533 7590 11/16/2009

TOLER LAW GROUP
8500 BLUFFSTONE COVE
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AUSTIN, TX 78759

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

Certificate of Mailing or Transmission

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781

TITLE OF INVENTION: SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	02/16/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
MAGLOIRE, VLADIMIR	2617	455-450000

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

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

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

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

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

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- ☐ 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.

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Date _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781
60533	7590	11/16/2009	EXAMINER	
TOLER LAW GROUP 8500 BLUFFSTONE COVE SUITE A201 AUSTIN, TX 78759			MAGLOIRE, VLADIMIR	
			ART UNIT	PAPER NUMBER
			2617	
DATE MAILED: 11/16/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 605 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 605 day(s).

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

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

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

Notice of Allowability	Application No.	Applicant(s)	
	11/362,395	PAN, SHAOWEI	
	Examiner	Art Unit	
	VLADIMIR MAGLOIRE	2617	

-- 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 9/4/09.

2. ☒ The allowed claim(s) is/are 22-42.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

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

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftsperson'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 _____.
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Allowance

Continued Examination Under 37 CFR 1.114

1. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 9/4/09. Since this application is eligible for continued examination under 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 9/04/09 has been entered.

Response to Arguments

2. Applicant's arguments, see pages 9 to 10, filed 9/4/09, with respect to claims 21-42 have been fully considered and are persuasive.

Allowable Subject Matter

3. Claims 21-42 are allowed (Please examiner's amendment below).

EXAMINER'S AMENDMENT

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Roy Salvagio on 11/6/09.

All claims are to remain as submitted except for claim 32, which is amended as follows:

BEGIN AMENDMENT

32. (Currently Amended) A distributed mobile architecture (DMA) system, comprising:

- a housing;

- a base transceiver station coupled to the housing, the base transceiver station operable to receive a call from a mobile subscriber;

- a computer readable storage medium within the housing, the computer readable storage medium comprising:

- an authentication, authorization, and accounting (AAA) module embedded within the computer readable storage medium, the AAA module comprising:

- a home location register (HLR) that stores information associated with one or more mobile subscriber devices that are registered with the DMA system;

- a visitor location register (VLR) that stores information associated with one or more roaming mobile subscriber devices that are temporarily registered with the DMA system;

- a community location register (CLR) that stores information associated with a second HLR of a second DMA system, wherein the second HLR stores information associated with one or more mobile subscriber devices that are registered with the second DMA system; and

- a destination preference register (DPR) that stores one or more preferred call paths for calls to be routed outside of a DMA network that is accessible to the DMA

system, wherein the DMA network includes at least the first DMA system and the second DMA system,

a call routing component embedded within the computer readable storage medium, the call routing component comprising processor executable instructions to wherein the call is routed route the call via a particular preferred call path of the one or more preferred call paths stored at the DPR when the AAA module determines that the call is directed to a destination device that is outside of the DMA network.

END AMENDMENT.

Examiner's Statement of Reason for Allowance

5. The applicant discloses receiving, at a first distributed mobile architecture (DMA) system of a DMA network, a call from a first mobile subscriber to a second mobile subscriber, wherein the DMA network includes at least the first DMA system and a second DMA system; determining whether the second mobile subscriber is located within a first wireless coverage area of the DMA network that is associated with the first DMA system based on information stored at a home location register (HLR) of the first DMA system and a visitor location register (VLR) of the first DMA system; when the second mobile subscriber is located within the first wireless coverage area, connecting the call to the second mobile subscriber via the first DMA system; when the second mobile subscriber is not located within the first wireless coverage area, determining whether the second mobile subscriber is located within a second wireless coverage area of the DMA network that is associated with the second DMA system based on information stored at a community location register (CLR) associated with the second

DMA system, wherein the CLR associated with the second DMA system is stored at the first DMA system; and when the second mobile subscriber is not located within the first wireless coverage area and is not located within the second wireless coverage area, determining a preferred call path to route the call outside of the DMA network based on information stored at a destination preference register (DPR), wherein the DPR is stored at the first DMA system.

6. The prior art, Gallant et al (US 5,590,175) discloses receiving a call made by one mobile device at one switch and routing the call to another mobile device in another switch by checking the location of the called mobile device in the originating HLR/VLR, however, Gallant fails to teach when the second mobile subscriber is not located within the first wireless coverage area, determining whether the second mobile subscriber is located within a second wireless coverage area of the DMA network that is associated with the second DMA system based on information stored at a community location register (CLR) associated with the second DMA system, wherein the CLR associated with the second DMA system is stored at the first DMA system; and when the second mobile subscriber is not located within the first wireless coverage area and is not located within the second wireless coverage area, determining a preferred call path to route the call outside of the DMA network based on information stored at a destination preference register (DPR), wherein the DPR is stored at the first DMA system.

The prior art made of record in the previous action, Kalavade (US 7,136,651 B2) discloses a subscriber gateway with VLR, AAA, HLR modules within a housing.

Kalavade fails to disclose a housing with a community location register (CLR) that stores information associated with a second HLR of a second DMA system, wherein the second HLR stores information associated with one or more mobile subscriber devices that are registered with the second DMA system; and a destination preference register (DPR) that stores one or more preferred call paths for calls to be routed outside of a DMA network that is accessible to the DMA system, wherein the DMA network includes at least the first DMA system and the second DMA system, and a call routing component embedded within the computer readable storage medium, the call routing component comprising processor executable instructions to route the call via a particular preferred call path of the one or more preferred call paths stored at the DPR when the AAA module determines that the call is directed to a destination device that is outside of the DMA network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VLADIMIR MAGLOIRE whose telephone number is (571)270-5144. The examiner can normally be reached on Monday to Thursday, 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617

/Vladimir Magloire/
Examiner, Art Unit 2617 11/7/09

Notice of References Cited	Application/Control No. 11/362,395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI	
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,590,175	12-1996	Gallant et al.	455/433
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Issue Classification 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

ORIGINAL						INTERNATIONAL CLASSIFICATION												
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED							
455			560			H	0	4	M	1 / 00 (2006.01.01)								
CROSS REFERENCE(S)																		
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																	
455	561	445																

☐ 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
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-	3	-	19	14	35										
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-	12	7	28												
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-	14	9	30												
-	15	10	31												
-	16	11	32												

/VLADIMIR MAGLOIRE/ Examiner.Art Unit 2617 (Assistant Examiner)	11/7/09 (Date)	Total Claims Allowed: 21	
/NICK CORSARO/ Supervisory Patent Examiner.Art Unit 2617 (Primary Examiner)	11/07/2009 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	38	((SHAOWEI) near2 (PAN)).INV.	US-PGPUB; USPAT	OR	ON	2008/10/21 15:35
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S4	7	("6064891" "6122263" "6167271" "6167279" "6816706").PN. OR ("6996086").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 08:31
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S7	0	"9849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S8	0	"9849002"	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:48
S9	1	us-20020089994-\$.did.	US-PGPUB; USPAT; USOCR	OR	ON	2008/12/09 09:49
S10	1	"11362395"	US-PGPUB; USPAT	OR	ON	2008/12/12 12:40
S11	1	("6816706").PN.	USPAT; USOCR; EPO	OR	OFF	2008/12/12 15:12

S12	2872	455/ 445.ccls. 455/ 428.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 12 16:55
S13	0	S12 and (preferred adj route)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 12 16:57
S14	0	S12 and (preferred adj rout)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 12 16:57
S15	0	S12 and (preferred adj routing)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 12 16:57
S16	0	S12 and (preferred adj call)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 12 16:58
S17	10	S12 and (optimum adj path)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 12 16:59
S18	2876	455/ 445.ccls. 455/ 428.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 16 13:04
S19	0	S18 and (preferred adj path)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 16 13:04
S20	0	S18 and (preferred adj rout\$4)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 16 13:05
S21	30	S18 and (best adj rout \$4)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 16 13:05
S22	539	S18 and distribution	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/ 12/ 16 13:20

S23	31	S22 and voip	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 13:20
S24	2324	455/445.ccls.	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S25	1308	S24 and (busy or alternative)	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S26	320	S25 and ISDN	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
S27	188	S26 and MSC	US-PGPUB; USPAT; USOCR; EPO	OR	ON	2008/12/16 16:51
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S38	0	S37 and (smart adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 10:49
S39	11	S37 and (intelligent adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 10:49
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S42	11	S40 and (intelligent adj base)	US-PGPUB; USPAT	OR	ON	2009/05/23 20:24
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		"20040156495" "20040204097" "20040253949" "20040259556" "20050176413" "20060046760" "20060203746" "20060234747" "20060234774" "20070202847" "20070232267" "20070287452" "20080039144" "20080146158" "5623495" "6411825" "6515985" "6704409" "6751207" "6760325" "6807431" "6807432" "6122499" "6141564" "6421325" "6539237" "6584098" "6611533" "6614784" "6647426" "6678155" "6694134" "6763226" "6763233" "6791988" "6795444" "6819652" "6831903" "6839356" "6859652" "6879582" "6879677" "6917813" "7120435" "7324478" "7349412" "7050414" "7072650" "7313399" "H001918").PN.				
S48	1	("7136651").PN.	USPAT; USOCR; EPO	OR	OFF	2009/06/01 09:03
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S50	23	S49 and hlr	US-PGPUB; USPAT	OR	ON	2009/06/01 17:04
S51	4	community adj location adj register	US-PGPUB; USPAT	OR	ON	2009/11/07 11:35

S52	12	("20020061746" "20020160772" "20030092441" "20030100302" "20040253984" "5933784" "5991639" "6160804" "6542497" "6697355" "7385947" "7406069").PN.	US-PGPUB; USPAT	OR	ON	2009/11/07 11:37
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EAST Search History (Interference)

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S54	2003	455/445.ccls. 455/428.ccls.	USPAT; UPAD	OR	ON	2009/11/07 11:31
S56	3749	S53 S54	USPAT; UPAD	OR	ON	2009/11/07 11:32
S57	2	S56 and (community adj location adj register).clm.	USPAT; UPAD	OR	ON	2009/11/07 11:33

11/7/2009 7:12:12 PM

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wsp

Search Notes 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

SEARCHED			
Class	Subclass	Date	Examiner
455	428, 445	12/17/2008	Vladimir Magloire
455	560-561	6/4/2009	VM

SEARCH NOTES		
Search Notes	Date	Examiner
Consulted with Nick Corsaro, inventor search, limited text search	12/17/2008	Vladimir Magloire
limited text search	6/4/2009	VM

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
455	560, 561, 445	11/7/2009	VM

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Index of Claims 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

✓	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	12/17/2008	06/03/2009	11/07/2009																																			
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-	3	✓	✓	-																																			
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<i>Index of Claims</i> 	Application/Control No. 11362395	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI
	Examiner VLADIMIR MAGLOIRE	Art Unit 2617

✓	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	12/17/2008	06/03/2009	11/07/2009					
16	37			=					
17	38			=					
18	39			=					
19	40			=					
20	41			=					
21	42			=					

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

60533 7590 11/16/2009

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AUSTIN, TX 78759

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.

Jason D. Smith	(Depositor's name)
	(Signature)
DEC 10, 2009	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan	1082-0005	4781

TITLE OF INVENTION: SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	02/16/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
MAGLOIRE, VLADIMIR	2617	455-450000

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 Toler Law Group

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)

Lemko Corporation

Schaumburg, Illinois

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 1

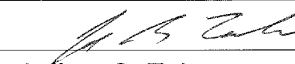
4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ 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 502469 (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 
Typed or printed name Jeffrey G. Toler

Date 12-10-2009
Registration No. 38342

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal				
Application Number:		11362395		
Filing Date:		24-Feb-2006		
Title of Invention:		SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		
First Named Inventor/Applicant Name:		Shaowei Pan		
Filer:		Jeffrey G. Toler/Jason D. Smith		
Attorney Docket Number:		1082-0005		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Printed copy of patent - no color	8001	1	3	3
Total in USD (\$)				1058

Electronic Acknowledgement Receipt	
EFS ID:	6614324
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	60533
Filer:	Jeffrey G. Toler/Jason D. Smith
Filer Authorized By:	Jeffrey G. Toler
Attorney Docket Number:	1082-0005
Receipt Date:	10-DEC-2009
Filing Date:	24-FEB-2006
Time Stamp:	17:41:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$1058
RAM confirmation Number	4182
Deposit Account	502469
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	1082-0005_IFEE_xmit.pdf	264100 bd1b3ff5d7ccd922c4d11b81059f045d106ddeab2	no	1
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	33818 9230e918aa541f40b8bf5196a38ae9d97fad321c	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			297918		

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

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

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

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

Receipt date: 10/09/2006

11362395 - GAU: 2617

OCT. 9. 2006 5:17PM TOLER SCHAFFER

NO. 176 P. 5

PTO/SB/D8A (07-05)

Approved for use through 07/31/2005. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	11/362,395
	Filing Date	February 24, 2006
	First Named Inventor	Shaowei Pan
	Art Unit	2182
Examiner Name	Unknown	
Attorney Docket Number	1082-0005	

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
/V.M./	A1	US- 6,411,825 B1	06-25-2002	Csapo, et al.	
/V.M./	B1	US- 6,807,432 B2	10-19-2004	Sayers, et al. (6,807,431)	
/V.M./	C1	US- H1, 918	11-07-2000	Hoffpauir, et al.	
	D1	US-			
	E1	US-			
	F1	US-			
	G1	US-			
	H1	US-			
	I1	US-			
	J1	US-			
	K1	US-			
	L1	US-			
	M1	US-			
	N1	US-			
	O1	US-			
	P1	US-			
	Q1	US-			
	R1	US-			
	S1	US-			

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)			
	T1				
	U1				
	V1				
	W1				
	X1				
	Y1				

Examiner Signature	/Vladimir Magloire/	Date Considered	12/17/2008
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kind Code of USPTO Patent Documents at www.uspto.gov or MPEP 801.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to the (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PAGE 5/5 * RCVD AT 10/9/2006 6:23:13 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/0 * DNIS:2738300 * CSID:5123275575 * DURATION (mm:ss):01:24

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /V.M./



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	01/26/2010	7653414	1082-0005	4781

60533 7590 01/06/2010
TOLER LAW GROUP
8500 BLUFFSTONE COVE
SUITE A201
AUSTIN, TX 78759

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 605 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):

Shaowei Pan, Kildeer, IL;

"FEE ADDRESS" INDICATION FORM

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

Fax to:
571-273-6500

- OR -

INSTRUCTIONS: The issue fee must have been paid for application(s) listed on this form. In addition, only an address represented by a Customer Number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application. **When to check the first box below:** If you have a Customer Number to represent the fee address. **When to check the second box below:** If you have no Customer Number representing the desired fee address, in which case a completed Request for Customer Number (PTO/SB/125) must be attached to this form. For more information on Customer Numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.

For the following listed application(s), please recognize as the "Fee Address" under the provisions of 37 CFR 1.363 the address associated with:

☒ Customer Number: **15346**

OR

☐ The attached Request for Customer Number (PTO/SB/125) form.

PATENT NUMBER (if known)	APPLICATION NUMBER
7,653,414	11/362,395

Completed by (check one):

☐ Applicant/Inventor


Signature

☒ Attorney or Agent of record 52,046
(Reg. No.)

Jason L. Moore
Typed or printed name

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

512-327-5515
Requester's telephone number

☐ Assignee recorded at Reel _____ Frame _____

July 26, 2012
Date

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

☒ * Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.363. 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 5 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 COMPLETE D FORMS TO THIS ADDRESS.
SEND TO: Mail Stop M Correspondence, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Electronic Acknowledgement Receipt	
EFS ID:	13351452
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	60533
Filer:	Jeffrey G. Toler/Katherine Meals
Filer Authorized By:	Jeffrey G. Toler
Attorney Docket Number:	1082-0005
Receipt Date:	26-JUL-2012
Filing Date:	24-FEB-2006
Time Stamp:	17:10:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Post Allowance Communication - Incoming	1082-0005_Fee_Address.pdf	238567	no	1
			90d8c3d65d0485fd795225b7654fdb776931e7c8		
Warnings:					
Information:					

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

SEP 17 2012

PTO/SB/123 (11-08)

Approved for use through 11/30/2011. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**CHANGE OF
CORRESPONDENCE ADDRESS
Patent**Address to:
Mail Stop Post Issue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Patent Number	7,653,414
Issue Date	01-26-2010
Application Number	11/362,395
Filing Date	02-24-2006
First Named Inventor	Shaowei Pan
Attorney Docket Number	1082-0005

Please change the Correspondence Address for the above-identified patent to:

☒ The address associated with Customer Number:

15346

OR

☐ Firm or
Individual Name

Address

City

State

ZIP

Country

Telephone

Email

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

This form will not affect any "fee address" provided for the above-identified patent. To change a "fee address" use the "Fee Address Indication Form" (PTO/SB/47).

I am the:

☐ Patentee.☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).☒ Attorney or agent of record. Registration Number 52,046

Signature

Typed or
Printed Name Jason Moore

Date

9/17/12

Telephone 512-327-5515

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

☐ Total of _____ forms are submitted.

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

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

PTO/AIA/81A (02-15)

Approved for use through 03/31/2021. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	7653414
	Issue Date	01/26/2010
	First Named Inventor	PAN, Shaowei
	Title	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
	Attorney Docket No.	

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

☐ A Power of Attorney is submitted herewith.

OR

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

171308

OR

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

Practitioner(s) Name	Registration Number

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

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

OR

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

OR

☐ Firm or

Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Applicant.

OR

☒ Patent owner.

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

DocuSigned by:

SIGNATURE of Applicant or Patent Owner

Signature

Name

Dr. Shaowei Pan

Date

April 7, 2021

Telephone

1-630-948-3023

Title and Company

Chief Technology Officer, Lemko Corporation

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

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt	
EFS ID:	42458546
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	15346
Filer:	Joseph T. Cygan
Filer Authorized By:	
Attorney Docket Number:	1082-0005
Receipt Date:	15-APR-2021
Filing Date:	24-FEB-2006
Time Stamp:	03:53:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	US7653414_11362395_373_ST ATEMENT.pdf	243876	no	3
			ee54e1a3130835a405df8a13cca5af6293e0b024		
Warnings:					

The PDF file has been signed with a digital signature and the legal effect of the document will be based on the contents of the file not the digital signature.

Information:

2	Power of Attorney	US7653414_11362395_POA.pdf	240614	no	2
			cb598f27106a1e5cdab20a365b65345d23419cce		

Warnings:

The PDF file has been signed with a digital signature and the legal effect of the document will be based on the contents of the file not the digital signature.

Information:

Total Files Size (in bytes):	484490
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)Applicant/Patent Owner: Lemko CorporationApplication No./Patent No.: 7653414Filed/Issue Date: 01/26/2010Titled: SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURELemko Corporation, a corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):1. ☒ The assignee of the entire right, title, and interest.2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 017677, Frame 0060, or for which a copy thereof is attached.B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

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

2. From: _____ To: _____

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

[Page 1 of 2]

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

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

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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

4. From: _____ To: _____

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

5. From: _____ To: _____

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

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet(s).☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

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

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

DocuSigned by:
Dr. Shaowei Pan
Signature F77975C858434BF...April 7, 2021

Date

Dr. Shaowei Pan

Printed or Typed Name

Chief Technology Office, Lemko Corporation

Title or Registration Number

Privacy Act Statement

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

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

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



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
11/362,395	02/24/2006	Shaowei Pan		137423

Acknowledgement of Change to Small Entity Status

The entity status change request below filed through Private PAIR on 04/23/2021 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

☒ Applicant asserting small entity status. See 37 CFR 1.27.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Joseph T. Cygan/
Name:	Joseph T. Cygan
Registration Number:	50937



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/362,395	02/24/2006	Shaowei Pan	

171308
Lemko Corporation c/o Cygan Law Offices, P.C.
2300 Barrington Road
Suite 400
Hoffman Estates, IL 60169

CONFIRMATION NO. 4781
POA ACCEPTANCE LETTER



OC000000125121907

Date Mailed: 04/26/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/15/2021.

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

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

/vostuart/



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/362,395	02/24/2006	Shaowei Pan	1082-0005

15346
Lemko Corporation
One Pierce Place
Suite 700
Itasca, IL 60143

CONFIRMATION NO. 4781
POWER OF ATTORNEY NOTICE



Date Mailed: 04/26/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/15/2021.

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

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

/vostuart/



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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
11/362,395	02/24/2006	Shaowei Pan		139655

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 05/24/2021 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

☒ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Joseph T. Cygan/
Name:	Joseph T. Cygan
Registration Number:	50937

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	11/362,395	Confirmation No.:	4781
Patent No:	7653414	Group Art Unit:	2617
Attorney Docket No.:	N/A	Customer No.:	171308
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		

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

CORRECTION OF ENTITY STATUS TO LARGE ENTITY

Dear Commissioner:

An Assertion of Small Entity Status filed via EFS-Web was erroneous and Lemko Corporation should be designated as a large entity for the above-identified patent.

Respectfully submitted,

Please forward all correspondence to:
Cygan Law Offices, P.C.
2300 Barrington Road, Suite 400
Hoffman Estates, IL 60169

/Joseph T. Cygan/
Joseph T. Cygan May 24, 2021
Attorney for Lemko Corporation
Registration No. 50,937
Telephone: (847) 973-5246, (ext. 100)

Electronic Acknowledgement Receipt	
EFS ID:	42807272
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	171308
Filer:	Joseph T. Cygan
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	24-MAY-2021
Filing Date:	24-FEB-2006
Time Stamp:	19:54:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notification of loss of entitlement to small entity status	US7653414_LEMKO_USA_CORRECTION_TO_LARGE_ENTITY_STATUS.pdf	21151	no	1
			37e641e5b635c3ecc922f38fb906257d99ceec71		
Warnings:					

Information:	
Total Files Size (in bytes):	21151
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

LEMKO CORPORATION
PATENT MAINTENANCE FEES DUE

PATENT NO.	APPL NO.	FEE PAID	FEE CODE	AMOUNT PAID	SURCHARGE PAID	FEE CODE	FEE	PETITION FEE	DATE PAID	LARGE ENTITY FEE	LARGE ENTITY SURCHARGE	LARGE ENTITY PETITION	TOTAL PAID	DIFFERENCE DUE
9755931	14/184120	3.5 YEAR	2551	\$1,000.00	6 month	2554	\$250.00		04/16/21	\$2,000.00	\$500.00		\$1,250.00	\$1,250.00
8706105	12/163601	7.5 YEAR	2552	\$1,880.00	No	2558			04/22/21	\$3,760.00			\$1,880.00	\$1,880.00
8676197	11/955017	7.5 YEAR	2552	\$1,880.00	No				04/22/21	\$3,760.00			\$1,880.00	\$1,880.00
7653414	11/362395	11.5 YEAR	2553	\$3,850.00	No				04/23/21	\$7,700.00			\$3,850.00	\$3,850.00
7486967	11/104925	11.5 YEAR	2553	\$3,850.00	No	2558		\$1,050.00	04/15/21	\$7,700.00		\$2,100.00	\$4,900.00	\$4,900.00
7548763	11/105173	11.5 YEAR	2553	\$3,850.00	6 month	2554	\$250.00		04/23/21	\$7,700.00	\$500.00		\$4,100.00	\$4,100.00
												TOTALS:	\$17,860.00	\$17,860.00



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan		4781

171308	7590	08/24/2021
Lemko Corporation c/o Cygan Law Offices, P.C.		
2300 Barrington Road		
Suite 400		
Hoffman Estates, IL 60169		

EXAMINER	
MAGLOIRE, VLADIMIR	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
08/24/2021	ELECTRONIC

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

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

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

docketing@cyganlawoffices.com
jcygan@cyganlawoffices.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Patent No. 7,653,414
Issue Date: January 26, 2010
Application No. 11/362,395
Filing or 371(c) Date: February 24, 2006
Attorney Docket No.

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DECISION ON PETITION

This is a Notice regarding the request for acceptance of a fee deficiency submission under 37 CFR 1.28(c) filed May 24, 2021.

The Office no longer investigates or rejects original or reissue applications under 37 CFR 1.56. 1098 Off. Gaz. Pat. Office 502 (January 3, 1989). Therefore, nothing in this Notice is intended to imply that an investigation was done.

The fee deficiency submission under 37 CFR 1.28(c) is **NOT ACCEPTED**.

Applicant should note that 37 CFR 1.28(c) states in part: If status as a small entity is established in good faith, and fees as a small entity are paid in good faith, in any application or patent, and it is later discovered that such status as a small entity was established in error, or that through error the Office was not notified of a loss of entitlement to small entity status as required by § 1.27(g)(2), the error will be excused upon compliance with the separate submission and itemization. *See* 37 CFR 1.28(c)(2)(ii).

The itemization must include the following information:

- (A) Each particular type of fee that was erroneously paid as a small entity, (e.g., basic statutory filing fee, two-month extension of time fee) along with the current fee amount for a non-small entity;

- (B) The small entity fee actually paid, and when. This will permit the Office to differentiate, for example, between two one-month extension of time fees erroneously paid as a small entity but on different dates;
- (C) The deficiency owed amount (for each fee erroneously paid); and
- (D) The total deficiency payment owed, which is the sum or total of the individual deficiency owed amounts set forth in paragraph (c)(2)(ii) of this section.

The petition filed May 24, 2021 is can not be accepted because it is not signed.

The present petition and the statement of unintentional delay is not acceptable, since the applicant has not been established. In this regard, petitioner's attention is directed to 37 CFR 1.33(b), which states:

Amendments and other papers. Amendments and other papers, except for written assertions pursuant to § 1.27(c)(2)(iii) or (c)(2)(iv), filed in the application must be signed by:

- (1) A patent practitioner of record
- (2) A patent practitioner not of record who acts in a representative capacity under the provisions of § 1.34; or
- (3) The applicant (§ 1.42). Unless otherwise specified, all papers submitted on behalf of a juristic entity must be signed by a patent practitioner.

An unsigned amendment (or other paper) or one not properly signed by a person having authority to prosecute the application is not entered. This applies, for instance, where the amendment (or other paper) appears to be signed by someone who has not been established as the applicant.

Applicant should submit the itemization within **ONE (1) MONTH** from the mail date of this Notice. This time limit is non-extendable. Failure to timely respond may result in the return of the fee deficiency paper, at the option of the Office.

Further correspondence with respect to this matter should be addressed as follows:

By mail: Mail Stop PETITION
 Commissioner for Patents
 P. O. Box 1450
 Alexandria, VA 22313-1450

By FAX: (571) 273-8300
 ATTN: Office of Petitions

By hand: U. S. Patent and Trademark Office
Customer Service Window, Mail Stop Petitions
Randolph Building
401 Dulany Street
Alexandria, VA 22314

By internet: EFS-Web¹

Telephone inquiries regarding this decision should be directed to Felicia Jenkins at (571) 272-0986.

/FELICIA ALLEN-JENKINS/
Paralegal Specialist, OPET

¹ www.uspto.gov/ebc/efs_help.html (for help using EFS-Web call the Patent Electronic Business Center at (866) 217-9197).

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	11/362,395	Confirmation No.:	4781
Patent No:	7653414	Group Art Unit:	2617
Attorney Docket No.:	N/A	Customer No.:	171308
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		

Via EFS-Web and courtesy copy fax
FAX: 1-571-273-8300
ATTN: Office of Petitions
cc: Felicia Allen-Jenkins

**RESPONSE TO DECISION ON PETITION REGARDING THE REQUEST FOR
ACCEPTANCE OF A FEE DEFICIENCY SUBMISSION UNDER 37 C.F.R. § 1.28(c)**

Dear Ms. Allen-Jenkins:

This paper is in response to the Petition Decision Notice having a notification date of August 24, 2021 and setting a 1-month deadline to respond ("Notice").

Lemko Corporation is the owner of the above-identified patent has asserted its ownership via a Statement Under 37 C.F.R. § 3.73 which has been filed via EFS-web on April 15, 2021. Lemko Corporation executed a power of attorney to their current representative and a Notice of Acceptance of Power of Attorney was issued by the Office on April 26, 2021.

The itemization as required by the Notice specific to the above-identified patent is as follows:

FEE DESCRIPTION; SMALL ENTITY	FEE CODE	AMOUNT PAID	DATE PAID
11.5 Year Maintenance Fee	2553	\$3,850.00	4/23/2021
	TOTAL:	\$3,850.00	

FEES DESCRIPTION; UNDISCOUNTED	FEE CODE	AMOUNT DUE	DEFICIENCY DUE
11.5 Year Maintenance Fee	1553	\$7,700.00	\$3,850.00
	TOTAL:	\$7,700.00	<u>\$3,850.00</u>

The original paper filed May 24, 2021 is also attached hereto for reference with proper signature.

Acceptance of the fee deficiency submission payment submitted on May 24, 2021 along with the present response to the Notice is respectfully requested having given the itemization above and proper signature below.

Respectfully submitted,

/Joseph T. Cygan/

Please forward all correspondence to:
Cygan Law Offices, P.C.
2300 Barrington Road, Suite 400
Hoffman Estates, IL 60169

Joseph T. Cygan September 16, 2021
Attorney for Lemko Corporation
Registration No. 50,937
Telephone: (847) 973-5246, (ext. 100)

LEMKO CORPORATION
PATENT MAINTENANCE FEES DUE

PATENT NO.	APPL NO.	FEE PAID	FEE CODE	AMOUNT PAID	SURCHARGE PAID	FEE CODE	FEE	PETITION FEE	DATE PAID	LARGE ENTITY FEE	LARGE ENTITY SURCHARGE	LARGE ENTITY PETITION	TOTAL PAID	DIFFERENCE DUE
9755931	14/184120	3.5 YEAR	2551	\$1,000.00	6 month	2554	\$250.00		04/16/21	\$2,000.00	\$500.00		\$1,250.00	\$1,250.00
8706105	12/163601	7.5 YEAR	2552	\$1,880.00	No	2558			04/22/21	\$3,760.00			\$1,880.00	\$1,880.00
8676197	11/955017	7.5 YEAR	2552	\$1,880.00	No				04/22/21	\$3,760.00			\$1,880.00	\$1,880.00
7653414	11/362395	11.5 YEAR	2553	\$3,850.00	No				04/23/21	\$7,700.00			\$3,850.00	\$3,850.00
7486967	11/104925	11.5 YEAR	2553	\$3,850.00	No	2558		\$1,050.00	04/15/21	\$7,700.00		\$2,100.00	\$4,900.00	\$4,900.00
7548763	11/105173	11.5 YEAR	2553	\$3,850.00	6 month	2554	\$250.00		04/23/21	\$7,700.00	\$500.00		\$4,100.00	\$4,100.00
													TOTALS:	\$17,860.00
														\$17,860.00

Respectfully submitted,

/Joseph T. Cygan/
Joseph T. Cygan September 16, 2021
Attorney for Lemko Corporation
Registration No. 50,937

Electronic Acknowledgement Receipt	
EFS ID:	43789821
Application Number:	11362395
International Application Number:	
Confirmation Number:	4781
Title of Invention:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
First Named Inventor/Applicant Name:	Shaowei Pan
Customer Number:	171308
Filer:	Joseph T. Cygan
Filer Authorized By:	
Attorney Docket Number:	
Receipt Date:	16-SEP-2021
Filing Date:	24-FEB-2006
Time Stamp:	19:56:26
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	US7653414_11362395_LEMKO_PETITION_FOR_RECONSIDERATION_16SEP2021.pdf	71747	no	3
			303f035cb22be930d4d5337f8cb66a2997c8b179		
Warnings:					

Information:	
Total Files Size (in bytes):	71747
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

SEP 16 2021

Finance

932

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	11/362,395	Confirmation No.:	4781
Patent No:	7653414	Group Art Unit:	2617
Attorney Docket No.:	N/A	Customer No.:	171308
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		

2021 SEP 21 AM 5:53

USPTO
RECEIVED
DIVISION

Via EFS-Web and courtesy copy fax
FAX: 1-571-273-8300
ATTN: Office of Petitions
cc: Felicia Allen-Jenkins

**RESPONSE TO DECISION ON PETITION REGARDING THE REQUEST FOR
ACCEPTANCE OF A FEE DEFICIENCY SUBMISSION UNDER 37 C.F.R. § 1.28(c)**

Dear Ms. Allen-Jenkins:

This paper is in response to the Petition Decision Notice having a notification date of August 24, 2021 and setting a 1-month deadline to respond ("Notice").

Lemko Corporation is the owner of the above-identified patent has asserted its ownership via a Statement Under 37 C.F.R. § 3.73 which has been filed via EFS-web on April 15, 2021. Lemko Corporation executed a power of attorney to their current representative and a Notice of Acceptance of Power of Attorney was issued by the Office on April 26, 2021.

The itemization as required by the Notice specific to the above-identified patent is as follows:

FEE DESCRIPTION;	FEE CODE	AMOUNT PAID	DATE PAID
SMALL ENTITY			
11.5 Year Maintenance Fee	2553	\$3,850.00	4/23/2021
	TOTAL:	\$3,850.00	

FEES DESCRIPTION;	FEE CODE	AMOUNT DUE	DEFICIENCY DUE
UNDISCOUNTED			
11.5 Year Maintenance Fee	1553	\$7,700.00	\$3,850.00
	TOTAL:	\$7,700.00	<u>\$3,850.00</u>

The original paper filed May 24, 2021 is also attached hereto for reference with proper signature.

Acceptance of the fee deficiency submission payment submitted on May 24, 2021 along with the present response to the Notice is respectfully requested having given the itemization above and proper signature below.

Respectfully submitted,

/Joseph T. Cygan/

Joseph T. Cygan September 16, 2021
 Attorney for Lemko Corporation
 Registration No. 50,937
 Telephone: (847) 973-5246, (ext. 100)

Please forward all correspondence to:
 Cygan Law Offices, P.C.
 2300 Barrington Road, Suite 400
 Hoffman Estates, IL 60169

**LEMKO CORPORATION
PATENT MAINTENANCE FEES DUE**

PATENT NO.	APPL NO.	FEE PAID	FEE CODE	AMOUNT PAID	SURCHARGE PAID	FEE CODE	FEE	PETITION FEE	DATE PAID	LARGE ENTITY FEE	LARGE ENTITY SURCHARGE	LARGE ENTITY PETITION	TOTAL PAID	DIFFERENCE
9755931	14/184120	3.5 YEAR	2551	\$1,000.00	6 month	2554	\$250.00		04/16/21	\$2,000.00	\$500.00		\$1,250.00	\$1,250.00
8706105	12/163601	7.5 YEAR	2552	\$1,880.00	No	2558			04/22/21	\$3,760.00			\$1,880.00	\$1,880.00
8676197	11/955017	7.5 YEAR	2552	\$1,880.00	No				04/22/21	\$3,760.00			\$1,880.00	\$1,880.00
7653414	11/362395	11.5 YEAR	2553	\$3,850.00	No				04/23/21	\$7,700.00			\$3,850.00	\$3,850.00
7486967	11/104925	11.5 YEAR	2553	\$3,850.00	No	2558		\$1,050.00	04/15/21	\$7,700.00		\$2,100.00	\$4,900.00	\$4,900.00
7548763	11/105173	11.5 YEAR	2553	\$3,850.00	6 month	2554	\$250.00		04/23/21	\$7,700.00	\$500.00		\$4,100.00	\$4,100.00
TOTALS:													\$17,860.00	\$17,860.00

Respectfully submitted,

/Joseph T. Cygan/
Joseph T. Cygan September 16, 2021
Attorney for Lemko Corporation
Registration No. 50,937

SEP 16 2021

CYGAN LAW OFFICES PC

To: USPTO Office of Petitions From: Joseph T. Cygan
Fax: 1-571-273-8300 Pages: 10 (INCLUDING THIS SHEET)
Phone: Date: September 16, 2021
Re: Lemko Corporation Correction Of Entity Status and Maintenance Fee
Deficiency Payment CC: Felicia Allen-Jenkins

☐ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

● Comments:

ATTN: OFFICE OF PETITIONS

CC: Felicia Allen-Jenkins

Dear USPTO Office of Petitions and Dear Ms. Allen-Jenkins:

Please find attached courtesy fax copies of Responses to Petition Decisions for the following patent matters for which Petition Decisions were received dated August 24, 2021:

US Patent No. 7,486,967; App. No. 11/104,925

US Patent No. 7,548,763; App. No. 11/105,173

US Patent No. 7,653,414; App. No. 11/362,395

The Responses were filed today via EFS-Web. If needed you may reach me via email at: jcygan@cyganlawoffices.com.

Respectfully Submitted,

/Joseph T. Cygan/

Joseph T. Cygan

Reg. No. 50,937

Cygan Law Offices, P.C.
2300 Barrington Road, Suite 400
Hoffman Estates, IL 60169
1-847 973-5246 T
1-847 728-8569 F



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/362,395	02/24/2006	Shaowei Pan		4781

171308	7590	10/29/2021
Lemko Corporation c/o Cygan Law Offices, P.C.		
2300 Barrington Road		
Suite 400		
Hoffman Estates, IL 60169		

EXAMINER	
MAGLOIRE, VLADIMIR	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
10/29/2021	ELECTRONIC

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

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

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

docketing@cyganlawoffices.com
jcygan@cyganlawoffices.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Patent No. 7,653,414
Issue Date: January 26, 2010
Application No. 11/362,395
Filing or 371(c) Date: February 24, 2006
Attorney Docket No.

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DECISION ON PETITION

This is a Notice regarding the request for acceptance of a fee deficiency submission under 37 CFR 1.28(c) filed September 16, 2021.

The Office no longer investigates or rejects original or reissue applications under 37 CFR 1.56. 1098 Off. Gaz. Pat. Office 502 (January 3, 1989). Therefore, nothing in this Notice is intended to imply that an investigation was done.

The fee deficiency submission under 37 CFR 1.28(c) is **ACCEPTED**. Accordingly, status as a small entity has been removed and any future fee(s) submitted must be paid at the undiscounted rate.

Inquiries related to this communication should be directed to Felicia Jenkins at (571) 272-0986.

/FELICIA ALLEN-JENKINS/
Paralegal Specialist, OPET