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UTILITY PATENT APPLICATION TRANSMITTAL

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Attorney Docket No.	1082-0003
First Inventor	Shaowei Pan
Title	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE
Express Mail Label No.	EV 507 724 563 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

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* 24]
   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* 16]
5. **Oath or Declaration** [*Total Sheets* _____]
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   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
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ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
   Name of Assignee SBC Knowledge Ventures, LP
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)
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14. ☑ **Return Receipt Postcard** (MPEP 503)
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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 1.2. 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.

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[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 prohibitive. 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 block diagram of a distributed management architecture server;

[0009] FIG. 3 is a flow chart to illustrate operating logic of a distributed management architecture server;

[0010] FIG. 4 is a flow chart to illustrate call hand-off logic of a distributed management architecture server;

[0011] FIG. 5 is a flow chart to illustrate group call logic of a distributed management architecture server;

[0012] FIG. 6 is a diagram of an exemplary communication system in which a distributed management architecture server can be incorporated;

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[0013] FIG. 7 is a diagram of a wireless local loop communication system in which a distributed management architecture server can be incorporated;

[0014] FIG. 8 is a diagram of plural wireless local loop communication systems connected to the public switched telephone network via a single back-haul connection;

[0015] FIG. 9 is a diagram of a communication system in which a distributed management architecture server can be deployed to extend an existing cellular network;

[0016] FIG. 10 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;

[0017] FIG. 11 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;

[0018] FIG. 12 is a diagram of an in-building communication system in which a distributed management architecture server can be deployed;

[0019] FIG. 13 is a diagram of a mobile in-field communication system in which multiple distributed management architecture servers can be deployed via multiple vehicles;

[0020] FIG. 14 is a diagram of a communication system in which a distributed management architecture server can utilize a satellite connection as a backhaul connection;

[0021] FIG. 15 is a diagram of a communication system in which a distributed management architecture server can receive multiple backhaul signals via multiple satellite signals; and

[0022] FIG. 16 is a diagram of a communication system in which a single distributed management architecture server can be connected to multiple base transceiver stations.

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DETAILED DESCRIPTION OF THE DRAWINGS

[0023] A method of providing telephone communication is disclosed and includes allowing a group call between four or more participants. Each participant calls from a separate telephone device that communicates with a base transceiver station that is coupled to a distributed mobile architecture server.

[0024] In a particular embodiment, the method also includes providing full duplex calling capability between all participants via one or more of the distributed mobile architecture servers. In another particular embodiment, the method includes allowing one or more participants to disconnect from the group call without effecting other participants remaining on the group call. In yet another particular embodiment, the method includes providing full duplex calling capability between the remaining participants via the one or more distributed mobile architecture server. In still another particular embodiment, the method includes allowing one or more added participants to connect to the group call. In yet still another embodiment, the method includes providing full duplex calling capability between the additional participants via the one or more distributed mobile architecture servers.

[0025] In another embodiment, a system is disclosed and includes four or more mobile communication devices and a distributed mobile architecture server. The distributed mobile architecture server includes a program to allow a group call between the four or more mobile communication devices.

[0026] In yet another embodiment, a system is disclosed and includes at least one distributed mobile architecture server and at least one rural base transceiver station coupled to the distributed mobile architecture server. A mobile switching center and base station controller is coupled to the distributed mobile architecture server and at least one urban base transceiver station is coupled to the mobile switching center and base station controller. The distributed mobile architecture server includes a program to allow a group call between four or more mobile communication devices.

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[0027] In still another embodiment, a system is disclosed ands includes at least one distributed mobile architecture server and at least one base transceiver station that is coupled to the distributed mobile architecture server. A public switched telephone network is coupled to the distributed mobile architecture server. The distributed mobile architecture server includes a program to allow a group call between four or more communication devices.

[0028] In yet still another embodiment, a system is disclosed and includes at least one portable distributed mobile architecture server that is mounted in a vehicle. At least one portable base transceiver station is coupled to the distributed mobile architecture server and is also mounted in the vehicle. The distributed mobile architecture server includes a program to allow a group call between four or more communication devices.

[0029] Referring to FIG. 1, a non-limiting exemplary embodiment of a distributive and associated 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) server 106 can be connected to each antenna 104. In one embodiment, each DMA server 106 is physically and directly connected to its respective antenna 104, e.g., by a wire or cable 108.

[0030] As illustrated in FIG. 1, each DMA server 106 is interconnected with the other DMA servers 106 via an Internet protocol network 110. As such, there exists a peer-to-peer connection 112 between each DMA server 106 in the system 100. As described in detail below, the DMA servers 106 can handle telephony traffic that is communicated at each antenna 104. For example, the DMA servers 106 can switch and route calls received via each antenna 104. Additionally, the DMA servers 106 can hand-off calls to each other as mobile communication devices move around and between the cellular coverage sites 102. The DMA servers 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

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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.

[0031] Within the distributed and associative telecommunications 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 DMA servers 106 loses powers, fails, or is otherwise inoperable, telephony traffic handled by the inoperable DMA server 106 can re-routed to one of the remaining operable DMA servers 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 DMA servers 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 server can be deployed as described below, connected to an antenna, connected to the IP network, and activated to provided cellular coverage in a new area.

[0032] FIG. 2 shows an exemplary, non-limiting embodiment of a DMA server, e.g., one of the DMA servers 106 described in conjunction with FIG. 1. The DMA server 106 is essentially a processor, or computer, having a housing and a computer readable medium 200 that is disposed therein. A power supply 202 can also be disposed within the housing of the DMA server 106 in order to provide power to the DMA server 106. The power supply 202 can be a rechargeable battery disposed within the DMA server 106 or it can be external to the DMA server 106, i.e., a standard power outlet. Moreover, a cooling system 204, e.g., a fan with a thermostat, can be within the DMA server 106 in order to keep the DMA server 106 from overheating.

[0033] As depicted in FIG. 2, the DMA server 106 can include a mobile switching center (MSC) module 206 and a base station controller (BSC) module 208 embedded within the computer readable medium 200. In an exemplary, non-limiting embodiment, the MSC module 206 can include a gatekeeper (GK) 210 that is connected to several gateways. For example, a circuit gateway (CGW) 212 can be connected to the GK 210 and can

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provide connectivity to an integrated services digital network/public switched telephone network (ISDN/PSTN) interface 214. The CGW 212 can provide a circuit switched to packet data conversion. In an exemplary, non-limiting embodiment, the PSTN portion of the ISDN/PSTN interface 214 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 214.

[0034] As further illustrated in FIG. 2, a packet data server node (PDSN) gateway 216 for CDMA, or a Gateway GPRS Support Node (GGSN) for Global System for Mobile Communication (GSM), and a Session Initiation Protocol (SIP) gateway 218 can also be connected to the GK 210. The PDSN gateway 216 and the SIP gateway 218 can provide connectivity to an Internet protocol (IP) interface 220. Further, the PDSN gateway 216 or a GGSN can establish a reverse tunnel with the PDSN or GGSN gateway 216 using generic routing encapsulation (GRE). Moreover, the PDSN gateway 216, or GGSN, can implement the Pseudo Random Function (PRF)/ Foreign Agent (FA) functionality of the DMA server 106 which supports mobile IP functions.

[0035] FIG. 2 further shows an SS7 gateway 222 that provides connectivity to an ANSI-41 and GSM Mobile Application Part (MAP) interface 224. 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 server 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.

[0036] As depicted in FIG. 2, a media gateway 226 can also be coupled to the GK 210. In an exemplary, non-limiting embodiment, the media gateway 226 can include cellular

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transcoders, one or more intranet gateways, conferencing bridges, and group calling functionality. Further, an authentication, authorization, and accounting (AAA) module 228 can be coupled to the GK 210. 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 228 can be included in the user level.

[0037] In an exemplary, non-limiting embodiment, the GK 210 can act as an AAA server and a feather server to support advanced supplementary service, short message service, etc. Moreover, the GK 210 can act as a call manager and can support ISUP and PSTN function calls. Additionally, the GK 210 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 210 can also function as a data call server.

[0038] As illustrated in FIG. 2, the BSC module 208 includes a cellular radio network controller (CRNC) 230 and a cellular selection/distribution unit (CSDU) 232 that are connected to a call protocol controller (CPC) 234. In turn, the CPC 234 can be connected to a plurality of base transceiver stations (BTSs) 236. Specifically, the DMS server 106 includes a BTS interface 238 at the CPC 234 that can be physically and directly connected to the BTSs 236. The CRNC 230 can provide cellular radio resource management and cellular call control. The CSDU 232 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 234 can convert a T1 or E1 message or ATM interface to a data packet message. In a particular embodiment, each BTS 236 supports all signals and traffic up to the front point of the CPC 234, e.g., up to the BTS interface 238. Further, in a particular embodiment, the CRNC 230, the CPC 234, the CSDU 232 and the OAMP 240 can perform one or more of the functions of legacy Base Station Controllers (BSC).

[0039] In an exemplary, non-limiting embodiment, the BTS interface 238 can be an IS-95A and IS-2000 interface over E1 or ATM, or the BTS interface 238 can be a GSM BTS interface using MAP or customized application for mobile network enhanced logic

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(CAMEL). In an illustrative embodiment, the CPC 234 can be connected to one or more BTSs 236. FIG. 2 further shows that the BSC module 208 includes an operations, administration, maintenance, and provisioning (OAMP) module 240. In an exemplary, non-limiting embodiment, the OAMP module 240 can use simple network management protocol (SNMP) for operations interfaces. Further, the OAMP module 240 can include a JAVA user interface. The OAMP module 240 can also include a software agent that is assigned to each component within the DMA server 106. The agents independently monitor their respective components. Moreover, each agent can provision its respective component.

[0040] Referring to FIG. 3, an exemplary, non-limiting embodiment of a flow chart is provided to illustrate operating logic of a DMA server 106 (FIG. 1). The operating logic commences at block 300 with a function loop wherein during operation, the succeeding steps are performed. At step 302, a call is received, e.g., at an antenna 104 (FIG. 1) in communication with a DMA server 106 (FIG. 1). Next, at decision step 304 it is determined whether the call is local, i.e., it is determined whether the call is between two mobile communication devices within the same cellular coverage site. If the call is local, the logic moves to block 306, and the call is switched at the local DMA server, i.e., the DMA server within the cellular coverage site in which the call is received. Then, at block 308, the call is connected from the first mobile communication device that initiated the call to a second mobile communication device via the local DMA server. Returning to decision step 304, if the call is not local, the logic proceeds to block 310 and the call is switched at the DMA server connected to the antenna 104 at which the call was received. Thereafter, at block 312, the call is connected from the first mobile communication device that initiated the call to a second mobile communication device via a peer-to-peer connection between a first DMA server and a second DMA server.

[0041] After the call is connected, either at block 308 or block 312, the logic continues to block 314 where the call is monitored. For example, the location of the first mobile communication device that initiated the call can be monitored, the location of the second mobile communication device that received the call can be monitored, the DMA server that is handling the call can be monitored, other DMA servers through which the call is

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connected can be monitored, and the connections (such as the peer-to-peer IP network connection) through which the call is transmitted can be monitored. Proceeding to decision step 316, it is determined if the first mobile communication device or the second mobile communication device involved in the call is roaming, i.e., moving between cellular coverage sites provided by individual antennas. If so, the logic moves to block 318 where the call at the roaming mobile communication device is automatically handed off to a new DMA server and associated antenna at a new cellular coverage site. If none of the mobile communication devices involved in the call is roaming, the logic moves to decision step 320.

[0042] At decision step 320, it is determined whether any DMA server has failed. If so, the call is re-routed around the failed DMA server by establishing one or more different peer-to-peer connections between one or more different DMA servers that are still operable. Thereafter, the logic moves to decision step 324. Decision step 324 can also be reached if it is determined that no DMA servers have failed at decision step 320. At decision step 324, it is determined whether the call has ended. If not, the logic moves to block 326 and the connection or connections through which the call has been established are maintained. Otherwise, if the call has ended, the logic moves to block 328 and the peer-to-peer connection, or connections, through which the call was established are terminated, and the logic ends, at state 330.

[0043] FIG. 4 depicts a flow chart to illustrate call hand-off logic that can be performed by a DMA server 106 (FIG. 1) in order to hand off calls, or user service connections, between a first BTS and a second BTS as a mobile communication device moves between cellular coverage zones. The logic commences at block 400 with a loop wherein when a mobile communication device is activated, the following steps are performed. At block 402, the location of a mobile communication device is monitored at a local DMA server. Continuing to decision step 404, it is determined if the mobile communication device is about to move from a first cellular coverage site provided by a first BTS to a second cellular coverage site provided by a second BTS. If not, the logic moves to decision step 406 where it is determined whether the call has terminated. If the call

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terminates, the logic ends at state 408. On the other hand, if the call does not terminate, the logic returns to block 402 and continues as described above.

[0044] Returning to decision step 404, if the user is about to move from a first cellular coverage site provided by a first BTS to a second cellular coverage site by a second BTS, the logic proceeds to decision step 410. At decision step 410, it is determined whether the second BTS is connected locally, i.e., to the same DMS server as the first BTS. If so, the logic moves to block 412 and the DMA server hands off the call, e.g., as a soft hand off, or the user service connection, from a first BTS connected to the DMS server to a second BTS connected to the same DMS server. Conversely, if the second BTS is not local, the logic continues to block 414 where the DMS server hands off the call from a first BTS connected to the DMS server to a second BTS connected to a second DMS server. From block 412 or block 414, the logic proceeds to decision step 406 and continues as described above.

[0045] FIG. 5 portrays an exemplary, non-limiting embodiment of a method to illustrate group call logic that can be executed at a DMA 106 (FIG. 1) to provide a group call between several mobile communication devices and PSTN/ISDN users. At block 500, a loop is entered wherein during operation, the following steps are performed. At decision step 502, it is determined whether greater than three (3) callers are participating in a telephone call handled via one or more DMA servers 106 (FIG. 1). If not, the logic continues to block 504 and normal calling, e.g., two-way calling, three-party conference calling, etc., is allowed. The logic then ends at state 506.

[0046] At decision step 502, if greater than three (3) callers are participating in a telephone call that is handled via one or more DMA servers 106 (FIG. 1), the logic moves to block 508 and group calling is allowed between all participants with full duplex capability. Next, at decision step 510, it is determined whether one or more participants have disconnected. If so, at decision block 512, the disconnected participant or participants are dropped from the group call. At block 514, full duplex calling is maintained between the remaining group call participants. Returning to decision step 510, if no participants have disconnected, the logic proceeds to decision step 516 where it

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is determined whether a new participant has connected to the group call. Decision step 516 is also reached from block 514, above.

[0047] At decision step 516, if a new participant enters the group call, the new participant is allowed to connect to the group call and may communicate with any one or more of the other participants with full duplex capability. The logic then moves to decision step 520. Decision step 520 is also reached from decision step 516 if no new participants have entered the group call. At decision step 520, it is determined whether all participants have disconnected from the group call. If not, the logic returns to block 508 and continues as described above. On the other hand, if all participants have disconnected from the group call, the logic moves to block 522 where the group call is terminated and then ends at state 506.

[0048] In a particular embodiment, a user can select a group of devices that can be dynamically called in order establish a group call. For example, a user can select a group of devices from a list of devices and press a single button in order to call all of the selected devices and establish a group call with full duplex capabilities between all of the selected devices. Alternatively, the user can select all of the devices on a list of devices and dynamically call all of the selected devices and establish a group with full duplex capabilities between all of the selected devices.

[0049] Referring now to FIG. 6, an exemplary, non-limiting embodiment of a telecommunications system is shown and is generally designated 600. As shown, the system includes one or more DMA servers 602 that are connected to a wireless carrier's central MSC 604. The DMA server(s) 602 can be connected to the MSC 604 via an E1 CCS (G.703, G732) connection, or any other applicable connection. The MSC 604, in turn, is connected to a code division multiple access (CDMA) network 606. FIG. 6 further shows that the DMA server(s) 602 can be connected to a switching transfer point (STP) 608 of a stand-alone carrier. As shown, the DMA server 602 can be connected to the STP 608 via an IS-41 + IS-880 (DS0) connection, or an ISUP ITU N7 connection.

[0050] As further depicted in FIG. 6, the STP 608 can be connected to a short messaging service (SMS) server 610 in order to provide text-messaging capabilities for the mobile

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communication devices using the system 600 shown in FIG. 6. Additionally, the STP 608 can be connected to a home location register (HLR) 612, a pre-paid wireless server 614 and an international roaming network 616 in order to provide pre-paid services and roaming between multiple countries. FIG. 6 shows that the DMA server(s) 602 can be connected to the PTSN 618 via an E1 CCS (G.703, G732) connection, or any other appropriate connection.

[0051] Referring to FIG. 7, a wireless local loop (WLL) system is portrayed and is generally designated 700. As illustrated in FIG. 7, the system 700 includes a DMA server 702 that is connected to a BTS 704. The BTS 704, in turn, is connected to an antenna 706. The antenna 706 provides cellular coverage for one or more subscribers 708 within transmission distance of the antenna 706. FIG. 7 indicates that the system 700 can further include a data network connection 710 from the DMA server 702. The data network connection 710 can connect the DMA server 702 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 710 can be an IEEE 802.11 connection between the DMA server 702 depicted in FIG. 7 and other DMA servers not shown. The DMA server 702 can beneficially utilize existing infrastructure used for cellular and SMS data services.

[0052] FIG. 8 shows a multi-WLL system, generally designated 800. As shown, the system 800 includes a plurality of WLLs 802. Each WLL 802 can include a DMA server 804 and an antenna 806 connected thereto to provide a cellular coverage site around the antenna 806. As illustrated in FIG. 8, the WLLs 802 can be interconnected via a wireless local area network (WLAN), or a wide area network, such as a microwave connection. Moreover, a DMA server 804 within one of the WLLs 802 can provide a back-haul connection 808 to the PSTN 810. This type of deployment scenario can greatly reduce the costs associated with a wireless system. Since the DMA servers 804 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 DMA servers 804 can enable roaming between the WLLs 802 and can further provide roaming to an external wireless or other network.

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[0053] Referring to FIG. 9, a telecommunications system is depicted and is designated 900. As illustrated in FIG. 9, the system 900 includes a DMA server 902 that can be connected to a plurality of BTSs 904. Each BTS 904 can provide cellular coverage for one or more mobile communication devices 906, e.g., one or more mobile handsets configured to communicate via the DMA server 902. FIG. 9 further shows that the DMA server 902 can be connected to an MSC 908, such as an MSC of an existing cellular system. The DMA server 902 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 server 902 can extend an existing cellular network when connected to an existing cellular system MSC 908.

[0054] FIG. 10 shows an additional telecommunications system, generally designated 1000. As shown, the system 1000 includes a city area coverage site 1002 and an urban fringe/nearby village coverage site 1004. In an exemplary, non-limiting embodiment, the city area coverage site 1002 includes a first MSC/BSC center 1006 connected to a second MSC/BSC center 1008. Also, a first representative BTS 1010 and a second representative BTS 1012 are connected to the first MSC/BSC center 1006. The particular deployment of equipment is configured to provide adequate cellular coverage for mobile communication devices within the city area coverage site 1002.

[0055] As illustrated in FIG. 10, the urban fringe/nearby village coverage site 1004 includes a DMA server 1014 having a plurality of BTSs 1016 connected thereto. The DMA server 1014 can provide hand-off of calls between the BTSs 1016 and can switch calls made between the BTSs 1016 locally. However, the DMA server 1014 within the urban fringe/nearby village coverage site 1004 can also connect telephony traffic to the first MSC/BSC center 1006 within the city area coverage site 1002 via a data network connection 1018. 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 server 1014 in a location such as that described above, i.e., in urban fringe or in a nearby village, and the connection of the DMA server 1014 to an MSC/BSC center 1006 in a city area, can provide service to potential wireless customers that typically would not receive cellular

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coverage from the city area cellular coverage site 1002. Thus, new subscribers receive access to wireless communication service and can further communicate with wireless customers within the city area cellular coverage site 1002.

[0056] Referring now to FIG. 11, another telecommunications system is depicted and is designated 1100. As illustrated in FIG. 11, the system 1100 includes a DMA server 1102 that can be connected to a plurality of BTSs 1104. Each BTS 1104 can provide cellular coverage for one or more mobile communication devices 1106. FIG. 11 further shows that the DMA server 1102 can include a data network connection 1108 that provides a back-haul connection to the PSTN 1110. 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 1100 depicted in FIG. 11 can be deployed using CDMA IS-95, CDMA 1X, GSM/GPRS, W-CDMA, or other industry standard technologies.

[0057] Using a single back-haul connection greatly minimizes costs associated with the wireless communication network. Further, the system 1100 shown in FIG. 11 can be deployed relatively rapidly and can be maintained remotely. Additionally, with the inclusion of the OAMP module 240 (FIG. 2) and the AAA module 228 (FIG. 2), subscriber accounts can be managed locally and billing can be performed locally, i.e., within the DMA server 1102. Moreover, as the number of subscribers increase, the size of the system can be increased modularly, e.g., by adding DMA servers, corresponding BTSs, and the appropriate connections.

[0058] FIG. 12 illustrates an in-building telecommunications network that is generally designated 1200. FIG. 12 depicts a structure 1202, e.g., an office building, a commercial building, a house, etc. An enterprise local area network (LAN) 1204 is installed within the building 1202. A micro-BTS 1206 is connected to the enterprise LAN 1204. Moreover, a voice mail server 1208 and plural enterprise services servers 1210 are connected to the enterprise LAN 1204. In an exemplary, non-limiting embodiment, the enterprise services servers 1210 can include a dynamic host configuration protocol (DHCP) server, a radius server, a domain name server (DNS), etc. As depicted in FIG.

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12, a plurality of phones 1212, e.g., IP desk phones, can be connected to the enterprise LAN 1204.

[0059] FIG. 12 further indicates that an office DMA server 1214 can be connected to the enterprise LAN 1204. The office DMA server 1214 can also be connected to the PSTN 1216, which, in turn, can be connected to a cellular voice and data network 1218. The enterprise LAN 1204 can also be connected to the cellular voice and data network 1218 via an Internet protocol (IP) network 1220. A signaling system seven (SS7) network 1222 can be connected to the cellular voice and data network 1218 and the IP network 1220. FIG. 12 also depicts an SS7 gateway 1224 between the SS7 network 1222 and the IP network 1220 and a firewall 1226 between the enterprise LAN 1204 and the IP network 1220. FIG. 12 shows a wireless communication device 1228 in communication with the cellular voice and data network 1218 and the micro-BTS 1206.

[0060] Referring to FIG. 13, a mobile in-field telecommunications system is depicted and is generally designated 1300. As depicted, the system 1300 includes a plurality of mobile cellular coverage sites 1302. Each mobile cellular coverage site 1302 includes a vehicle 1304 in which a field DMA server 1306 is disposed. Moreover, a BTS 1308 is disposed within each vehicle 1304 and is in direct physical connection with the field DMA server 1306, e.g., by a wire or cable connected there between. The field DMA server 1306 and the BTS 1308 can be removably installed within the vehicle 1304 or permanently affixed therein. FIG. 13 further indicates that each BTS 1308 can include an antenna 1310 that is designed to communicate with mobile communication devices. Also, each field DMA server 1306 includes an antenna 1312. In an exemplary, non-limiting embodiment, the field DMA servers 1306 can communicate wirelessly with each other via the antennae 1312, e.g., via 802.11a, 802.11b, microwaves, or other wireless link.

[0061] The mobile cellular coverage sites 1302 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 1300 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 1314.

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[0062] Referring to FIG. 14, still another telecommunications system is illustrated and is generally designated 1400. As depicted in FIG. 14, the system 1400 includes a DMA server 1402 that is connected to a BTS 1404. The BTS 1404, in turn, is connected to an antenna 1406. FIG. 14 further illustrates that a first satellite transceiver 1408 is also connected to the DMA server 1402. The first satellite transceiver 1408 communicates with a second satellite transceiver 1410 via a satellite 1412. Additionally, the second satellite transceiver 1410 includes a data network connection 1414, e.g., a T1 connection, or an E1 connection. The satellite transceivers 1408, 1410 and the satellite 1412 can provide a backhaul connection for the DMA server 1402. Or, the satellite transceivers 1408, 1410 and the satellite 1412 can connect the DMA server 1402 to an additional DMA server (not shown).

[0063] FIG. 15 shows yet another telecommunications system that is generally designated 1500. As illustrated in FIG. 15, the system includes a DMA 1502 that is connected to a first satellite transceiver 1504. Moreover, the DMA 1502 includes a primary network connection 1506, e.g., a T1 connection, or an E1 connection, and a secondary network connection 1508, e.g., an IP connection. FIG. 15 shows that the first satellite transceiver 1504 communicates with a second satellite transceiver 1510 and a third satellite transceiver 1512 via a satellite 1514. Each of the second and third satellite transceivers 1510, 1512 is connected to an interworking unit (IWU) 1516 via a data network connection 1518, e.g., an IP connection. Each IWU 1516 is connected to a BTS 1520, which in turn, is connected to an antenna 1522. The satellite transceivers 1504, 1510, 1512 provide an IP network extension for the DMA server 1502. Moreover, in the deployment illustrated in FIG. 15, the DMA server 1502 can act as a centralized micro-switch for handling calls received at the antennas 1522 and transmitted via the second and third satellite transceivers 1510, 1512.

[0064] Referring to FIG. 16, another telecommunications system is depicted and is designated 1600. As shown, the system 1600 includes a DMA server 1602 having a primary network connection 1604. Moreover, the DMA server 1602 can be connected to a plurality of IWUs 1606. In an exemplary, non-limiting embodiment, the DMA server 1602 can be connected to each IWU 1606 via a secondary network connection 1608, such

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as a category five (Cat 5) cable connection, a microwave connection, or a WLAN connection. Further, each IWU 1606 is connected to a BTS 1610 and each BTS 1610, in turn, is connected to an antenna 1612. Each BTS 1610 can be a 3-sector BTS. In the deployment depicted in FIG. 16, the DMA server 1602 can act as a centralized micro-switch that can be used to handle telephony traffic received at the antennae 1612.

[0065] With the configuration of structure described above, the present disclosure provides a flexible telecommunications device, i.e., the DMA server 106 (FIG. 1), that is distributive and associative, i.e., it can operate stand-alone or seamlessly within an existing cellular or other network. Moreover, the DMA server 106 can be integrated with virtually any third party base station. The DMA server 106 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 server 106 can provide integrated prepaid billing, OAMP, network management, and AAA functionality. The DMA server 106 can include a Java based user interface and feature configuration system. Also, the DMA server 106 can provide real time call metering, call detail record (CDR) generation, and real time call provisioning. The DMA server 106 may be implemented in a relatively small footprint and has a relatively low power requirement. Further, the DMA server 106 may be implemented using inexpensive and widely available computer equipment.

[0066] With one or more of the deployment configurations described above, the present system provides mobile to landline calls from mobile handsets within a DMA server 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 server 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.

[0067] 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.

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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.

[0068] Further, one or more of the illustrated systems can provide IP transport between distributed elements, e.g., DMA servers 106 (FIG. 1). Packet back-haul from BTS to Radio Access Network (RAN) can be provided. Further, the control logic within the DMA servers 106 (FIG. 1) 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 server 106 (FIG. 1) can be linked to a previously deployed DMA server 106 (FIG. 1) in order to broaden, or otherwise extend, cellular coverage. Further, distributed systems can be de-centralized to avoid single points of failure.

[0069] 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 server 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.

[0070] 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.

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WHAT IS CLAIMED IS:

1. A method of providing telephone communication, comprising allowing a group call between four or more participants, each participant calling from a separate telephone device communicating with a base transceiver station that is coupled to a distributed mobile architecture server.

2. The method of claim 1, further comprising providing full duplex calling capability between all participants via one or more of the distributed mobile architecture servers.

3. The method of claim 2, further comprising allowing one or more participants to disconnect from the group call without effecting other participants remaining on the group call.

4. The method of claim 3, further comprising providing full duplex calling capability between the remaining participants via the one or more distributed mobile architecture server.

5. The method of claim 4, further comprising allowing one or more added participants to connect to the group call.

6. The method of claim 5, further comprising providing full duplex calling capability between the additional participants via the one or more distributed mobile architecture servers.

7. A system, comprising:

four or more mobile communication devices; and

a distributed mobile architecture server, the distributed mobile architecture server comprising a program to allow a group call between the four or more mobile communication devices.

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8. The system of claim 8, wherein the program further comprises an instruction to provide full duplex calling capability between all of the mobile communication devices.

9. The system of claim 8, wherein the program further comprises an instruction to allow one or more of the mobile communication devices to disconnect from the group call without effecting other participants remaining on the group call.

10. The system of claim 9, wherein the program further comprises an instruction for allowing one or more additional telephones to connect to the group call.

11. A system, comprising:

at least one distributed mobile architecture server;

at least one rural base transceiver station coupled to the distributed mobile architecture server;

a mobile switching center and base station controller coupled to the distributed mobile architecture server;

at least one urban base transceiver station coupled to the mobile switching center and base station controller; and

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices.

12. The system of claim 11, wherein the four or more mobile communication devices are in communication with the distributed mobile architecture server via the at least one rural base transceiver station.

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13. The system of claim 11, wherein at least one of the four or more mobile communication devices is in communication with the distributed mobile architecture server via the at least one urban base transceiver station and the mobile switching center/base station controller.

14. The system of claim 11, wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via an E1 connection.

15. The system of claim 11, wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via a T1 connection.

16. The system of claim 11, wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via a wireless connection.

17. The system of claim 16, wherein the wireless connection is a microwave connection.

18. A system, comprising:

at least one distributed mobile architecture server;

at least one base transceiver station coupled to the distributed mobile architecture server;

a public switched telephone network coupled to the distributed mobile architecture server; and

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

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19. The system of claim 18, wherein the four or more communication devices are mobile communication devices that are in communication with the distributed mobile architecture server via the at least one base transceiver station.

20. The system of claim 18, wherein at least one of the four or more communication devices is in communication with the distributed mobile architecture server via the public switched telephone network.

21. The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via an E1 connection.

22. The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via a T1 connection.

23. A system, comprising:

at least one portable distributed mobile architecture server mounted in a vehicle;

at least one portable base transceiver station coupled to the distributed mobile architecture server and mounted in the vehicle;

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

24. The system of claim 23, wherein the four or more communication devices communicate via the portable base station transceiver and the distributed mobile architecture server.

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ABSTRACT OF THE DISCLOSURE

[0071] A method of providing telephone communication is disclosed and includes allowing a group call between four or more participants. Each participant calls from a separate telephone device that communicates with a base transceiver station that is coupled to a distributed mobile architecture server. The method also includes providing full duplex calling capability between all participants via one or more of the distributed mobile architecture servers. One or more participants can disconnect from the group call without effecting other participants remaining on the group call. Further, one or more added participants can connect to the group call.

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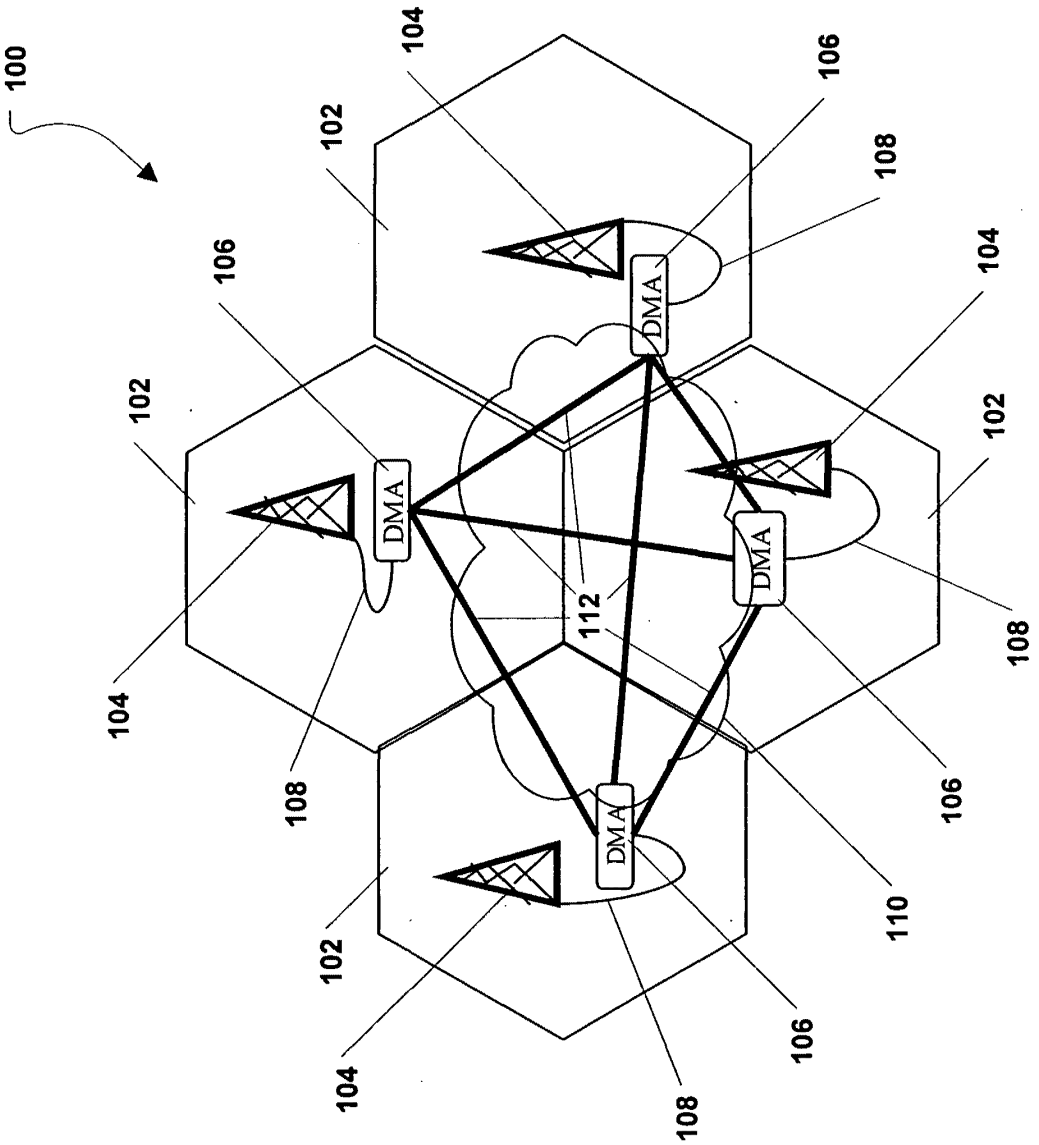


FIG. 1

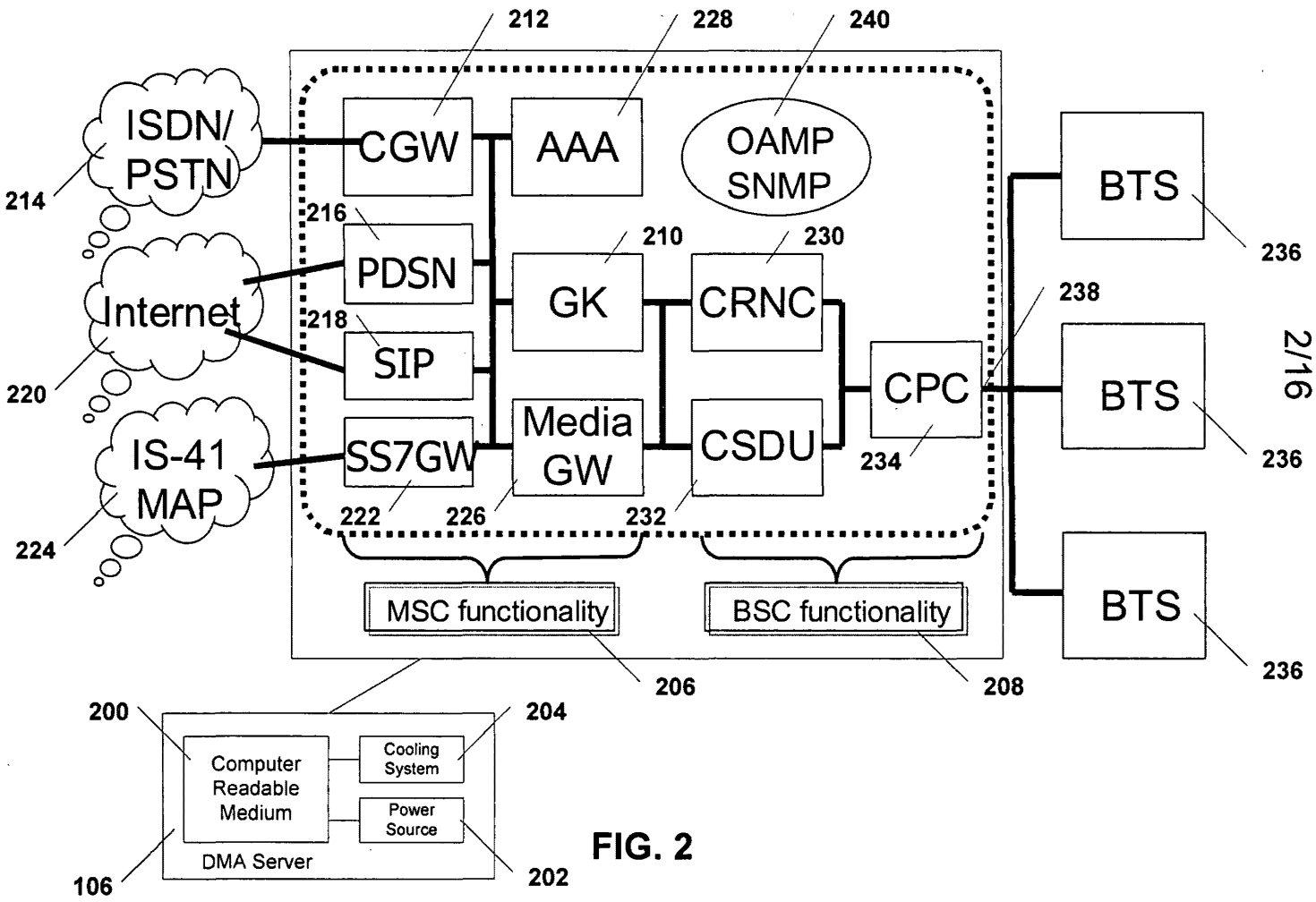


FIG. 2

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

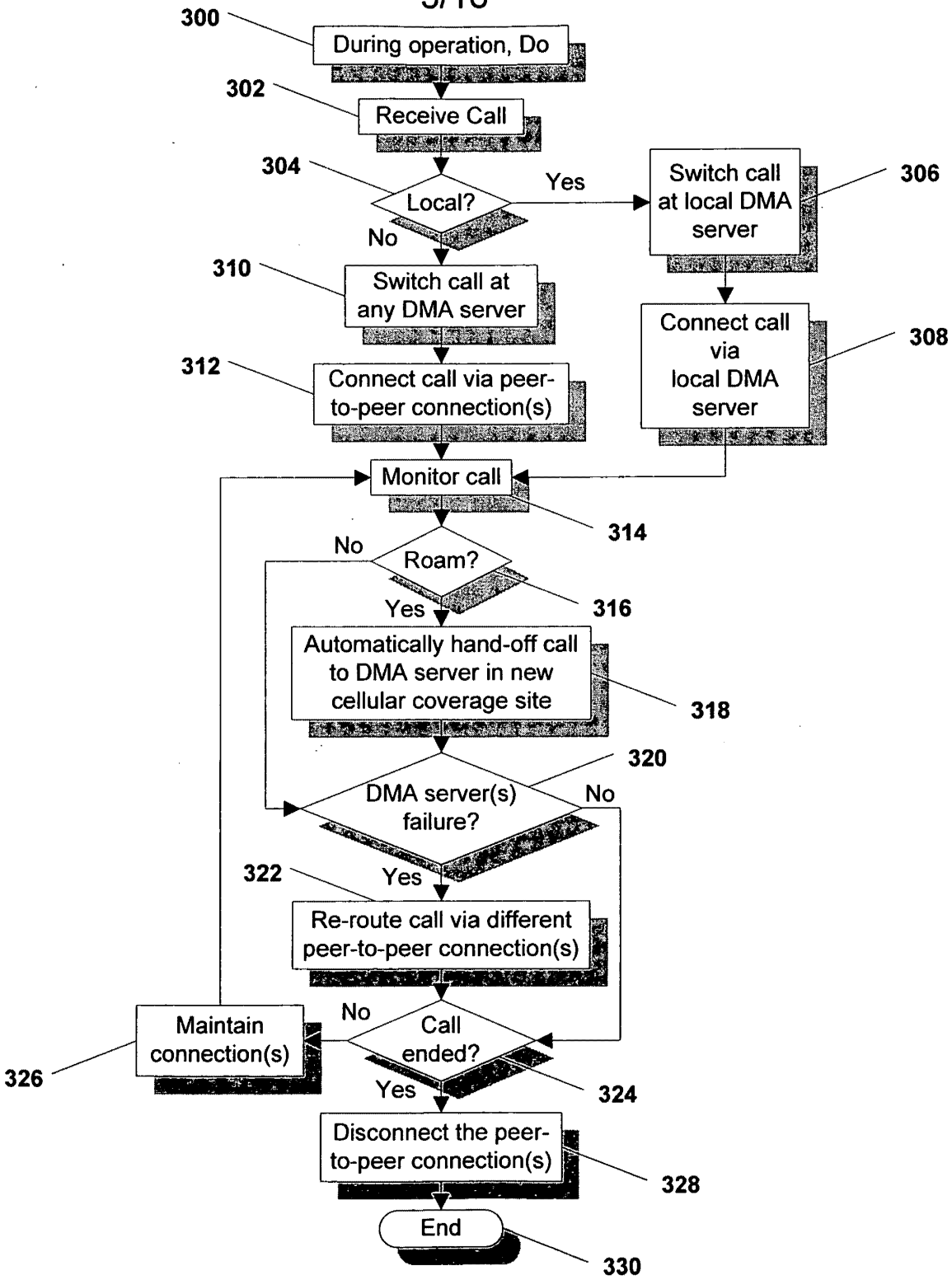

300
During operation, Do
302
Receive Call
304
Local?
Yes
No
306
Switch call at local DMA server
310
Switch call at any DMA server
308
Connect call via local DMA server
312
Connect call via peer-to-peer connection(s)
Monitor call
314
No
Roam?
316
Yes
Automatically hand-off call to DMA server in new cellular coverage site
318
320
DMA server(s) failure?
No
322
Yes
Re-route call via different peer-to-peer connection(s)
No
Call ended?
Maintain connection(s)
326
Yes
324
Disconnect the peer-to-peer connection(s)
328
End
330

FIG. 3

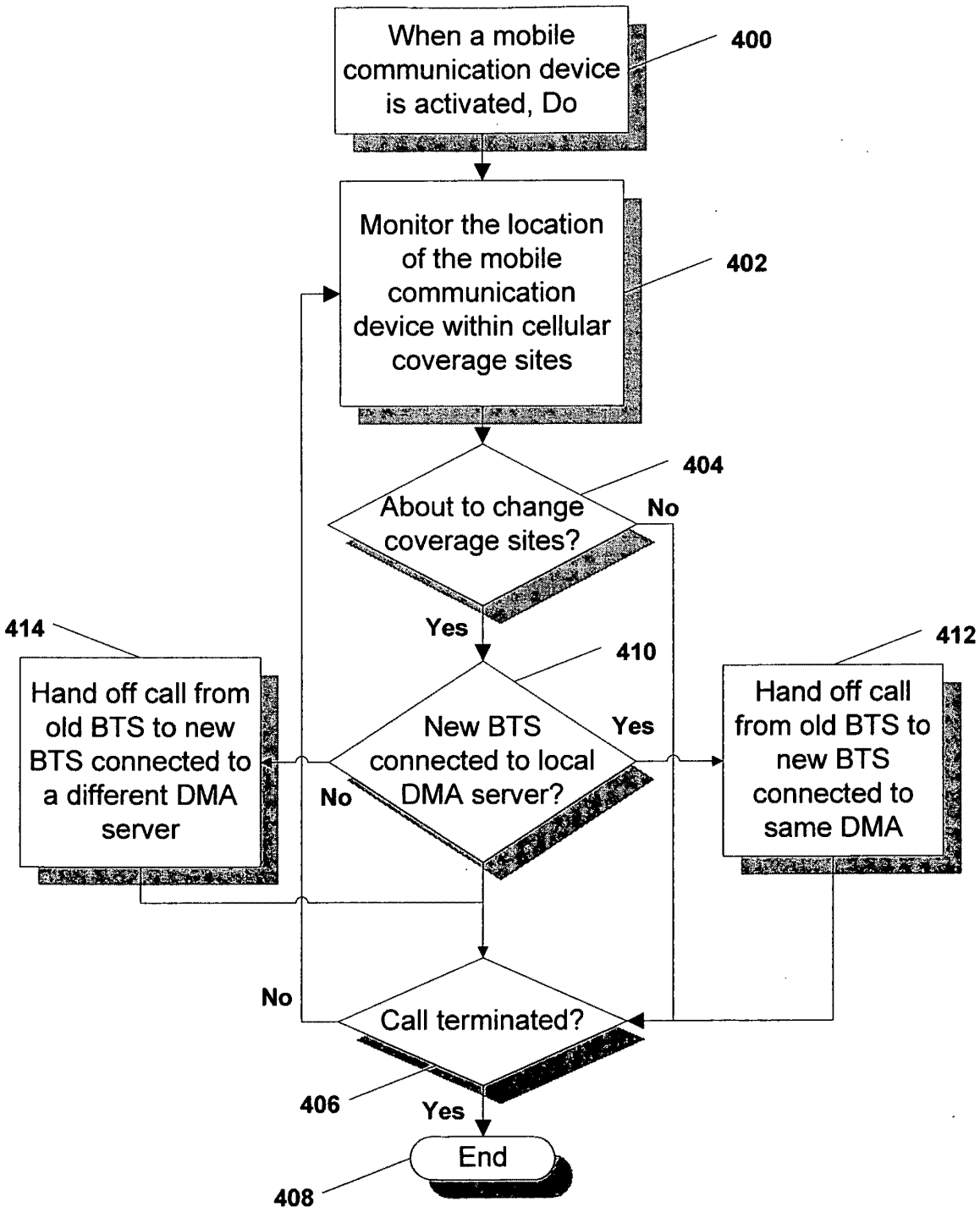

When a mobile communication device is activated, Do
400
Monitor the location of the mobile communication device within cellular coverage sites
402
About to change coverage sites?
404
No
Yes
414
Hand off call from old BTS to new BTS connected to a different DMA server
410
New BTS connected to local DMA server?
Yes
No
412
Hand off call from old BTS to new BTS connected to same DMA
No
Call terminated?
406
Yes
End
408

FIG. 4

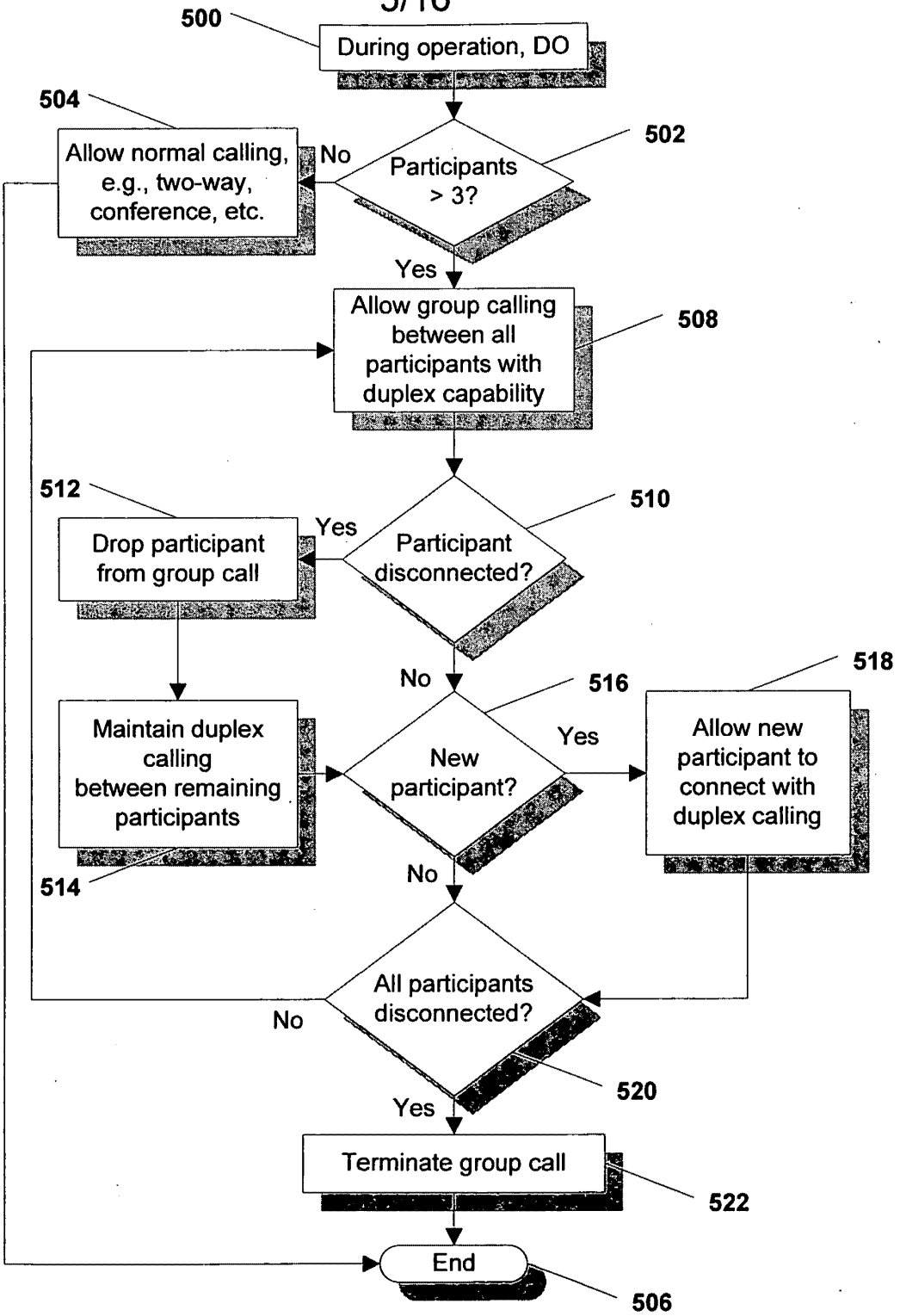

500
During operation, DO
504
Allow normal calling, e.g., two-way, conference, etc.
No
Participants > 3?
502
Yes
Allow group calling between all participants with duplex capability
508
512
Drop participant from group call
Yes
Participant disconnected?
510
No
516
Maintain duplex calling between remaining participants
New participant?
Yes
518
Allow new participant to connect with duplex calling
514
No
All participants disconnected?
No
520
Yes
Terminate group call
522
End
506

FIG. 5

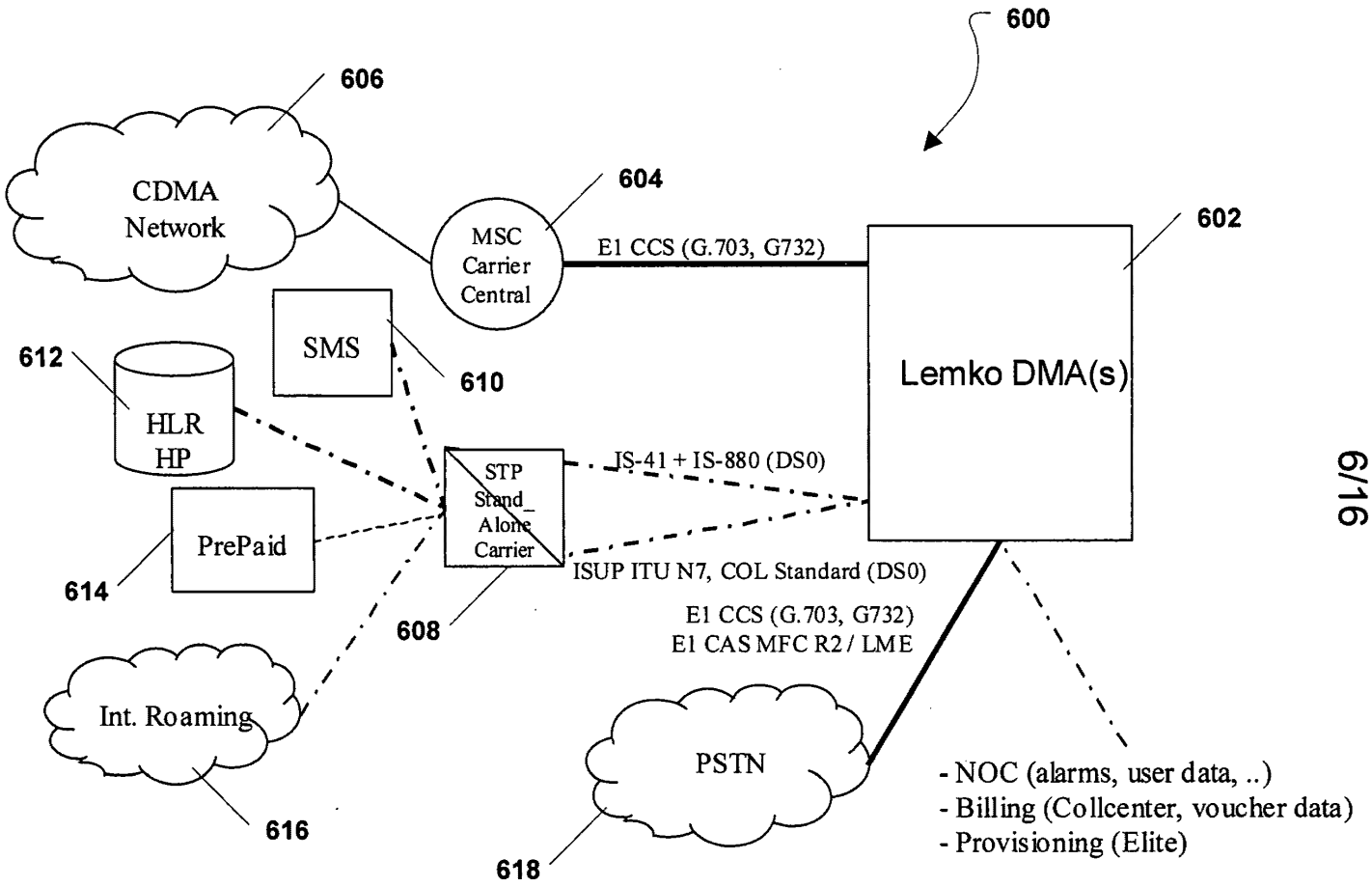


FIG. 6

6/16

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

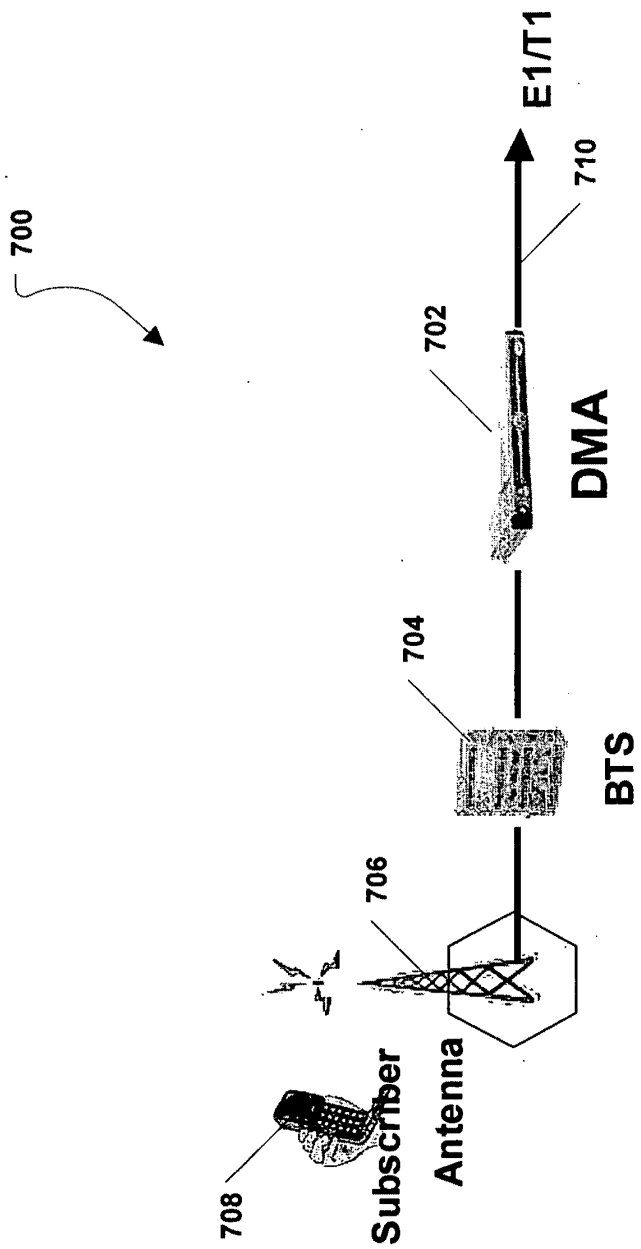


FIG. 7

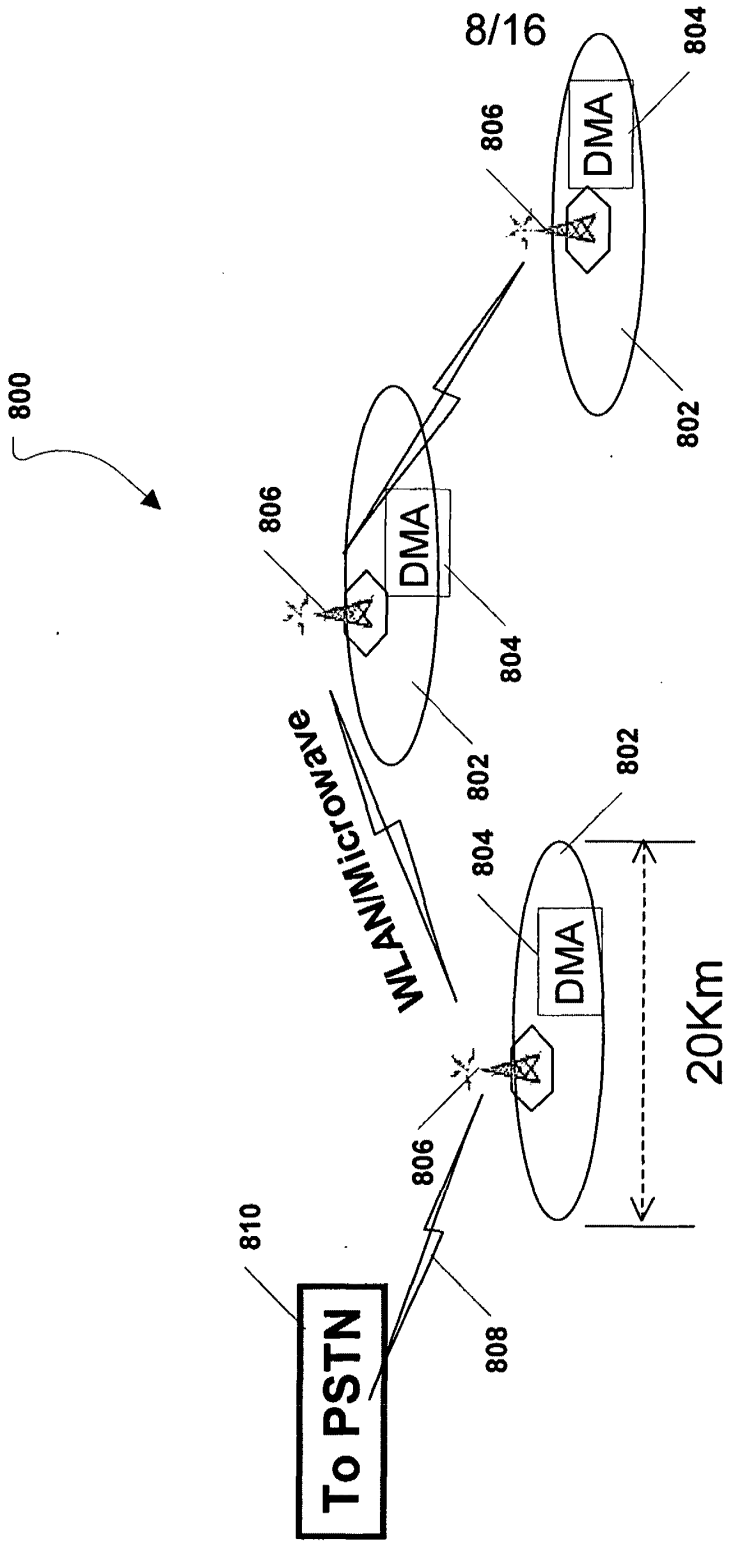


FIG. 8

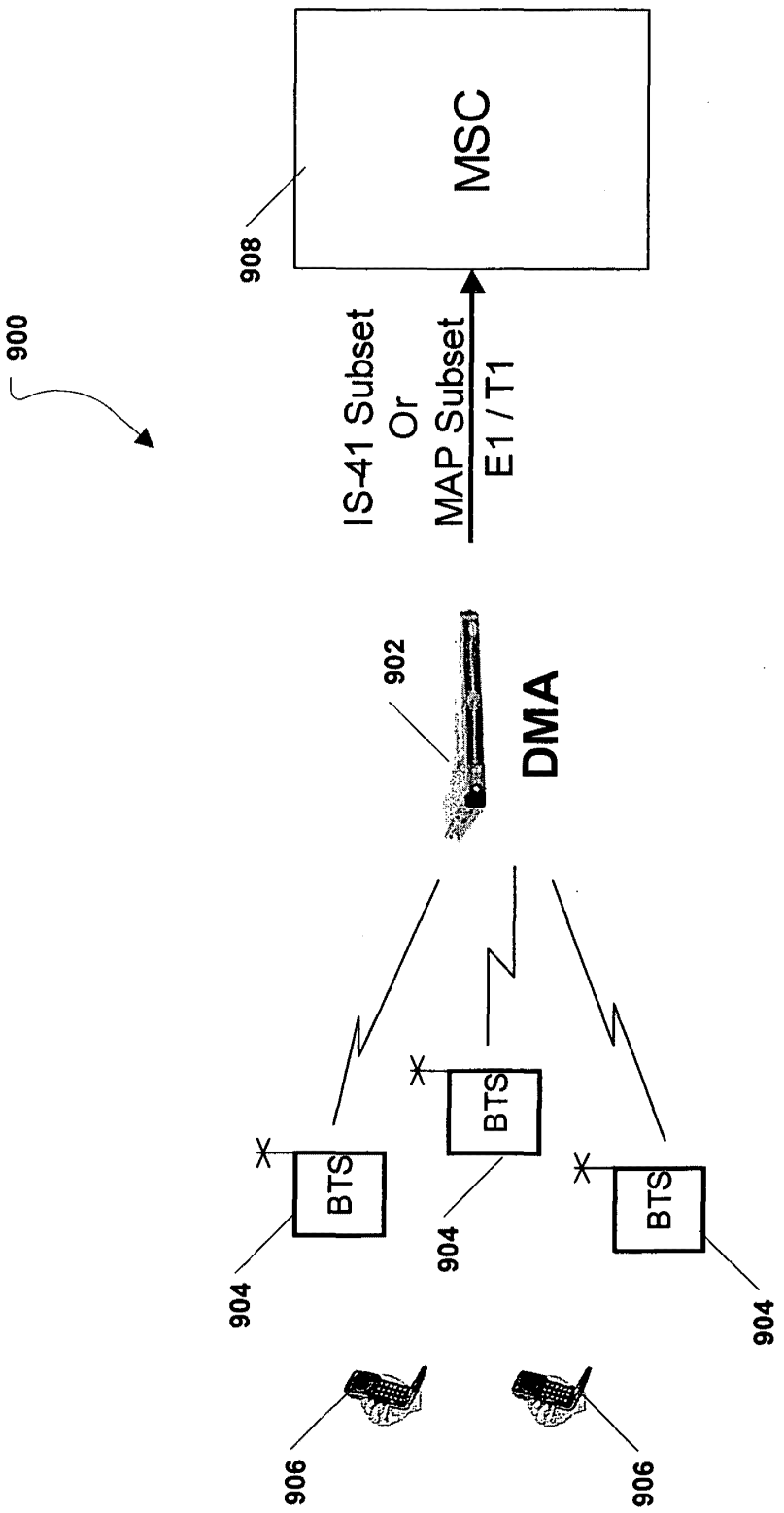

900
908
MSC
IS-41 Subset
Or
MAP Subset
E1 / T1
902
DMA
BTS
BTS
BTS
904
904
904
906
906

FIG. 9

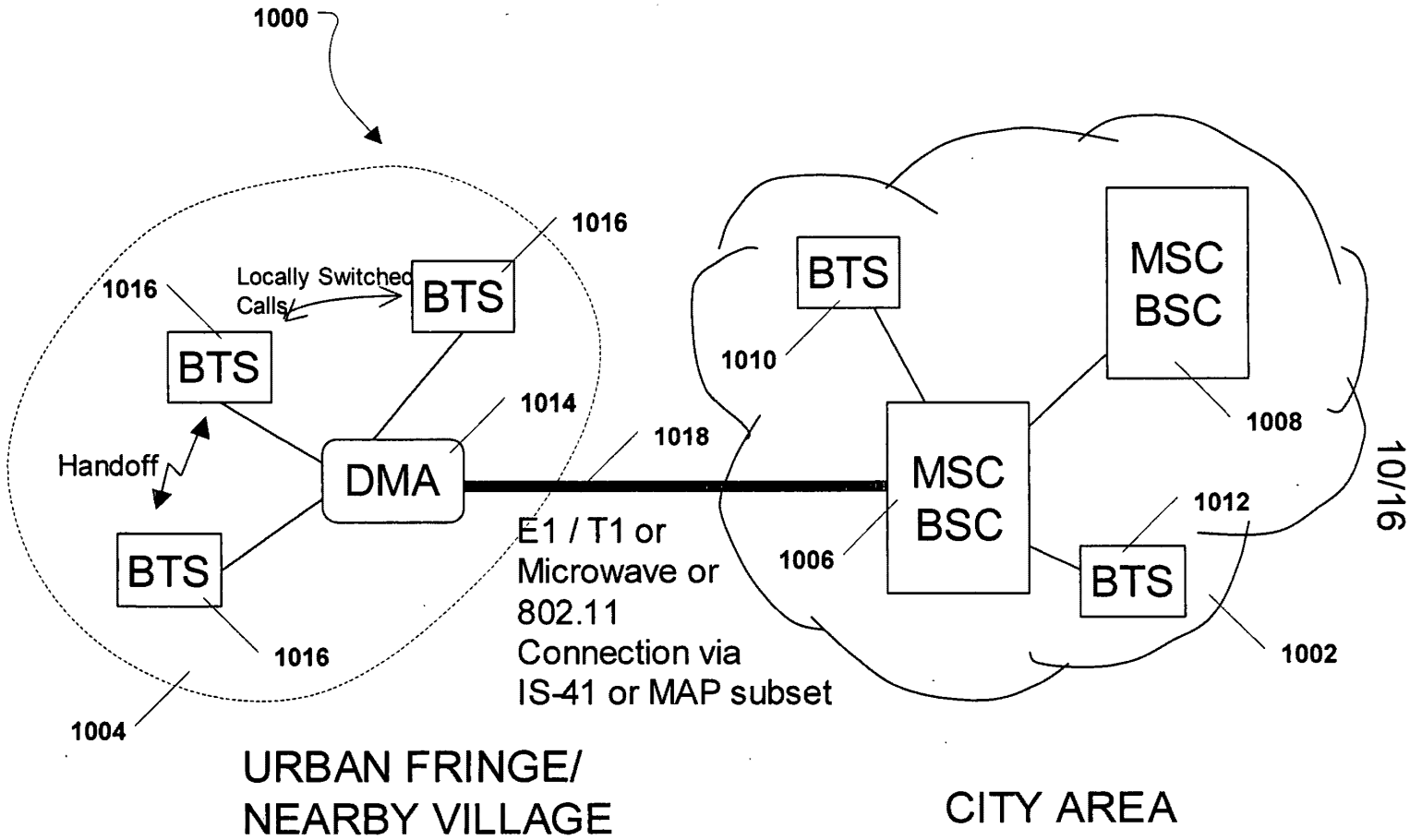


FIG. 10

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

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Microsoft v. Lemko- IPR2023-00530
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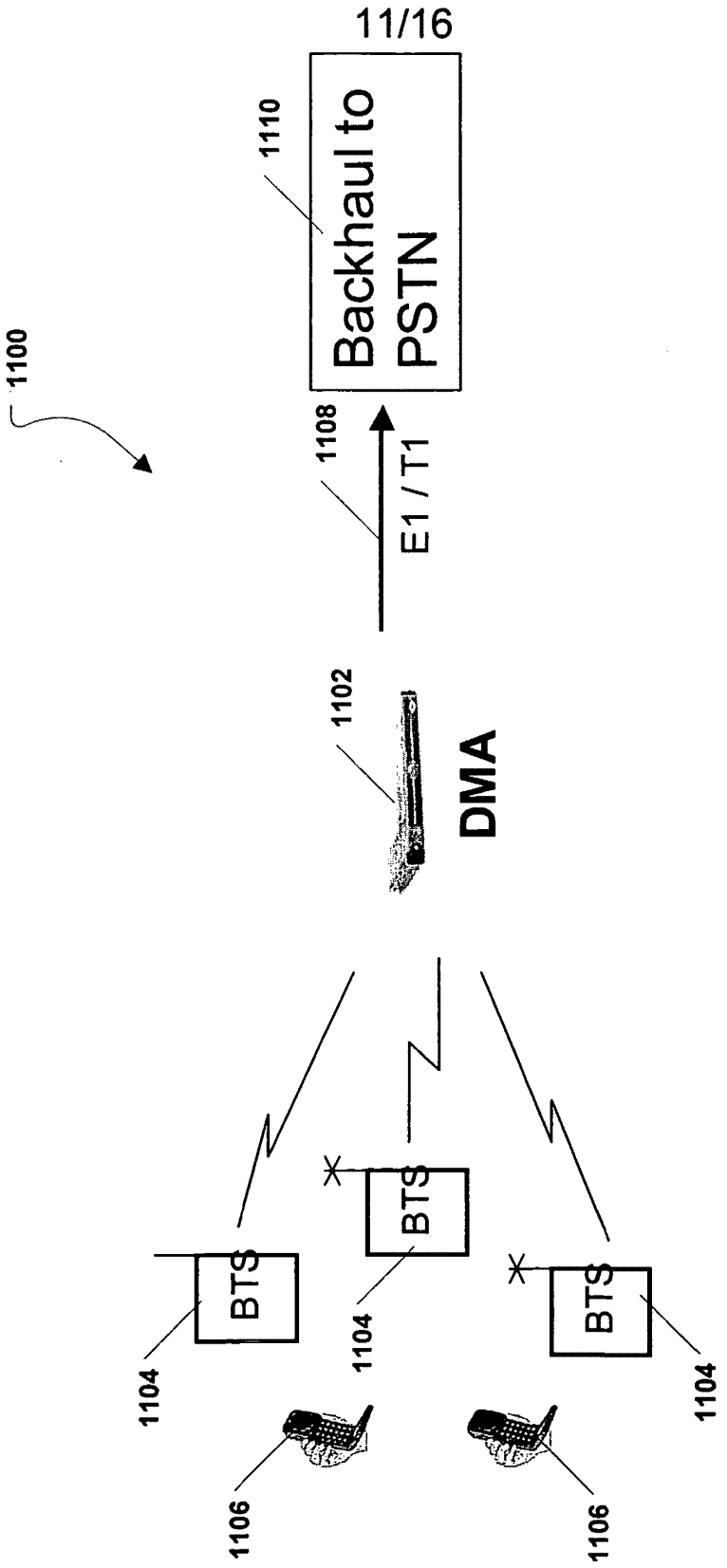

1100
1110
Backhaul to PSTN
1108
E1 / T1
1102
DMA
BTS
BTS
BTS
1104
1104
1104
1106
1106

FIG. 11

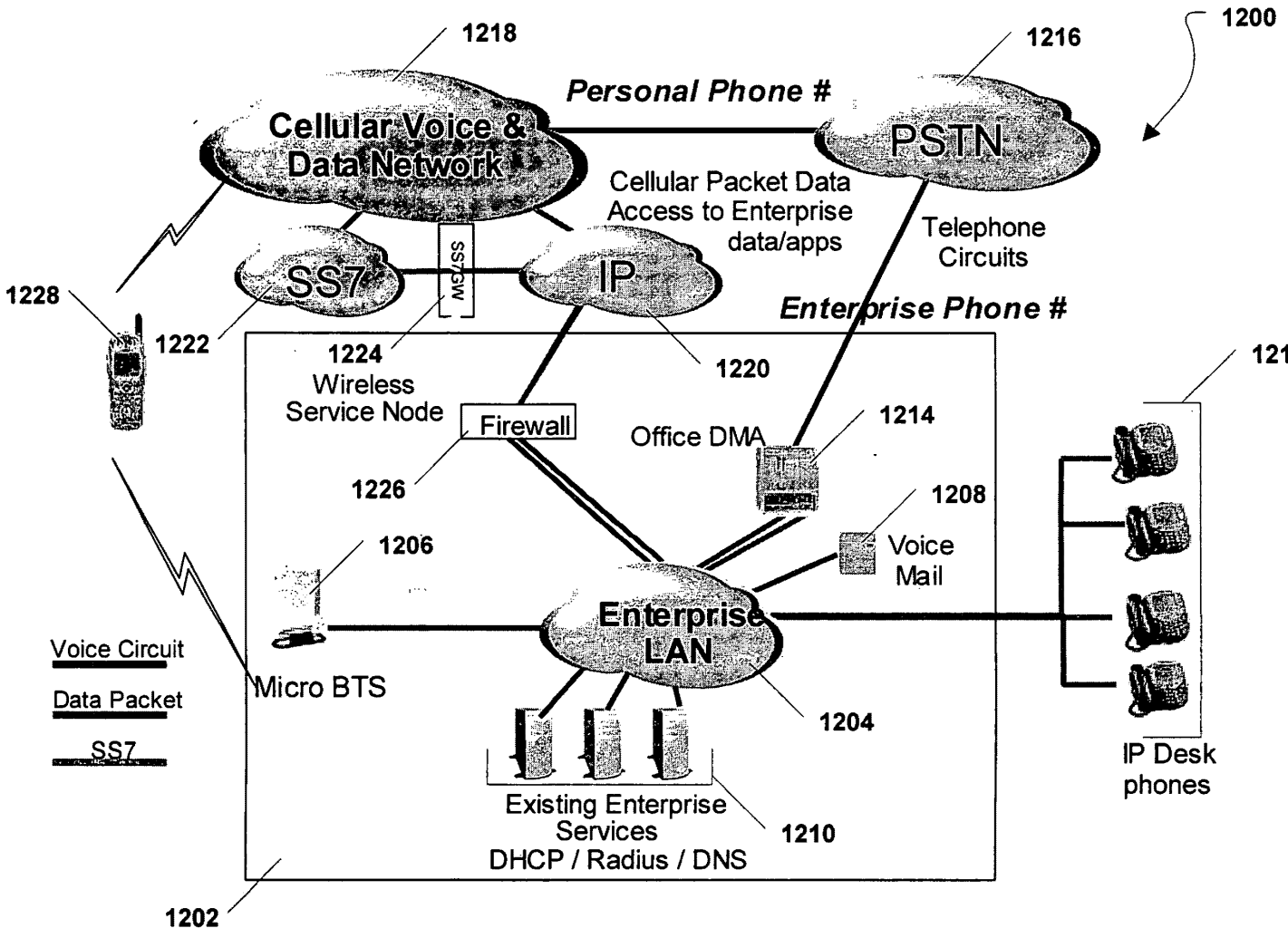


FIG. 12

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

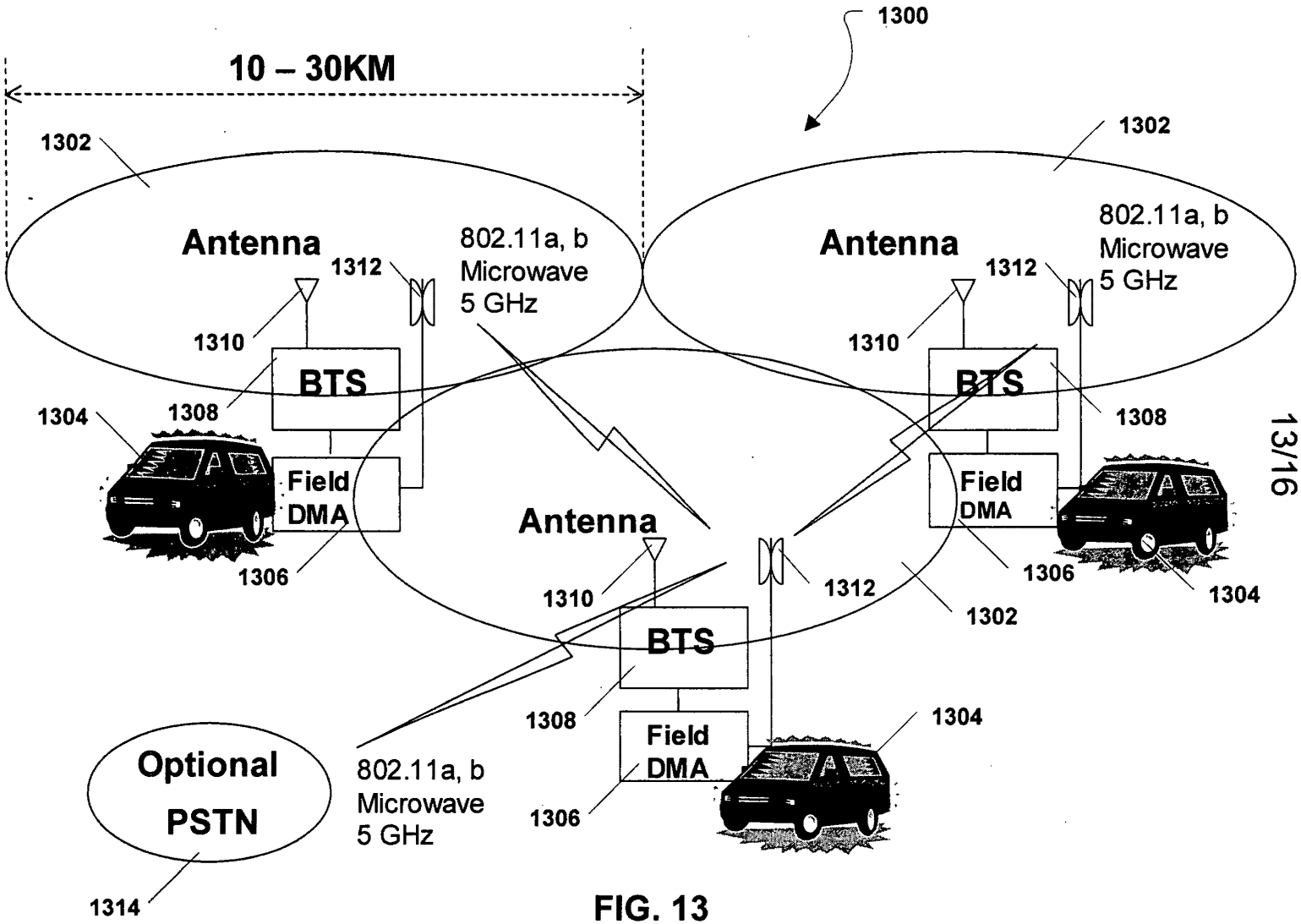


FIG. 13

13/16

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

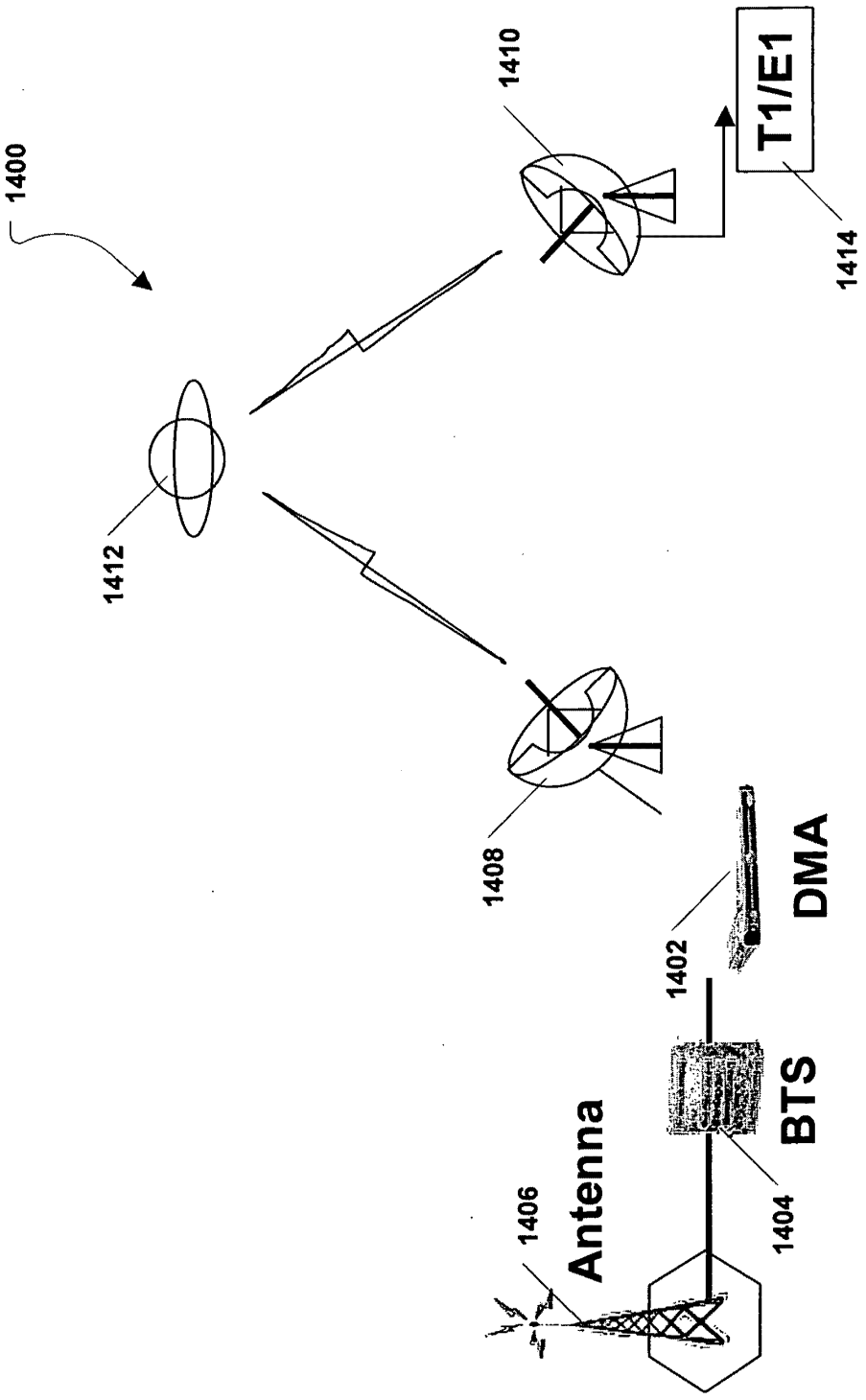


FIG. 14

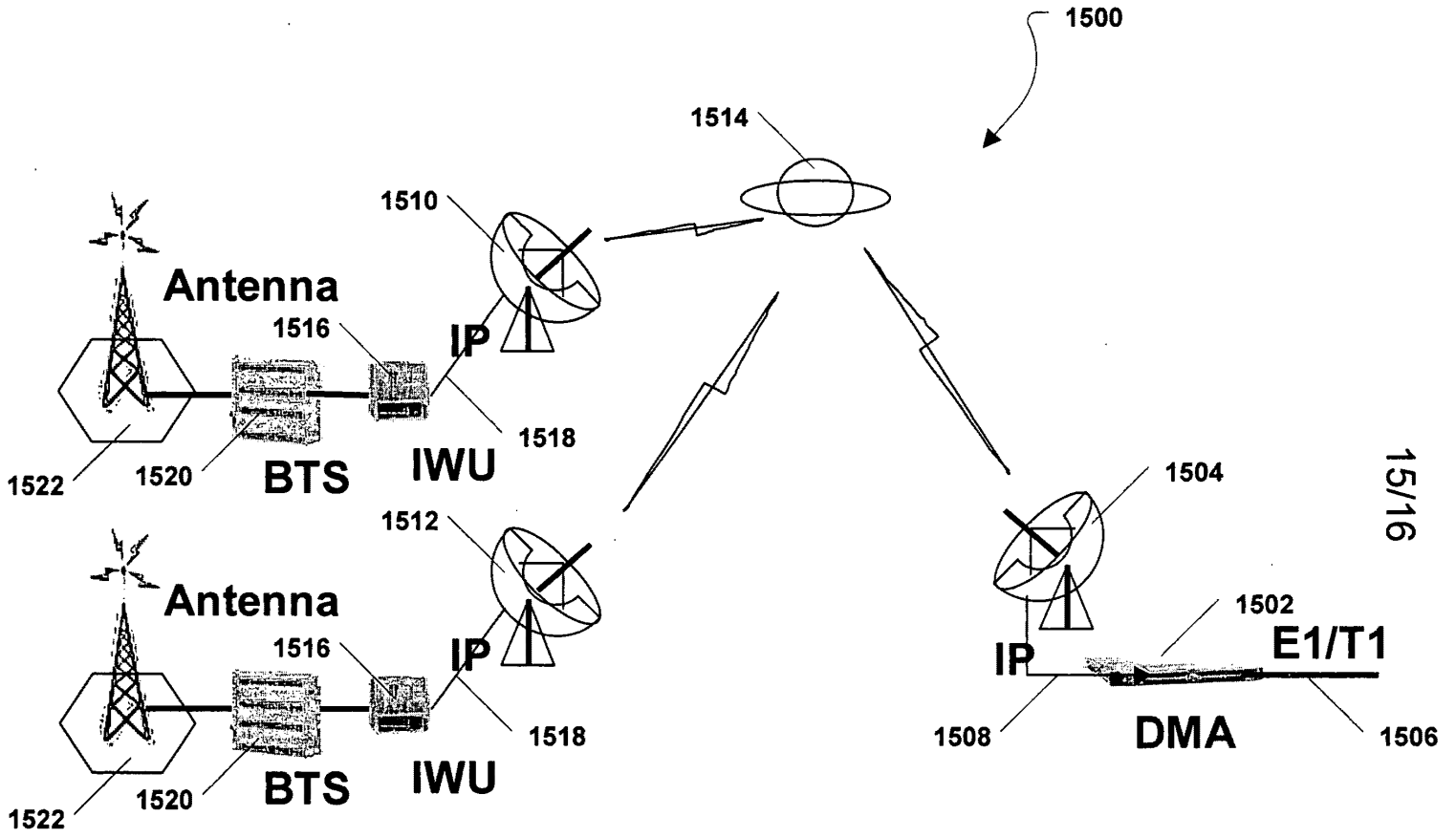


FIG. 15

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

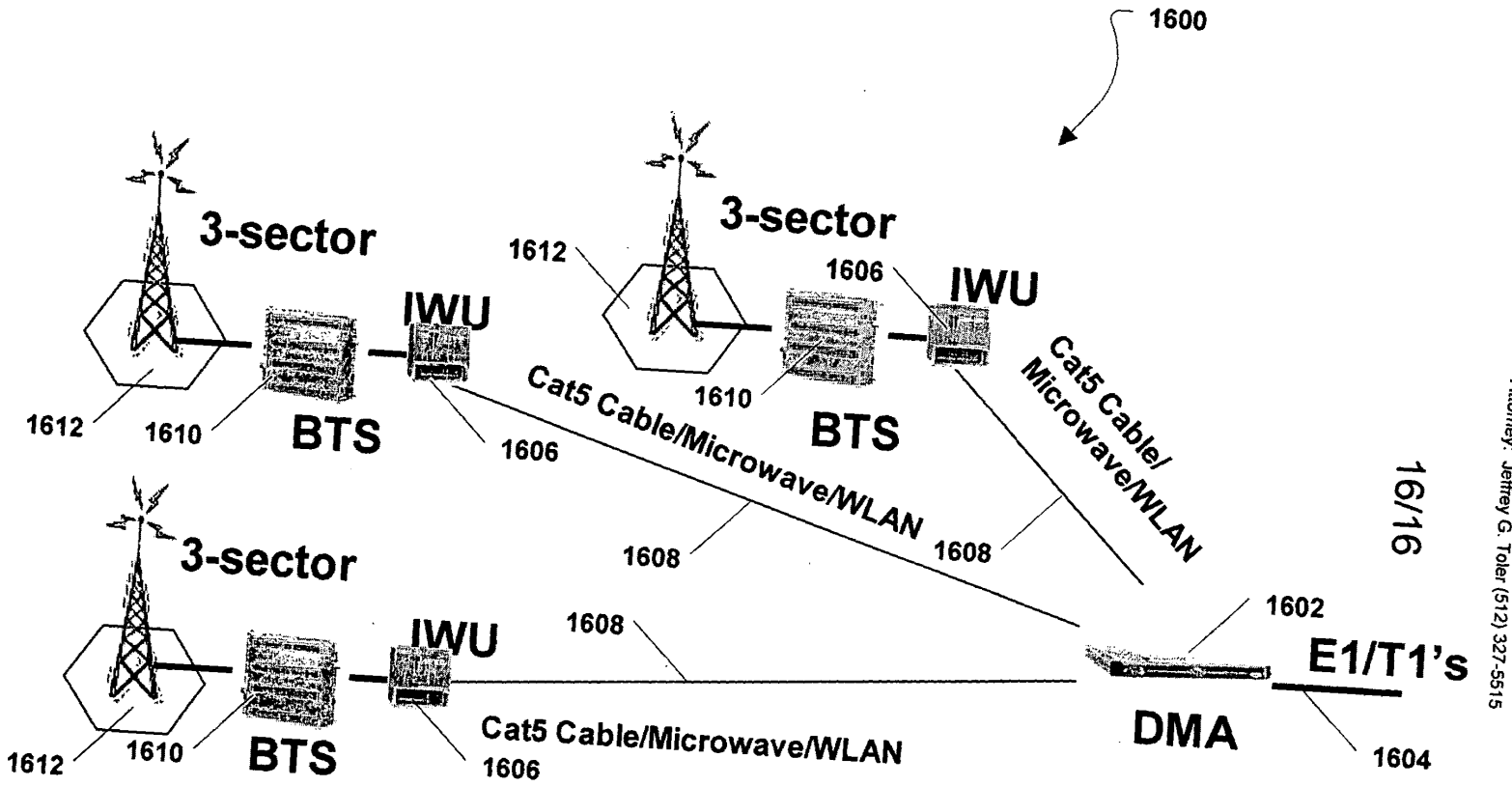


FIG. 16

Attorney Docket No.: 1082-0003
Inventor(s): Shaowei Pan
Attorney: Jeffrey G. Toler (512) 327-5515

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::	1082-0003
Request for Early Publication?::	No
Request for Non-Publication?::	No
Suggested Drawing Figure::	1
Total Drawing Sheets::	16
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 Dr.

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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

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 43 of 310

PATENT APPLICATION FEE DETERMINATION RECORD
Effective December 8, 2004

11105173

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	24	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	24 minus 20=	* 4
INDEPENDENT CLAIMS	5 minus 3 =	* 2
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	150	OR	BASIC FEE	
X$ 25=	100	OR	X$50=	
X100=	200	OR	X200=	
+180=		OR	+360=	
TOTAL	350	OR	TOTAL	

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. 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.

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 44 of 310

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/105,173	04/13/2005	Shaowei Pan	1082-0003

CONFIRMATION NO. 8703

34456
TOLER & LARSON & ABEL L.L.P.
5000 PLAZA ON THE LAKE STE 265
AUSTIN, TX 78746

FORMALITIES LETTER

OC000000016008643

Date Mailed: 05/12/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

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

- The statutory basic filing fee is missing.
  Applicant must submit $ **150** *to complete the basic filing fee for a small entity.*
- The oath or declaration is missing. *A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
  Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(f) of $65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.

The applicant needs to satisfy supplemental fees problems indicated below.

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

- Additional claim fees of **$300** as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **$865** for a Small Entity

- **$150** Statutory basic filing fee.
- **$65** Late oath or declaration Surcharge.

- The application search fee has not been paid. Applicant must submit **$250** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **$100** to complete the examination fee for a small entity in compliance with 37 CFR 1.27

- Total additional claim fee(s) for this application is **$300**

  - **$200** for **2** independent claims over 3.
  - **$100** for **4** total claims over 20.

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

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

T. Ketsela

Office of Initial Patent Examination (703) 308-1202

PART 3 - OFFICE COPY

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LARSON
& ABEL LLP

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JUL 11 2005

FACSIMILE COVER SHEET

DATE: July 11, 2005

TO: USPTO
Response to File Missing Parts

FAX NO.: (703) 746-4060

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

RE U.S. App. No.: 11/105,173

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0003

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

NO. OF PAGES (including Cover Sheet): 8

MESSAGE:

Attached please find:

- ☒ a Transmittal Form (1 pg);
- ☒ a copy of the Notice to File Missing Parts of Application (2 pgs);
- ☒ a Fee Transmittal Form (in duplicate) (2 pgs); and
- ☒ a combined Declaration and Power of Attorney, executed (2 pgs).

RECEIVED
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JUL 12 2005

5000 Plaza On The Lake
Suite 265
AUSTIN, TEXAS 78746

Tel: (512) 327-5515
Fax: (512) 327-5452
www.tlg-law.com

CONFIDENTIALITY NOTE

The pages accompanying this facsimile transmission contain information from the law office of Toler, Larson & Abel, L.L.P. and are confidential and privileged. The information is intended to be used by the individual(s) or entity(ies) named on this cover sheet only. If you are not the intended recipient be aware that reading disclosing copying distribution or use of the contents of this transmission is prohibited. Please notify us immediately if you have received this transmission in error at the number listed above and return the document to us via regular mail.

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
CENTRAL FAX CENTER
JUL 11 2005

Applicant(s):	**Shaowei Pan**		
Title:	**SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE**		
App. No.:	**11/105,173**	Filed:	**April 13, 2005**
Examiner:	**Unknown**	Group Art Unit:	**2681**
Atty. Dkt. No.:	**1082-0003**	Conf. No.:	**8703**

MS MISSING PARTS
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

Dear Sir:

In response to the Notice to File Missing Parts of Application mailed May 12, 2005, please find enclosed herewith:

- ☒ This Transmittal Form;
- ☒ a copy of the Notice to File Missing Parts of Application;
- ☒ a Fee Transmittal Form (in duplicate); and
- ☒ a combined Declaration and Power of Attorney, executed.

Respectfully submitted,

7-11-2005
Date

Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
TOLER, LARSON & ABEL, L.L.P.
5000 Plaza On The Lake, Suite 265
Austin, Texas 78746
(512) 327-5515 (phone)
(512) 327-5452 (fax)

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents on July 11, 2005

Emma L. Meyer
Typed or Printed Name

Signature

PAGE 2/8 * RCVD AT 7/11/2005 4:53:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/0 * DNIS:7464060 * CSID:512 327 5452 * DURATION (mm-ss):02-54

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/105,173	04/13/2005	Shaowei Pan	1082-0003

CONFIRMATION NO. 8703

34456
TOLER & LARSON & ABEL L.L.P.
5000 PLAZA ON THE LAKE STE 265
AUSTIN, TX 78746

FORMALITIES LETTER

OC000000016008643

Date Mailed: 05/12/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

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

- The statutory basic filing fee is missing.
  Applicant must submit $ 150 to complete the basic filing fee for a small entity.
- The oath or declaration is missing. *A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.*
  Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.
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- Additional claim fees of $300 as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **$865** for a Small Entity

- **$150** Statutory basic filing fee.
- **$65** Late oath or declaration Surcharge.

07/13/2005 HMARZI1 00000090 502469 11105173

01 FC:2011	150.00 DA
02 FC:2111	250.00 DA
03 FC:2311	100.00 DA
04 FC:2201	200.00 DA
05 FC:2202	100.00 DA
06 FC:2051	65.00 DA

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 49 of 310

- The application search fee has not been paid. Applicant must submit **$250** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **$100** to complete the examination fee for a small entity in compliance with 37 CFR 1.27

- Total additional claim fee(s) for this application is **$300**
  - **$200** for **2** independent claims over 3.
  - **$100** for **4** total claims over 20.

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

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

T. Kersela
Office of Initial Patent Examination (703) 308-1202
PART 1 - ATTORNEY/APPLICANT COPY

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Page 50 of 310

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PTO/SB/17 (12-04)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 905.00

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Examiner Name	Unknown
Art Unit	2681
Attorney Docket No.	1082-0003

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

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

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	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 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
24 - 20 or HP =	4 x	25.00 =	100.00

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
5 - 3 or HP =	2 x	100 =	200.00

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims Fee ($)	Fee Paid ($)

3. APPLICATION SIZE FEE

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).

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) Fees Paid ($)

Non-English Specification, $130 fee (no small entity discount)

Other: 1051- Late Filing Fee/ Assignment Recordation 65.00/ 40.00

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 38,342	Telephone 512-327-5515
Name (Print/Type)	Jeffrey G. Toler		Date 7-11-2005

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.**

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

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& ABEL LLP

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FACSIMILE COVER SHEET

DATE: July 11, 2005

TO: USPTO
Response to File Missing Parts

FAX NO.: (703) 746-4060

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

RE U.S. App. No.: 11/105,173

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0003

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

NO. OF PAGES (including Cover Sheet): 8

MESSAGE:

Attached please find:

- ☒ a Transmittal Form (1 pg);
- ☒ a copy of the Notice to File Missing Parts of Application (2 pgs);
- ☒ a Fee Transmittal Form (in duplicate) (2 pgs); and
- ☒ a combined Declaration and Power of Attorney, executed (2 pgs).

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JUL 12 2005

5000 Plaza On The Lake
Suite 265
AUSTIN, TEXAS 78746

Tel: (512) 327-5515
Fax: (512) 327-5452
www.tlg-law.com

CONFIDENTIALITY NOTE

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
CENTRAL FAX CENTER
JUL 11 2005

Applicant(s):	**Shaowei Pan**		
Title:	**SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE**		
App. No.:	**11/105,173**	Filed:	**April 13, 2005**
Examiner:	**Unknown**	Group Art Unit:	**2681**
Atty. Dkt. No.:	**1082-0003**	Conf. No.:	**8703**

MS MISSING PARTS
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

Dear Sir:

In response to the Notice to File Missing Parts of Application mailed May 12, 2005, please find enclosed herewith:

- ☒ This Transmittal Form;
- ☒ a copy of the Notice to File Missing Parts of Application;
- ☒ a Fee Transmittal Form (in duplicate); and
- ☒ a combined Declaration and Power of Attorney, executed.

Respectfully submitted,

7-11-2005
Date

Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
TOLER, LARSON & ABEL, L.L.P.
5000 Plaza On The Lake, Suite 265
Austin, Texas 78746
(512) 327-5515 (phone)
(512) 327-5452 (fax)

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents on July 11, 2005

Emma L. Meyer
Typed or Printed Name

Signature

PAGE 2/8 * RCVD AT 7/11/2005 4:53:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/0 * DNIS:7464060 * CSID:512 327 5452 * DURATION (mm-ss):02-54

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
11/105,173	04/13/2005	Shaowei Pan	1082-0003

CONFIRMATION NO. 8703

34456
TOLER & LARSON & ABEL L.L.P.
5000 PLAZA ON THE LAKE STE 265
AUSTIN, TX 78746

FORMALITIES LETTER

OC0000000016008643

Date Mailed: 05/12/2005

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

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- The statutory basic filing fee is missing.
  Applicant must submit $ 150 to complete the basic filing fee for a small entity.
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  Note: If a petition under 37 CFR 1.47 is being filed, an oath or declaration in compliance with 37 CFR 1.63 signed by all available joint inventors, or if no inventor is available by a party with sufficient proprietary interest, is required.
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SUMMARY OF FEES DUE:

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- **$150** Statutory basic filing fee.
- **$65** Late oath or declaration Surcharge.

07/13/2005 HMARZI1 00000090 502469 11105173

01 FC:2011	150.00 DA
02 FC:2111	250.00 DA
03 FC:2311	100.00 DA
04 FC:2201	200.00 DA
05 FC:2202	100.00 DA
06 FC:2051	65.00 DA

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 54 of 310

- The application search fee has not been paid. Applicant must submit **$250** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit **$100** to complete the examination fee for a small entity in compliance with 37 CFR 1.27

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  - **$100** for **4** total claims over 20.

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

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

T. Kersela
Office of Initial Patent Examination (703) 308-1202
PART 1 - ATTORNEY/APPLICANT COPY

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 55 of 310

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Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☑ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 905.00

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Examiner Name	Unknown
Art Unit	2681
Attorney Docket No.	1082-0003

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

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

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	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 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
24 - 20 or HP =	4 x	25.00 =	100.00

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
5 - 3 or HP =	2 x	100 =	200.00

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims Fee ($)	Fee Paid ($)

3. APPLICATION SIZE FEE

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).

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) Fees Paid ($)

Non-English Specification, $130 fee (no small entity discount)

Other: 1051- Late Filing Fee/ Assignment Recordation 65.00/ 40.00

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 38,342	Telephone 512-327-5515
Name (Print/Type)	Jeffrey G. Toler		Date 7-11-2005

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.**

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

Attorney Docket No.: 1082-0003

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

PAGE 7/8 * RCVD AT 7/11/2005 4:53:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/0 * DNIS:7464060 * CSID:512 327 5452 * DURATION (mm-ss):02-54

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 57 of 310

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: Shaowei Pan Date: April 12, 05
Residence: Kildeer, IL Citizenship: US
Post Office Address: 21878 Tall Oaks Dr.
Kildeer, IL 60047

PAGE 8/8 * RCVD AT 7/11/2005 4:53:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/0 * DNIS:7464060 * CSID:512 327 5452 * DURATION (mm-ss):02-54

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Page 58 of 310

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

APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
11/105,173		2618	

Correspondence Address / Fee Address Change

The following fields have been set to Customer Number 60533 on 04/07/2006

- Correspondence Address

The address of record for Customer Number 60533 is:
TOLER SCHAFFER, LLP
5000 PLAZA ON THE LAKES
SUITE 265
AUSTIN,TX 78746

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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
11/105,173		2618	

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5000 PLAZA ON THE LAKES
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AUSTIN,TX 78746

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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
11/105,173		2618	

Correspondence Address / Fee Address Change

The following fields have been set to Customer Number 60533 on 04/14/2006

- Correspondence Address

The address of record for Customer Number 60533 is:
TOLER SCHAFFER, LLP
5000 PLAZA ON THE LAKES
SUITE 265
AUSTIN,TX 78746

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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DATE: July 11, 2006

TO: Examiner MAUNG, Nay Aung
USPTO GPAU 2618

FAX NO.: 571-273-8300

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

RE U.S. App. No.: 11/105,173, filed April 13, 2005

Applicant(s): Shaowei Pan, et al.

Atty Dkt No.: 1082-0003

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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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 4

Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	MAUNG, Nay Aung
Attorney Docket Number	1082-0003

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

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

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

7-12-2006
Date

Raymond Howell
Chief Financial Officer, LEMKO, Corp.

847-240-1990 x 224
Telephone No.

PAGE 3/4 * RCVD AT 7/12/2006 12:16:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/1 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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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.

6-12-2006
Date

847-290-1990 x224
Telephone No.

Raymond Howell
Chief Financial Officer, LEMKO, Corp.

PAGE 4/4 * RCVD AT 7/12/2006 12:16:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-5/1 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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.: 11/105,173 Filed: April 13, 2005

Examiner: Nay Aung Maung Group Art Unit: 2618

Atty. Docket No.: 1082-0003

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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:

☒ 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
Typed or Printed Name

Signature

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.

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Microsoft v. Lemko- IPR2023-00530
Page 67 of 310

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

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)

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 68 of 310

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	Nay Aung Maung
Attorney Docket Number	1082-0003

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
	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-			
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	P	US-			
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	R	US-			
	S	US-			

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[6]
	T					
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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: Examiner MAUNG, Nay Aung
USPTO GPAU 2618

FAX NO.: 571-273-8300

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

RE U.S. App. No.: 11/105,173, filed April 13, 2005

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0003

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:

☒ IDS Transmittal Form (3 pgs)
☒ IDS Form 1449/PTO (1 pg)

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Suite 265
AUSTIN, TEXAS 78746

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

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Applicant(s):	Shaowei Pan		
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		
Application No.:	11/105,173	Filed:	April 13, 2005
Examiner:	MAUNG, Nay Aung	Group Art Unit:	2618
Atty. Docket No.:	1082-0003		

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Jeaneaux Jordan — Signature

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 71 of 310

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.

PAGE 3/5 * RCVD AT 10/9/2006 6:17:13 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/30 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-26

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 72 of 310

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,

10-9-2006
Date

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)

PAGE 4/5 * RCVD AT 10/9/2006 6:17:13 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/30 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-26

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Microsoft v. Lemko- IPR2023-00530
Page 73 of 310

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	MAUNG, Nay Aung
Attorney Docket Number	1082-0003

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
	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-			
	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 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[6]
	T1					
	U1					
	V1					
	W1					
	X1					
	Y1					

Examiner Signature		Date Considered	

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

TOLER SCHAFFER, LLP
8500 Bluffstone Cove, Suite A201
Austin, Texas 78759
Phone 512-327-5515
Fax 512-327-5575

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FACSIMILE COVER SHEET

DATE: April 10, 2007

TO: Examiner MAUNG, Nay Aung **FAX NO.:** 571-273-8300
USPTO GPAU 2618

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

RE U.S. App. No.: 11/105,173, filed April 13, 2005

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0003

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

NO. OF PAGES (including Cover Sheet): 6

MESSAGE:

Attached please find:

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

8500 Bluffstone Cove
Suite A201
AUSTIN, TEXAS 78759

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

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 6

Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	MAUNG, Nay Aung
Attorney Docket Number	1082-0003

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	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	Jeaneaux Jordan	Date	4-10-07

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Attorney Docket No.: 1082-0003

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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		
App. No.:	11/105,173	Filed:	April 13, 2005
Examiner:	MAUNG, Nay Aung	Group Art Unit:	2618
Atty. Dkt. No.:	1082-0003	Confirmation No.:	8703

MS: Amendment
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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Jeaneaux Jordan
Typed or Printed Name

Signature

PAGE 3/6 * RCVD AT 4/10/2007 11:22:51 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/38 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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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.

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☐ 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.

PAGE 4/6 * RCVD AT 4/10/2007 11:22:51 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/38 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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Microsoft v. Lemko- IPR2023-00530
Page 78 of 310

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,

4-9-2007
Date

Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant(s)
TOLER SCHAFFER, L.L.P.
8500 Bluffstone Cove, Suite A201
Austin, Texas 78759
(512) 327-5515 (phone)
(512) 327-5575 (fax)

PAGE 5/6 * RCVD AT 4/10/2007 11:22:51 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/38 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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Page 79 of 310

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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	MAUNG, Nay Aung
Attorney Docket Number	1082-0003

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
	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-			
	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 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[6]
	T1					
	U1					
	V1					
	W1					
	X1					
	Y1					

Examiner Signature		Date Considered	

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

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United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 03/14/2008

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

EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
03/14/2008	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.

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 81 of 310

Office Action Summary	Application No.	Applicant(s)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *13 April 2005*.

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) *1-24* is/are pending in the application.

4a) Of the above claim(s) *1-10 and 18-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-17* is/are rejected.

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

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

Application Papers

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

10)☒ The drawing(s) filed on *13 April 2005* 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 *13 April 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention**.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

This application contains claims directed to the following patentably distinct species: **Species 1 – Paragraph 0023 directed towards claims 1-6**; **Species 2 – Paragraph 0025 directed towards claims 7-10**; **Species 3 – Paragraph 0026 directed towards claims 11-17**; **Species 4 – Paragraph 0027 directed towards claims 18-22**; **Species 5 – Paragraph 0028 directed towards claims 23-24**. The species are independent or distinct because claims to the different species recite the

mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic claim.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the

requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

During a telephone conversation with Mr. Jeffrey G. Toler on February 25th, 2008 a provisional election was made with traverse to prosecute the invention of **Species 3 – Paragraph 0026 directed towards claims 11-17**. Affirmation of this election must be made by applicant in replying to this Office action. **Claims 1-10 and 18-24** are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected species.

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 negatived by the manner in which the invention was made.

1. **Claims 11-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Csapo et al, US Patent 6,411,825 (hereafter referenced as Csapo), in view of Bertino et al, US 2006/0046760 A1 (hereafter referenced as Bertino).

Regarding **Claim 11**, Csapo teaches a system, comprising: “at least one distributed mobile architecture server” (see Column 1 lines 59-67 and Column 2 lines 1-10). The upper BSC 70 in Figure 3 is read on by the “distributed mobile architecture server,” because according to the Applicant’s specification, the DMA serves as a controlling apparatus to control external BTS's. Csapo also teaches "at least one rural base transceiver station coupled to the distributed mobile architecture server” (see Column 1 lines 59-67 and Colum 2 lines 1-10). The upper BTS 66 in Figure 3 could easily be located in a "rural" community, which can then be connected to the upper BSC 70. Csapo also teaches "a mobile switching center and base station controller coupled to the distributed mobile architecture server" (see Column 1 lines 59-67 and Column 2 lines 1-10). The lower "Base station controller" 70 is connected to the "mobile switching center" 72, which is further connected to the "distributed mobile architecture server” as defined above. Thus, the “mobile switching center and base station controller are coupled to the distributed mobile architecture server.” Csapo also teaches “at least one urban base transceiver station coupled to the mobile switching center and base station controller” (see Column 1 lines 59-67 and Column 2 lines 1-10). Figure 3 discloses a "base transceiver station" 66, which is located below the other "rural base transceiver

station." Thus, the lower base transceiver station 66 could easily be located in an "urban" community, which according to Figure 3, can then be "coupled to the mobile switching center and the" lower "base station controller" as defined above. Csapo does not teach "wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices." However, Bertino generally teaches "wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices" (see Abstract, Paragraph 0009, and Paragraphs 0028 through 0031). "Program" reads on the ability of the group communication server 32 to determine whether it can bridge the communication or not, between the "four or more mobile communication devices." It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Csapo so that the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices as taught by Bertino, for the purpose of allowing a group call between the mobile stations 10 as disclosed in Csapo.

Regarding **Claim 12**, Csapo does not teach "wherein the four or more mobile communication devices are in communication with the distributed mobile architecture server via the at least one rural base transceiver station." However, Bertino generally teaches "wherein the four or more mobile communication devices are in communication with the distributed mobile architecture server via the at least one rural base transceiver station" (see Paragraph 0030 and Paragraph 0031). Figure 2 discloses that between the "mobile communication devices" and the "distributed mobile architecture server,"

there are many "base transceiver stations" which serve as interfaces between the two entities. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Csapo so that the four or more mobile communication devices are in communication with the distributed mobile architecture server via the at least one rural base transceiver station as taught by Bertino, for the purpose of allowing a group call between the mobile stations 10 as disclosed in Csapo.

Regarding **Claim 13**, Csapo does not teach "wherein at least one of the four or more mobile communication devices is in communication with the distributed mobile architecture server via the at least one urban base transceiver station and the mobile switching center/base station controller." However, Bertino generally teaches "wherein at least one of the four or more mobile communication devices is in communication with the distributed mobile architecture server via the at least one urban base transceiver station and the mobile switching center/base station controller" (see Paragraph 0030 and Paragraph 0031). Figure 2 discloses that between the "mobile communication devices" and the "distributed mobile architecture server," one of the BTS's could easily be placed in an "urban" environment, making it an "urban base transceiver station." Also, between the "mobile communication devices" and the "distributed mobile architecture server," there are many "mobile switching centers/base station controllers" which serve as interfaces between the two entities.

2. **Claims 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Csapo in view of Bertino, as applied to Claim 11 above, and further in view of Ham et al, US 2003/0100342 A1 (hereafter referenced as Ham).

Regarding **Claim 14**, the combination of Csapo and Bertino does not teach "wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via an E1 connection." However, Ham generally teaches "wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via an E1 connection" (see Paragraph 0011, Paragraph 0023, and Paragraph 0024). As described in claim 11, the BSC is read on by the "distributed mobile architecture server," because according to the Applicant's specification, the DMA serves as a controlling apparatus to control external BTS's. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination so that the distributed mobile architecture server is coupled to the mobile switching center/base station controller via an E1 connection as taught by Ham, for the purpose of providing a complete system to allow a group call between four or more mobile communication devices when there is a direct E1 connection.

Regarding **Claim 15**, the combination of Csapo and Bertino does not teach "wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via an T1 connection." However, Ham generally teaches "wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via an T1 connection" (see Paragraph 0011, Paragraph 0023, and Paragraph 0024).

3. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Csapo in view of Bertino, as applied to Claim 11 above, and further in view of Czys, US 2004/0259556 A1 (hereafter referenced as Czys).

Regarding **Claim 16**, the combination of Csapo and Bertino does not teach "wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via a wireless connection." However, Czys generally teaches "wherein the distributed mobile architecture server is coupled to the mobile switching center/base station controller via a wireless connection" (see Paragraph 0063). As described in claim 11, the BSC is read on by the "distributed mobile architecture server," because according to the Applicant's specification, the DMA serves as a controlling apparatus to control external BTS's. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination so that the distributed mobile architecture server is coupled to the mobile switching center/base station controller via a wireless connection as taught by Czys, for the purpose of providing a complete system to allow a group call between four or more mobile communication devices when there is a direct wireless connection.

4. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Csapo in view of Bertino and Czys, as applied to Claim 16 above, and further in view of Scheinert et al, US 2004/0204097 A1 (hereafter referenced as Scheinert).

Regarding **Claim 17**, the combination of Csapo, Bertino, and Czys does not teach "wherein the wireless connection is a microwave connection." However, Scheinert generally teaches "wherein the wireless connection is a microwave

connection" (see Paragraph 0006). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination so that the wireless connection is a microwave connection as taught by Scheinert, for the purpose of providing a complete system to allow a group call between four or more mobile communication devices when there is a direct microwave connection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Jain whose telephone number is 571-272-9747. The examiner can normally be reached on M-F, 7:30 am to 5:00 pm, EST, Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le, can be reached on 571-272-7891. 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.

/Ankur Jain/
Examiner, Art Unit 2618
02/27/08

/Lana N. Le/
Acting SPE of Art Unit 2618
03/02/08

Notice of References Cited	Application/Control No. 11/105,173	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI	
	Examiner ANKUR JAIN	Art Unit 2618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,411,825 B1	06-2002	Csapo et al.	455/561
*	B	US-2003/0100342 A1	05-2003	Ham et al.	455/560
*	C	US-2004/0204097 A1	10-2004	Scheinert et al.	455/561
*	D	US-2004/0259556 A1	12-2004	Czys, Baruch	455/447
*	E	US-2006/0046760 A1	03-2006	Bertino et al.	455/519
	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					
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	Q					
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	S					
	T					

NON-PATENT DOCUMENTS

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

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

✓	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	02/27/2008								
	1	N								
	2	N								
	3	N								
	4	N								
	5	N								
	6	N								
	7	N								
	8	N								
	9	N								
	10	N								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	N								
	19	N								
	20	N								
	21	N								
	22	N								
	23	N								
	24	N								

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Page 95 of 310

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

SEARCHED			
Class	Subclass	Date	Examiner
455	519	2/27/2008	AJ

SEARCH NOTES		
Search Notes	Date	Examiner
Searched databases USPAT, US-PGPUB, EPO, JPO, DERWENT, and IBM_TDB. EAST Search History is attached.	2/27/2008	AJ

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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CONFIRMATION NO. 8703

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/105,173	04/13/2005 RULE	455	2618	1082-0003

APPLICANTS
Shaowei Pan, Kildeer, IL;

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

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

** **IF REQUIRED, FOREIGN FILING LICENSE GRANTED** ** SMALL ENTITY **
05/12/2005

Foreign Priority claimed		STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
❑ Yes ☑ No	❑ Met after Allowance				
35 USC 119(a-d) conditions met ❑ Yes ☑ No					
Verified and Acknowledged /ANKUR JAIN/ Examiner's Signature	AJ Initials	IL	16	24	5

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

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	162	(server) near5 (program$4) near5 (group or party or parties or team$2 or users) near5 (call)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:27
L4	23	L3 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:27
L5	1	((group ADJ call ADJ server) near5 (program $6)) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:32
L6	3	((group ADJ call) near5 server near5 program$6) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:33
L7	10	((group) near5 server near5 program$6) AND (455/518,519. CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:34
L8	1	"6411825".pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 11:35
L9	1	"6411825".pn. AND (BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 11:36
L10	1	"20060046760"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
L11	1	"20060046760" AND (program WITH server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
L12	1	"20060046760" AND (program SAME server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12

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L13	13	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$). did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/02/27 12:48
L14	4	L13 AND (E1)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:48
L15	4	L13 AND (E1 or T1)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:48
L16	6	(E1 or T1) WITH DMA WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:51
L17	16	(E1 or T1) WITH server WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:53
L18	752	(BSC or MSC) WITH (E1 or T1) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:58
L19	384	L18 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:58
L20	3	L19 AND 455/518,519. CCLS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:59
L21	209	(BSC or MSC) WITH ((E1 or T1) near7 (connect$4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:59
L22	134	L21 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00

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L23	188	(BSC or MSC) WITH ((E1 or T1) near5 (connect$4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
L24	118	L23 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
L25	92	(BSC or MSC) WITH ((E1) near7 (connect $4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:10
L26	50	L25 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:10
L27	5240	(BSC or MSC) WITH (wireless) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:40
L28	1343	(BSC or MSC) near5 (wireless) near5 (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:41
L29	28	(BSC or MSC) near5 (wireless ADJ connection) near5 (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:41
L30	198	(BSC) near5 wireless near5 (MSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:49
L31	115	L30 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:50
L32	16	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$ or US-20040204097-$ or US-20040233892-$ or US-20040259556-$). did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-	US-PGPUB; USPAT	OR	ON	2008/02/27 15:03

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		6515985-$ or US-H001918-$).did.				
L33	3	L32 AND (micro $2wave or microwave)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 15:04
S1	12	("20010036173" | "20010055298" | "20020058502" | "20030153343" | "20040018829" | "6411825" | "6515985" | "6751207" | "6760325" | "6807431" | "6807432" | "H001918").PN.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 12:28
S2	37	((SHAOWEI) near2 (PAN)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/26 14:17
S3	1	S2 AND ((rural AND urban AND mobile AND server).CLM.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:19
S4	1	11/105173.APP.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:20
S5	15	DMA ADJ server	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:44
S6	51	(DMA or (distributed ADJ mobile ADJ architecture)) WITH (BTS or (base ADJ station$2))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 15:03
S7	5	((distributed ADJ mobile ADJ architecture)) WITH (BTS or (base ADJ station$2))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 15:08

2/27/2008 3:27:29 PM
C:\Documents and Settings\ajain1\My Documents\EAST\Workspaces\11105173.wsp

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Fax 512-327-5575

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DATE: April 10, 2007

TO: Examiner MAUNG, Nay Aung **FAX NO.:** 571-273-8300
USPTO GPAU 2618

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

RE U.S. App. No.: 11/105,173, filed April 13, 2005

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0003

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

NO. OF PAGES (including Cover Sheet): 6

MESSAGE:

Attached please find:

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

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Total Number of Pages in This Submission: 6

Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	MAUNG, Nay Aung
Attorney Docket Number	1082-0003

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
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Printed name	Jeffrey G. Toler		
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Typed or printed name	Jeaneaux Jordan	Date	4-10-07

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Attorney Docket No.: 1082-0003

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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		
App. No.:	11/105,173	Filed:	April 13, 2005
Examiner:	MAUNG, Nay Aung	Group Art Unit:	2618
Atty. Dkt. No.:	1082-0003	Confirmation No.:	8703

MS: Amendment
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PO Box 1450
Alexandria, VA 22313-1450

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Jeaneaux Jordan
Typed or Printed Name

Signature

PAGE 3/6 * RCVD AT 4/10/2007 11:22:51 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/38 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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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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Page 105 of 310

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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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8500 Bluffstone Cove, Suite A201
Austin, Texas 78759
(512) 327-5515 (phone)
(512) 327-5575 (fax)

PAGE 5/6 * RCVD AT 4/10/2007 11:22:51 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/38 * DNIS:2738300 * CSID:5123275575 * DURATION (mm-ss):01-02

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	MAUNG, Nay Aung
Attorney Docket Number	1082-0003

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
	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-			
	K1	US-			
	L1	US-			
	M1	US-			
	N1	US-			
	O1	US-			
	P1	US-			
	Q1	US-			
	R1	US-			
	S1	US-			

FOREIGN PATENT DOCUMENTS

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	T1					
	U1					
	V1					
	W1					
	X1					
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Examiner Signature	/Ankur Jain/	Date Considered	02/26/2008

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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.: 11/105,173 Filed: April 13, 2005

Examiner: Nay Aung Maung Group Art Unit: 2618

Atty. Docket No.: 1082-0003

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Elaine Balagia
Typed or Printed Name

Elaine Balagia
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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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Microsoft v. Lemko- IPR2023-00530
Page 109 of 310

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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.
5000 Plaza On The Lake, Suite 265
Austin, Texas 78746
(512) 327-5515 (phone)
(512) 327-5575 (fax)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/105,173
Filing Date	April 13, 2005
First Named Inventor	Shaowei Pan
Art Unit	2618
Examiner Name	Nay Aung Maung
Attorney Docket Number	1082-0003

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
	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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	N	US-			
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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[6]
	T					
	U					
	V					
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	X					
	Y					

Examiner Signature	/Ankur Jain/	Date Considered	02/26/2008

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Ph. 512-327-5515
Fax 512-327-5575

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DATE: October 9, 2006

TO: Examiner MAUNG, Nay Aung
USPTO GPAU 2618
FAX NO.: 571-273-8300

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

RE U.S. App. No.: 11/105,173, filed April 13, 2005

Applicant(s): Shaowei Pan

Atty Dkt No.: 1082-0003

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

NO. OF PAGES (including Cover Sheet): 5

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Applicant(s):	Shaowei Pan		
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		
Application No.:	11/105,173	Filed:	April 13, 2005
Examiner:	MAUNG, Nay Aung	Group Art Unit:	2618
Atty. Docket No.:	1082-0003		

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Page 114 of 310

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Respectfully submitted,

10-9-2006
Date

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)

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Attorney Docket Number	1082-0003

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	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-			
	G1	US-			
	H1	US-			
	I1	US-			
	J1	US-			
	K1	US-			
	L1	US-			
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	Y1					

Examiner Signature	/Ankur Jain/	Date Considered	02/26/2008

*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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.J./

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 06/03/2008

TOLER LAW GROUP
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EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	
MAIL DATE	DELIVERY MODE
06/03/2008	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.

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Interview Summary	Application No.	Applicant(s)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

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

(1) *ANKUR JAIN*. (3)*Lana Le*.

(2) *Jeffrey G. Toler*. (4)_____.

Date of Interview: *29 May 2008*.

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: *11*.

Identification of prior art discussed: *US Patent 6,411,825*.

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: *An amendment will be mailed to determine if the proposed amendments overcome all cited art.*.

(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.

/Lana Le/ /Ankur Jain/
Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Shoawei Pan		
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		
App. No.:	11/105,173	Filed:	April 13, 2005
Examiner:	JAIN, Ankur	Group Art Unit:	2618
Customer No.:	60533	Confirmation No.:	8703
Atty. Dkt. No.:	1082-0003		

MS: Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NON-FINAL OFFICE ACTION

Dear Sir:

In response to the Non-Final Office Action mailed March 14, 2008, 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. (Withdrawn) A method of providing telephone communication, comprising allowing a group call between four or more participants, each participant calling from a separate telephone device communicating with a base transceiver station that is coupled to a distributed mobile architecture server.

2. (Withdrawn) The method of claim 1, further comprising providing full duplex calling capability between all participants via one or more of the distributed mobile architecture servers.

3. (Withdrawn) The method of claim 2, further comprising allowing one or more participants to disconnect from the group call without effecting other participants remaining on the group call.

4. (Withdrawn) The method of claim 3, further comprising providing full duplex calling capability between the remaining participants via the one or more distributed mobile architecture server.

5. (Withdrawn) The method of claim 4, further comprising allowing one or more added participants to connect to the group call.

6. (Withdrawn) The method of claim 5, further comprising providing full duplex calling capability between the additional participants via the one or more distributed mobile architecture servers.

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7. (Withdrawn) A system, comprising:

four or more mobile communication devices; and

a distributed mobile architecture server, the distributed mobile architecture server comprising a program to allow a group call between the four or more mobile communication devices.

8. (Withdrawn) The system of claim 8, wherein the program further comprises an instruction to provide full duplex calling capability between all of the mobile communication devices.

9. (Withdrawn) The system of claim 8, wherein the program further comprises an instruction to allow one or more of the mobile communication devices to disconnect from the group call without effecting other participants remaining on the group call.

10. (Withdrawn) The system of claim 9, wherein the program further comprises an instruction for allowing one or more additional telephones to connect to the group call.

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11. (Currently Amended) A system, comprising:

at least one distributed mobile architecture server comprising:[[;]]

a computer readable medium;

a mobile switching center module embedded in the computer readable medium; and

a base station controller module embedded in the computer readable medium;

wherein the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver; and

wherein telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server;

at least one rural base transceiver station coupled to the at least one distributed mobile architecture server;

a mobile switching center and base station controller coupled to the at least one distributed mobile architecture server;

at least one urban base transceiver station coupled to the mobile switching center and base station controller; and

wherein the at least one distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices.

12. (Currently Amended) The system of claim 11, wherein the four or more mobile communication devices are in communication with the at least one distributed mobile architecture server via the at least one rural base transceiver station.

13. (Currently Amended) The system of claim 11, wherein at least one of the four or more mobile communication devices is in communication with the at least one distributed mobile architecture server via the at least one urban base transceiver station and the mobile switching ~~center/base~~ center and base station controller.

14. (Currently Amended) The system of claim 11, wherein the at least one distributed mobile architecture server is coupled to the mobile switching ~~center/base~~ center and base station controller via an E1 connection.

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15. (Currently Amended) The system of claim 11, wherein the at least one distributed mobile architecture server is coupled to the mobile switching ~~center/base~~ center and base station controller via a T1 connection.

16. (Currently Amended) The system of claim 11, wherein the at least one distributed mobile architecture server is coupled to the mobile switching ~~center/base~~ center and base station controller via a wireless connection.

17. (Original) The system of claim 16, wherein the wireless connection is a microwave connection.

18. (Withdrawn) A system, comprising:

at least one distributed mobile architecture server;

at least one base transceiver station coupled to the distributed mobile architecture server;

a public switched telephone network coupled to the distributed mobile architecture server; and

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

19. (Withdrawn) The system of claim 18, wherein the four or more communication devices are mobile communication devices that are in communication with the distributed mobile architecture server via the at least one base transceiver station.

20. (Withdrawn) The system of claim 18, wherein at least one of the four or more communication devices is in communication with the distributed mobile architecture server via the public switched telephone network.

21. (Withdrawn) The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via an E1 connection.

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22. (Withdrawn) The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via a T1 connection.

23. (Withdrawn) A system, comprising:

at least one portable distributed mobile architecture server mounted in a vehicle;

at least one portable base transceiver station coupled to the distributed mobile architecture server and mounted in the vehicle;

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

24. (Withdrawn) The system of claim 23, wherein the four or more communication devices communicate via the portable base station transceiver and the distributed mobile architecture server.

25. (New) The system of claim 11, wherein the at least one rural base transceiver station is located outside an urban coverage area, and wherein the mobile switching center and base station controller are located within the urban coverage area, and wherein the at least one urban base transceiver station is located within the urban coverage area.

26. (New) The system of claim 11, wherein the at least one distributed mobile architecture server comprises at least one vehicle mounted distributed mobile architecture server.

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REMARKS

This amendment is in response to the Office Action dated March 14, 2008 (the "Office Action"). The Office has restricted claims 1-24 of this application into Species 1 (claims 1-6), Species 2 (claims 7-10), Species 3 (claims 11-17), Species 4 (claims 18-22), and Species 5 (claims 23-24). Applicant elects the claims of Species 3 (claims 11-17) and provisionally withdraws the non-elected claims of Species 1, 2, 4 and 5. The restriction is respectfully traversed in order to preserve the issue for subsequent petition since the examination of all of the claims is not believed to create an undue burden on the USPTO and since the subject matter among the species is not independent and distinct as required by statute. Furthermore, different classifications as recited by the USPTO are not adequate grounds for restriction since the USPTO has historically examined applications containing multiple sets of claims with different classifications.

As noted above, claims 1-10 and 18-24 have been provisionally withdrawn in response to the restriction requirement. Claims 11-17 and 25-26 are pending in the application. Claims 11-16 have been amended. Claims 25-26 have been added. No new matter has been added.

Claims 11-13 are Allowable

The Office has rejected claims 11-13 at paragraph 1 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,411,825 ("Csapo"), in view of U.S. Application No. 2006/0046760 ("Bertino"). Applicant respectfully traverses the rejections.

The cited portions of Csapo and Bertino, individually or in combination, do not disclose or suggest each and every element of claim 11. For example, the cited portions of Csapo and Bertino fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

Instead, the cited portions of Csapo describe multiple base transceiver stations (BTSs) coupled to a single base station controller (BSC). *See* Csapo, col. 1, lines 59-67. The Office asserts that the BSC 70 in Figure 3 is read on by the "distributed mobile architecture server,"

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because according to the Applicant's specification, the DMA serves as a controlling apparatus to control external BTS's. *See* Office Action, p. 6. However, the cited portions of Csapo fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

In further contrast to claim 11, the cited portions of Bertino describe an "optimistic talk-permit reliability enhancement in a push-to-talk system." *See* Bartino, Title. However, the cited portions of Bartino fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

Thus, the cited portions of Csapo and Bertino, individually or in combination, fail to disclose or suggest at least one element of claim 11. Hence, claim 11 is allowable. Claims 12-13 depend from claim 11, which Applicant has shown to be allowable. Therefore, claims 12-13 are allowable at least by virtue of their dependence from claim 11.

Claims 14-15 are Allowable

The Office has rejected claims 14-15 at paragraph 2 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Csapo, in view of Bertino, and further in view of U.S. Application No. 2003/0100342 ("Ham"). Applicant respectfully traverses the rejections.

Claims 14-15 depend from claim 11. As explained above, the cited portions of Csapo and Bertino fail to disclose or suggest at least one element of claim 11. The cited portions of Ham do not disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Csapo and Bertino. For example, the cited portions of Ham fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station

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controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

In contrast to claim 11, the cited portions of Ham describe a BSC connected to a public MSC via either a T1 or E1 connection. *See* Ham, paragraph 0011. However, the cited portions of Ham fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

Therefore, the cited portions of Csapo, Bertino, and Ham, individually or in combination, fail to disclose or suggest at least one element of claim 11, or of claims 14-15, which depend from claim 11. Hence, claims 14-15 are allowable.

Claim 16 is Allowable

The Office has rejected claim 16 at paragraph 3 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Csapo, in view of Bertino, and further in view of U.S. Application No. 2004/0259556 ("Czys"). Applicant respectfully traverses the rejections.

Claim 16 depends from claim 11. As explained above, the cited portions of Csapo and Bertino fail to disclose or suggest at least one element of claim 11. The cited portions of Czys do not disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Csapo and Bertino. For example, the cited portions of Czys fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

In contrast to claim 11, the cited portions of Czys describe a network comprising a MSC connected by wireless links to BSCs. *See* Czys, paragraph 0063. However, the cited portions of

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Czys fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

Therefore, the cited portions of Csapo, Bertino, and Czys, individually or in combination, fail to disclose or suggest at least one element of claim 11, or of claim 16, which depends from claim 11. Hence, claim 16 is allowable.

Claims 17 is Allowable

The Office has rejected claim 17 at paragraph 4 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Csapo, in view of Bertino, and further in view of Czys, and further in view of U.S. Application No. 2004/0204097 ("Scheinert"). Applicant respectfully traverses the rejections.

Claim 17 depends from claim 11. As explained above, the cited portions of Csapo and Bertino fail to disclose or suggest at least one element of claim 11. The cited portions of Scheinert do not disclose or suggest the elements of claim 11 not disclosed or suggested by the cited portions of Csapo and Bertino. For example, the cited portions of Scheinert fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

In contrast to claim 11, the cited portions of Scheinert describe connecting base stations and BSCs, and BSCs and a MSC via dedicated lines which may be a point-to-point microwave relay. *See* Scheinert, paragraph 0006. However, the cited portions of Scheinert fail to disclose or suggest at least one distributed mobile architecture server comprising a computer readable medium, a mobile switching center module embedded in the computer readable medium, and a base station controller module embedded in the computer readable medium, where the at least one distributed mobile architecture server is in direct physical connection with a wireless

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transceiver, and where telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server, as in claim 11.

Therefore, the cited portions of Csapo, Bertino, and Scheinert, individually or in combination, fail to disclose or suggest at least one element of claim 11, or of claim 17, which depends from claim 11. Hence, claim 17 is allowable.

New Claims 25-26 are Allowable

Claims 25-26 depend from claim 11, which Applicant has shown to be allowable. Therefore, claims 25-26 are allowable at least by virtue of their dependence from claim 11. Further, the dependent claims recite additional elements not disclosed or suggested by the cited portions of the cited references.

For example, the cited portions of Csapo, Bertino, Ham, Czys, and Scheinert, individually or in combination, fail to disclose or suggest at least one rural base transceiver station located outside an urban coverage area, a mobile switching center and base station controller located within the urban coverage area, and at least one urban base transceiver station located within the urban coverage area, as in claim 25. For this additional reason, claim 25 is allowable.

As a further example, the cited portions of Csapo, Bertino, Ham, Czys, and Scheinert, individually or in combination, fail to disclose or suggest at least one vehicle mounted distributed mobile architecture server, as in claim 26. For this additional reason, claim 26 is allowable.

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.

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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,

6-5-2008
Date

Jeffrey G. Toler, Reg. No. 38,342
Attorney for Applicant
Toler Law Group, Intellectual Properties
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Austin, Texas 78759
(512) 327-5515 (phone)
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Electronic Acknowledgement Receipt

EFS ID:	3414433
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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/jeaneaux jordan
Filer Authorized By:	Jeffrey G. Toler
Attorney Docket Number:	1082-0003
Receipt Date:	06-JUN-2008
Filing Date:	13-APR-2005
Time Stamp:	11:31:35
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		1082-0003_Response_to_Non-Final_Office_Action.pdf	1152298 4ce5bd62022cd301cdd36c52ff78e82f32cbc162	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment - After Non-Final Rejection	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	12
Warnings:			
Information:			
	Total Files Size (in bytes):	1152298	

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

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

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

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

PTO/SB/06 (07-06)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/105,173	Filing Date 04/13/2005	☐ 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 ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	06/06/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 26	Minus	** 24	= 2	X $25 =	50	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 5	Minus	***5	= 0	X $105 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	50	OR	TOTAL ADD'L FEE	

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

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

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

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

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

Legal Instrument Examiner:
/TINA J. BARDEN/

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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 09/11/2008

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

EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
09/11/2008	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)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

-- 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 *06 June 2008*.

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

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

Disposition of Claims

4)☒ Claim(s) *11-17,25 and 26* is/are pending in the application.

4a) Of the above claim(s) *1-10 and 18-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-17,25 and 26* 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: _____.

DETAILED ACTION

Election/Restrictions

1. **Claims 1-10 and 18-24** are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 6th, 2008.

2. Applicant's election with traverse of **Species 3 (claims 11-17)** in the reply filed on June 6th, 2008 is acknowledged. The traversal is on the ground(s) that all of the pending claims are not believed to create an undue burden and the subject matter among the species is not independent and distinct. This is not found persuasive because claims 1-6 refer to a method of providing telephone communication allowing a group call between four or more participants. This is independent and distinct from claims 7-10 because claim 1 goes into detail of each participant calling from a separate telephone device communicating with a base transceiver station that is coupled to a distributed mobile architecture server. Furthermore, the above mentioned claims are independent and distinct from claims 11-17 and 25-26 because claim 11 goes into detail of a distributed mobile architecture server and the physical connections between the server and other external devices. Furthermore, the above mentioned claims are independent and distinct from claims 18-22 because claim 18 goes into detail of a public switched telephone network coupled to the distributed mobile architecture server. Furthermore, the above mentioned claims are independent and distinct from claims 23-

24 because claim 23 goes into detail of the distributed mobile architecture server in relation with a vehicle.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

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

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

4. **Claim 25** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitation is considered new matter because the specification is silent as to the concept of this claim. Figure 10 of the Applicant's invention is the closest interpretation of this claim, however claim 25 does not follow the figure and the ideas of the specification, and the Examiner is thus rejecting this claim as a new matter issue.

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 negatived by the manner in which the invention was made.

5. **Claims 11-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al, US 2005/0176413 A1 (hereafter referenced as Lee), in view of Csapo et al, US Patent 6,411,825 (hereafter referenced as Csapo), and further in view of Bertino et al, US 2006/0046760 A1 (hereafter referenced as Bertino).

Regarding **Claim 11**, Lee teaches at least one distributed mobile architecture server comprising: “a computer readable medium” (see Paragraph 0136). Private BSC 20 from Figure 4 is read on by “distributed mobile architecture server,” because according to the Applicant’s specification, the DMA serves as a controlling apparatus to control external BTS's. Lee also teaches “a mobile switching center module embedded in the computer readable medium” (see Paragraph 0077 and Paragraph 0136). Lee also teaches “a base station controller module embedded in the computer readable medium” (see Paragraph 0077 and Paragraph 0136). Lee does not teach “wherein the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver." However, Csapo generally teaches "wherein the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver” (see Column 1 lines 59-67 and Column 2 lines 1-10). BSC 70 from Figure 3 is read on by “distributed mobile architecture server,” because according to the Applicant’s specification, the DMA serves as a controlling apparatus to control external BTS's. Lee also does not teach “wherein telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server.” However, Csapo generally teaches “wherein telephony traffic received from the wireless

transceiver is switchable by the at least one distributed mobile architecture server" (see Column 1 lines 59-67). "Switchable by the at least one distributed mobile architecture server" reads on how the BSC 70 diverts, or "switches" information/data to the MSC 72. Lee also does not teach "at least one rural base transceiver station coupled to the distributed mobile architecture server." However, Csapo generally teaches "at least one rural base transceiver station coupled to the distributed mobile architecture server" (see Column 1 lines 59-67 and Colum 2 lines 1-10). The upper BTS 66 in Figure 3 could easily be located in a "rural" community, which can then be connected to the upper BSC 70. Lee also does not teach "a mobile switching center and base station controller coupled to the distributed mobile architecture server." However, Csapo generally teaches "a mobile switching center and base station controller coupled to the distributed mobile architecture server" (see Column 1 lines 59-67 and Column 2 lines 1-10). The lower "Base station controller" 70 is connected to the "mobile switching center" 72, which is further connected to the "distributed mobile architecture server" as defined above. Thus, the "mobile switching center and base station controller are coupled to the distributed mobile architecture server." Lee also does not teach "at least one urban base transceiver station coupled to the mobile switching center and base station controller." However, Csapo generally teaches "at least one urban base transceiver station coupled to the mobile switching center and base station controller" (see Column 1 lines 59-67 and Column 2 lines 1-10). Figure 3 discloses a "base transceiver station" 66, which is located below the other "rural base transceiver station." Thus, the lower base transceiver station 66 could easily be located in an "urban" community, which

according to Figure 3, can then be "coupled to the mobile switching center and the" lower "base station controller" as defined above. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Lee to incorporate the limitations of Csapo as taught by Csapo, for the purpose of increasing the versatility, feasibility, and system efficiency of the distributed mobile architecture by incorporating the limitations into the method and system for providing data service in interworking wireless public and private networks. The combination of Lee and Csapo does not teach "wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices." However, Bertino generally teaches "wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices" (see Abstract, Paragraph 0009, and Paragraphs 0028 through 0031). "Program" reads on the ability of the group communication server 32 to determine whether it can bridge the communication or not, between the "four or more mobile communication devices." It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination of Lee and Csapo so that the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices as taught by Bertino, for the purpose of increasing the versatility, feasibility, and system efficiency of the distributed mobile architecture by incorporating the limitations into the method and system for providing data service in interworking wireless public and private networks of the combination.

Regarding **Claim 12**, the combination of Lee, Csapo, and Bertino generally teaches “wherein the four or more mobile communication devices are in communication with the at least one distributed mobile architecture server via the at least one rural base transceiver station" (see Paragraph 0030 and Paragraph 0031 of Bertino). Figure 2 discloses that between the "mobile communication devices” and the “distributed mobile architecture server,” there are many "base transceiver stations" which serve as interfaces between the two entities.

Regarding **Claim 13**, the combination of Lee, Csapo, and Bertino generally teaches “wherein at least one of the four or more mobile communication devices is in communication with the at least one distributed mobile architecture server via the at least one urban base transceiver station and the mobile switching center and base station controller” (see Paragraph 0030 and Paragraph 0031). Figure 2 discloses that between the "mobile communication devices” and the “distributed mobile architecture server,” one of the BTS’s could easily be placed in an "urban" environment, making it an "urban base transceiver station." Also, between the "mobile communication devices" and the "distributed mobile architecture server,” there are many “mobile switching centers/base station controllers” which serve as interfaces between the two entities.

6. **Claims 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Csapo and Bertino, as applied to Claim 11 above, and further in view of Ham et al, US 2003/0100342 A1 (hereafter referenced as Ham).

Regarding **Claim 14**, the combination of Lee, Csapo, and Bertino does not teach “wherein the at least one distributed mobile architecture server is coupled to the mobile

switching center and base station controller via an E1 connection." However, Ham generally teaches "wherein the at least one distributed mobile architecture server is coupled to the mobile switching center and base station controller via an E1 connection" (see Paragraph 0011, Paragraph 0023, and Paragraph 0024). As described in claim 11, the BSC is read on by the "distributed mobile architecture server," because according to the Applicant's specification, the DMA serves as a controlling apparatus to control external BTS's. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination so that the distributed mobile architecture server is coupled to the mobile switching center and base station controller via an E1 connection as taught by Ham, for the purpose of providing a complete system to allow a group call between four or more mobile communication devices when there is a direct E1 connection.

Regarding **Claim 15**, the combination of Lee, Csapo, and Bertino does not teach "wherein the at least one distributed mobile architecture server is coupled to the mobile switching center and base station controller via a T1 connection." However, Ham generally teaches "wherein the at least one distributed mobile architecture server is coupled to the mobile switching center and base station controller via a T1 connection" (see Paragraph 0011, Paragraph 0023, and Paragraph 0024).

Regarding **Claim 16**, the combination of Lee, Csapo, and Bertino does not teach "wherein the at least one distributed mobile architecture server is coupled to the mobile switching center and base station controller via a wireless connection." However, Ham generally teaches "wherein the at least one distributed mobile architecture server is

coupled to the mobile switching center and base station controller via a wireless connection" (see Paragraph 0011, Paragraph 0023, and Paragraph 0024). According to the Applicant's Specification in Paragraph 0051, a T1/E1 connection is a type of "wireless connection" as well.

7. **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Csapo and Bertino, as applied to Claim 16 above, and further in view of Scheinert et al, US 2004/0204097 A1 (hereafter referenced as Scheinert).

Regarding **Claim 17**, the combination of Lee, Csapo, and Bertino does not teach "wherein the wireless connection is a microwave connection." However, Scheinert generally teaches "wherein the wireless connection is a microwave connection" (see Paragraph 0006). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination so that the wireless connection is a microwave connection as taught by Scheinert, for the purpose of providing a complete system to allow a group call between four or more mobile communication devices when there is a direct microwave connection.

8. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Csapo and Bertino, as applied to Claim 11 above, and further in view of Maggenti et al, US 2006/0203746 A1 (hereafter referenced as Maggenti).

Regarding **Claim 26**, the combination of Lee, Csapo, and Bertino does not teach "wherein the at least one distributed mobile architecture server comprises at least one vehicle mounted distributed mobile architecture server." However, Maggenti generally teaches "wherein the at least one distributed mobile architecture server comprises at

least one vehicle mounted distributed mobile architecture server" (see Paragraph 0030 and Figure 2). As described in claim 11, the BSC is read on by the "distributed mobile architecture server," because according to the Applicant's specification, the DMA serves as a controlling apparatus to control external BTS's. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination so that the distributed mobile architecture server comprises at least one vehicle mounted distributed mobile architecture server as taught by Maggenti, for the purpose of increasing the versatility, feasibility, and system efficiency of the distributed mobile architecture by incorporating the limitations into the method and system for providing data service in interworking wireless public and private networks of the combination.

Response to Arguments

9. Applicant's arguments with respect to claims 11-17 and 25-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. 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 Ankur Jain whose telephone number is 571-272-9747. The examiner can normally be reached on M-F, 7:30 am to 5:00 pm, EST, Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan, can be reached on 571-272-7855. 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.

/Ankur Jain/

Examiner, Art Unit 2618

09/09/2008

/Yuwen Pan/

Primary Examiner, Art Unit 2618

Notice of References Cited	Application/Control No. 11/105,173	Applicant(s)/Patent Under Reexamination PAN, SHAOWEI	
	Examiner ANKUR JAIN	Art Unit 2618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2005/0176413 A1	08-2005	Lee et al.	455/414.1
*	B	US-2006/0203746 A1	09-2006	Maggenti et al.	370/254
	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.

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

✓	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	02/27/2008	09/09/2008							
	1	N	N							
	2	N	N							
	3	N	N							
	4	N	N							
	5	N	N							
	6	N	N							
	7	N	N							
	8	N	N							
	9	N	N							
	10	N	N							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
	17	✓	✓							
	18	N	N							
	19	N	N							
	20	N	N							
	21	N	N							
	22	N	N							
	23	N	N							
	24	N	N							
	25		✓							
	26		✓							

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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	11/105173.APP. AND (area SAME within SAME urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:01
L2	1	11/105173.APP. AND (server WITH vehicle $2)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:06
L3	18	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$ or US-20040204097-$ or US-20040233892-$ or US-20040259556-$ or US-20030100342-$ or US-20050176413-$). did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/09/09 10:16
L4	0	L3 AND (vehicle$2 WITH (controller$2 or BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:17
L5	3	(vehicle$2 WITH (mount$4) WITH (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:18
L6	139	(vehicle$2 SAME (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:19
L7	39	(vehicle$2 WITH (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:19

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L8	5	(vehicle$2 WITH locat $4 WITH (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:24
S1	12	("20010036173" | "20010055298" | "20020058502" | "20030153343" | "20040018829" | "6411825" | "6515985" | "6751207" | "6760325" | "6807431" | "6807432" | "H001918").PN.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 12:28
S2	37	((SHAOWEI) near2 (PAN)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/26 14:17
S3	1	S2 AND ((rural AND urban AND mobile AND server).CLM.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:19
S4	1	11/105173.APP.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:20
S5	15	DMA ADJ server	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:44
S6	51	(DMA or (distributed ADJ mobile ADJ architecture)) WITH (BTS or (base ADJ station$2))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 15:03
S7	5	((distributed ADJ mobile ADJ architecture)) WITH (BTS or (base ADJ station$2))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 15:08
S8	162	(server) near5 (program$4) near5 (group or party or parties or team$2 or users) near5 (call)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:27
S9	23	S8 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:27

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S10	1	((group ADJ call ADJ server) near5 (program $6)) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:32
S11	3	((group ADJ call) near5 server near5 program $6) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:33
S12	10	((group) near5 server near5 program$6) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:34
S13	1	"6411825".pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 11:35
S14	1	"6411825".pn. AND (BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 11:36
S15	1	"20060046760"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
S16	1	"20060046760" AND (program WITH server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
S17	1	"20060046760" AND (program SAME server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
S18	13	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$).did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/02/27 12:48
S19	4	S18 AND (E1)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:48

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S20	4	S18 AND (E1 or T1)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:48
S21	6	(E1 or T1) WITH DMA WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:51
S22	16	(E1 or T1) WITH server WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:53
S23	752	(BSC or MSC) WITH (E1 or T1) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:58
S24	384	S23 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:58
S25	3	S24 AND 455/518,519.OCLS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:59
S26	209	(BSC or MSC) WITH ((E1 or T1) near7 (connect$4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:59
S27	134	S26 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
S28	188	(BSC or MSC) WITH ((E1 or T1) near5 (connect$4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
S29	118	S28 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
S30	92	(BSC or MSC) WITH ((E1) near7 (connect $4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:10
S31	50	S30 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:10

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S32	5240	(BSC or MSC) WITH (wireless) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:40
S33	1343	(BSC or MSC) near5 (wireless) near5 (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:41
S34	28	(BSC or MSC) near5 (wireless ADJ connection) near5 (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:41
S35	198	(BSC) near5 wireless near5 (MSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:49
S36	115	S35 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:50
S37	16	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$ or US-20040204097-$ or US-20040233892-$ or US-20040259556-$). did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/02/27 15:03
S38	3	S37 AND (micro $2wave or microwave)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 15:04
S39	1	"20030100342"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 15:34

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S40	4	((BSC) near5 (includ$4 or compris$4 or consist $4)) SAME ((memory or database$3 or server $3) WITH (MSC near5 (module$2)) WITH (BSC near5 (module $2)))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:31
S41	2	"20050176413" AND (medium WITH module)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:35
S42	1	"6411825".pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:38
S43	0	"6411825".pn. AND (traffic$4 WITH switch $4 WITH base WITH control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:40
S44	0	"6411825".pn. AND (traffic$4 SAME switch $4 SAME base SAME control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:40
S45	1	"6411825".pn. AND (traffic$4 SAME base SAME control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:40
S46	1	"6411825".pn. AND (PMU WITH control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 15:01
S47	1	11/105173.APP.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 11:59
S48	61898	11/105173.APP. (area SAME station SAME mobile urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 12:56
S49	1	11/105173.APP. AND (area SAME station SAME mobile urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 12:56
S50	0	11/105173.APP. AND (area SAME station SAME within SAME urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 12:59

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S51	1	11/105173.APP. AND (server SAME vehicle SAME mount$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 13:00
S52	2	"20050176413" AND (medium WITH data WITH read$6)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 14:29
S53	2	"20050176413" AND (module$3 WITH data WITH read$6)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 14:29
S54	1	"6411825".pn. AND (traffic$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:31
S55	1	"6411825".pn. AND ((user$3 or traffic$4 or mobile$3) SAME (base) SAME (controller $4))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:36
S56	1	"6411825".pn. AND ((traffic$4 or user$3 or mobile$3) WITH (BSC) WITH (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:43
S57	1	"6411825".pn. AND ((BSC) WITH (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:44
S58	1	"6411825".pn. AND ((BSC) SAME (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:44
S59	0	"6411825".pn. AND ((control$6) WITH (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:44
S60	1	"6411825".pn. AND ((control$6) SAME (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:45
S61	1	"6411825".pn. AND (center)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:45
S62	1	"6411825".pn. AND (MSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:45

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9/9/2008 11:48:41 AM
C:\Documents and Settings\ajain1\My Documents\EAST\Workspaces\11105173.wsp

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 10/01/2008

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

EXAMINER	
JAIN, ANKUR	
ART UNIT	**PAPER NUMBER**
2618	

MAIL DATE	DELIVERY MODE
10/01/2008	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.

Interview Summary	Application No.	Applicant(s)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

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

(1) *ANKUR JAIN*. (3)*Yuwen Pan*.

(2) *Jeffrey G. Toler*. (4)*Roy Salvagio*.

Date of Interview: *23 September 2008*.

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: *New proposed claims were presented through fax*.

Identification of prior art discussed: *None*.

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 and Applicant have agreed that a RCE should be electronically filed the week of September 22nd, 2008 (this week) in order to expedite prosecution. In addition, the Applicant will double check the proposed representative claims to delete the word "module" where appropriate in order to emphasize solely the functionality of certain elements, such as the call detail record (CDR) module for example* .

(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.

/Yuwen Pan/ Primary Examiner, Art Unit 2618	

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Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (08/08)
Approved for use through 09/30/2008. 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	11/105,173	Filing Date	2005-04-13	Docket Number (if applicable)	1082-0003	Art Unit	2618
First Named Inventor	Shaowei Pan			Examiner Name	JAIN, ANKUR		

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 502469

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

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PTO/SB/30EFS (08/08)
Approved for use through 09/30/2008. OMB 0651-0031
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Jeffrey G. Toler/	Date (YYYY-MM-DD)	2008-10-01
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 record s.

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.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Shoawei Pan		
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		
App. No.:	11/105,173	Filed:	April 13, 2005
Examiner:	JAIN, Ankur	Group Art Unit:	2618
Customer No.:	60533	Confirmation No.:	8703
Atty. Dkt. No.:	1082-0003		

MS: Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

SUBMISSION ACCOMPANYING REQUEST FOR CONTINUED EXAMINATION PURSUANT TO 37 C.F.R. § 1.114

Dear Sir:

In response to the Final Office Action mailed September 11, 2008, 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. (Withdrawn) A method of providing telephone communication, comprising allowing a group call between four or more participants, each participant calling from a separate telephone device communicating with a base transceiver station that is coupled to a distributed mobile architecture server.

2. (Withdrawn) The method of claim 1, further comprising providing full duplex calling capability between all participants via one or more of the distributed mobile architecture servers.

3. (Withdrawn) The method of claim 2, further comprising allowing one or more participants to disconnect from the group call without effecting other participants remaining on the group call.

4. (Withdrawn) The method of claim 3, further comprising providing full duplex calling capability between the remaining participants via the one or more distributed mobile architecture server.

5. (Withdrawn) The method of claim 4, further comprising allowing one or more added participants to connect to the group call.

6. (Withdrawn) The method of claim 5, further comprising providing full duplex calling capability between the additional participants via the one or more distributed mobile architecture servers.

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7. (Withdrawn) A system, comprising:

four or more mobile communication devices; and

a distributed mobile architecture server, the distributed mobile architecture server comprising a program to allow a group call between the four or more mobile communication devices.

8. (Withdrawn) The system of claim 8, wherein the program further comprises an instruction to provide full duplex calling capability between all of the mobile communication devices.

9. (Withdrawn) The system of claim 8, wherein the program further comprises an instruction to allow one or more of the mobile communication devices to disconnect from the group call without effecting other participants remaining on the group call.

10. (Withdrawn) The system of claim 9, wherein the program further comprises an instruction for allowing one or more additional telephones to connect to the group call.

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11. (Currently Amended) A system, comprising:

~~at least one~~ a first distributed mobile architecture server comprising:

a first computer readable medium;

a first mobile switching center module embedded in the first computer readable medium; and

a first base station controller module embedded in the first computer readable medium; and

a first call detail record (CDR) generator embedded in the first computer readable medium;

wherein the ~~at least one~~ first distributed mobile architecture server is in direct physical connection with a first wireless transceiver; and

~~wherein telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server;~~

~~at least one rural base transceiver station coupled to the at least one distributed mobile architecture server;~~

~~a mobile switching center and base station controller coupled to the at least one distributed mobile architecture server;~~

~~at least one urban base transceiver station coupled to the mobile switching center and base station controller; and~~

~~wherein the at least one distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices.~~

a second distributed mobile architecture server, comprising:

a second computer readable medium;

a second mobile switching center module embedded in the second computer readable medium;

a second base station controller module embedded in the second computer readable medium; and

a second call detail record (CDR) generator embedded in the second computer readable medium;

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a media gateway including group call logic to allow a group call between four or more mobile communication devices;

wherein the second distributed mobile architecture server is in direct physical connection with a second wireless transceiver;

wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via a peer-to-peer connection.

12. – 17. (Canceled).

18. (Withdrawn) A system, comprising:

at least one distributed mobile architecture server;

at least one base transceiver station coupled to the distributed mobile architecture server;

a public switched telephone network coupled to the distributed mobile architecture server; and

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

19. (Withdrawn) The system of claim 18, wherein the four or more communication devices are mobile communication devices that are in communication with the distributed mobile architecture server via the at least one base transceiver station.

20. (Withdrawn) The system of claim 18, wherein at least one of the four or more communication devices is in communication with the distributed mobile architecture server via the public switched telephone network.

21. (Withdrawn) The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via an E1 connection.

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22. (Withdrawn) The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via a T1 connection.

23. (Withdrawn) A system, comprising:

at least one portable distributed mobile architecture server mounted in a vehicle;

at least one portable base transceiver station coupled to the distributed mobile architecture server and mounted in the vehicle;

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

24. (Withdrawn) The system of claim 23, wherein the four or more communication devices communicate via the portable base station transceiver and the distributed mobile architecture server.

25. – 26. (Canceled).

27. (New) The system of claim 11, wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the first distributed mobile architecture server moves from a first location to a second location.

28. (New) The system of claim 27, wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the second distributed mobile architecture server moves from a third location to a fourth location.

29. (New) The system of claim 11, wherein the first distributed mobile architecture server further comprises:

a first home locator resource embedded in the first computer readable medium; and

a first visitor locator resource embedded in the first computer readable medium.

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30. (New) The system of claim 29, wherein the first distributed mobile architecture server further comprises:

a first operations, administration, maintenance, and provisioning (OAMP) module embedded in the first computer readable medium;

a first authentication, authorization, and accounting (AAA) module embedded in the first computer readable medium;

a first packet data server node (PDSN) gateway embedded in the first computer readable medium; and

a first gateway general packet radio service (GPRS) support node (GGSN) embedded in the first computer readable medium.

31. (New) The system of claim 11, wherein the second distributed mobile architecture server further comprises:

a second home locator resource embedded in the second computer readable medium; and

a second visitor locator resource embedded in the second computer readable medium.

32. (New) The system of claim 31, wherein the second distributed mobile architecture server further comprises:

a second operations, administration, maintenance, and provisioning (OAMP) module embedded in the second computer readable medium;

a second authentication, authorization, and accounting (AAA) module embedded in the second computer readable medium;

a second packet data server node (PDSN) gateway embedded in the second computer readable medium; and

a second gateway general packet radio service (GPRS) support node (GGSN) embedded in the second computer readable medium.

33. (New) The system of claim 11, wherein the first distributed mobile architecture server is located in a city area, and wherein the second distributed mobile architecture server is located in an urban fringe area.

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34. (New) The system of claim 11, wherein the first distributed mobile architecture server includes administrative information corresponding to one or more wireless telephone device subscribers.

35. (New) The system of claim 34, wherein the first distributed mobile architecture server further comprises a first gateway to a public switched telephone network.

36. (New) The system of claim 35, wherein the first distributed mobile architecture server further comprises a first media gateway.

37. (New) The system of claim 36, wherein the first distributed mobile architecture server further comprises a first Internet phone gateway.

38. (New) The system of claim 37, wherein the first distributed mobile architecture server further comprises a first signaling system seven (SS7) gateway.

39. (New) The system of claim 38, wherein the first distributed mobile architecture server further comprises a first Session Initiation Protocol gateway.

40. (New) The system of claim 11, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server comprises a first cellular radio network controller.

41. (New) The system of claim 40, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server further comprises a first cellular selection/distribution unit.

42. (New) The system of claim 41, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server further comprises a first call protocol controller.

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43. (New) The system of claim 42, wherein the first call protocol controller communicates with the first wireless transceiver of the first distributed mobile architecture server.

44. (New) A method of wireless communication, the method comprising:

receiving a call from a first mobile communication device at a first wireless transceiver;

forwarding the call from the first wireless transceiver to a distributed mobile architecture server, wherein the distributed mobile architecture server includes a mobile switch center module, a call detail record (CDR) generator, a media gateway including group calling functionality to support a group call between four or more mobile communication devices, and a base station controller module disposed within a single unit; and

routing the call via the distributed mobile architecture server to a second wireless transceiver, to communicate with respect to a second mobile communication device.

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45. (New) A telephone network comprising:

a plurality of cellular coverage sites;

wherein each of the plurality of cellular coverage sites comprises:

a transceiver; and

a distributed mobile architecture server in direct physical connection with the transceiver; and

wherein each distributed mobile architecture server comprises:

a housing;

a mobile switch center module within the housing;

a base station controller module within the housing;

a call detail record (CDR) generator within the housing; and

a media gateway within the housing including group call logic to allow a group call between four or more mobile communication devices;

wherein each of the distributed mobile architecture servers within each of the plurality of cellular coverage sites are interconnected by an Internet protocol data network; and

wherein telephony traffic received by the transceivers is switched and routed by one or more of the distributed mobile architecture servers.

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46. (New) A distributed communication system comprising:

a first wireless communication site including a first transmission antenna, a first base station coupled to the first transmission antenna, and a first computer system, wherein the first computer system includes a first mobile switching system module, a first call detail record generator, a first media gateway including group call logic to allow a group call between four or more mobile communication devices, and a first base station controller module disposed within a single first unit;

a second wireless communication site including a second transmission antenna, a second base station coupled to the second transmission antenna, and a second computer system, wherein the second computer system includes a second mobile switching system module, a second call detail record generator, a second media gateway including group call logic to allow a group call between four or more mobile communication devices, and a second base station controller module disposed within a single second unit; and

an Internet protocol network coupled to the first computer system and the second computer system.

47. (New) A communications system comprising:

a distributed mobile architecture server including a mobile switching center module, a call detail record generator, a media gateway including group call logic to allow a group call between four or more mobile communication devices, and a base station controller module disposed within the same housing; and

wherein the distributed mobile architecture server is coupled to a cellular system mobile switching center, a switching transfer point of a stand-alone carrier, and a public switched telephone network.

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REMARKS

This amendment is in response to the Final Office Action dated September 11, 2008 (the "Office Action"). Claims 11 and 27-47 are pending in the application. Claims 1-10 and 18-24 were previously withdrawn, pursuant to a Restriction Requirement. Claims 12-17 and 25-26 have been cancelled without prejudice or disclaimer. Claim 11 has been amended. Claims 27-47 have been added. No new matter has been added. Support for the amended claims and new claims may be found in at least paragraphs 0011, 0031, 0033, 0034, 0036, 0039, and 0065 of the application.

Claim 25

The Office has rejected claim 25 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claim 25 has been cancelled without prejudice or disclaimer, rendering the rejection moot.

Claims 11-13

The Office has rejected claims 11-13, under 35 U.S.C. §103(a), as being unpatentable over U.S. Published Application No. 2005/0176413 ("Lee"), in view of U.S. Patent No. 6,411,825 ("Csapo"), and further in view of U.S. Published Application No. 2006/0046760 ("Bertino"). Claims 12-13 have been cancelled without prejudice or disclaimer. Applicant respectfully traverses the remainder of the rejections.

The cited portions of Lee, Csapo and Bertino, individually or in combination, do not disclose or suggest the specific combination of claim 11. For example, the cited portions of the above-cited references fail to disclose or suggest a first call detail record (CDR) generator embedded in the first computer readable medium of the first distributed mobile architecture (DMA) server or a second call detail record (CDR) generator embedded in the second computer readable medium of the second DMA server, as in claim 11.

In contrast to claim 11, the cited portions of Lee describe a method and system for providing data service in interworking wireless public and private networks. *See* Lee, Title. In further contrast to claim 11, the cited portions of Csapo describe a telecommunication base station transceiver subsystem that can be configured to provide single or multi-carrier frequency service. *See* Csapo, Abstract. In further contrast to claim 11, the cited portions of Bertino describe an "optimistic talk-permit reliability enhancement in a push-to-talk system." *See*

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Bartino, Title. The cited portions of Lee, Csapo and Bertino fail to disclose or suggest a CDR generator embedded in a computer readable medium.

The cited portions of Lee, Csapo and Bertino, individually or in combination, do not disclose or suggest a system capable of storing billing records at a DMA server. Since the DMA servers include administrative and call record storage capability, the DMA servers 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 server is detached from the network (e.g., a link to a PSTN goes down). The call records can be stored at each of the DMA servers (rather than at another site). The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a first CDR generator embedded in the first computer readable medium of the first DMA server or a second CDR generator embedded in the second computer readable medium of the second DMA server, as in claim 11.

As a further example, the cited portions of the above-cited references fail to disclose or suggest that telephony traffic received at the first wireless transceiver of the first DMA server is transmitted from the first DMA server to the second DMA server via a peer-to-peer connection, as in claim 11. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a communications system where telephony traffic received at the first wireless transceiver of the first DMA server is transmitted from the first DMA server to the second DMA server via a peer-to-peer connection, as in claim 11.

Therefore, the cited portions of the above-cited references fail to disclose or suggest the specific combination of claim 11. Hence, claim 11 is allowable.

Claims 14-16

The Office has rejected claims 14-16, under 35 U.S.C. §103(a), as being unpatentable over Lee, in view of Csapo and Bertino, and further in view of U.S. Published Application No. 2003/0100342 ("Ham"). Claims 14-16 have been cancelled without prejudice or disclaimer, rendering the rejections moot.

Claim 17

The Office has rejected claim 17, under 35 U.S.C. §103(a), as being unpatentable over Lee, in view of Csapo and Bertino, and further in view of U.S. Published Application No.

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2004/0204097 ("Scheinert"). Claim 17 has been cancelled without prejudice or disclaimer, rendering the rejection moot.

Claim 26

The Office has rejected claim 26, under 35 U.S.C. §103(a), as being unpatentable over Lee, in view of Csapo and Bertino, and further in view of U.S. Published Application No. 2006/0203746 ("Maggenti"). Claim 26 has been cancelled without prejudice or disclaimer, rendering the rejection moot.

Claims 27-43 are Allowable

Claims 27-43 are allowable, at least by virtue of their dependence from claim 11. Further, the dependent claims recite additional elements not disclosed or suggested by the cited portions of the cited references.

For example, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a communications system where telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the first distributed mobile architecture server moves from a first location to a second location, as in claim 27. The cited portions of the above-cited references fail to disclose or suggest a first DMA server that can receive, switch, route, and communicate calls to other DMA servers (e.g. a second DMA server), while the first DMA server is moving (e.g. moving from a first location to a second location). The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest these features of claim 27. For this additional reason, claim 27 is allowable.

As a further example, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a communications system where telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the second distributed mobile architecture server moves from a third location to a fourth location, as in claim 28. The cited portions of the above-cited references fail to disclose or suggest a first DMA server that can receive, switch, route, and communicate calls to other DMA servers (e.g. a second DMA server), while the first DMA server is moving (e.g. moving from a first location to a second location) and

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while the second DMA server is moving (e.g. moving from a third location to a fourth location). The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 28.

Further, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a multi-mobility system that allows for communication while a mobile phone user (e.g., mobile communications device) is in motion, and while both the first DMA server and the second DMA server are also in motion. For example, the multi-mobility system of claim 28 provides benefits in a disaster type situation or other situations, where mobility is important. The system of claim 28 allows "triple mobility" in that the end user device (e.g., mobile phone), the DMA server, and the network (overlap of DMA server coverage areas) are all mobile. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 28. For these additional reasons, claim 28 is allowable.

As another example, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest that the first DMA server further comprises a first home locator resource (HLR) and a first visitor locator resource (VLR) embedded in the first computer readable medium, as in claim 29. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 29. For this additional reason, claim 29 is allowable.

As another example, the cited portions of the cited references fail to disclose or suggest that the second DMA server further comprises a second HLR and a second VLR embedded in the second computer readable medium, as in claim 31. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 31. For this additional reason, claim 31 is allowable.

Claims 44-47 are Allowable

Applicant submits that new claims 44-47 are allowable over the above-cited references.

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

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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,

10-1-2008
Date

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PTO/SB/08a (08-08)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	11105173
Filing Date	2005-04-13
First Named Inventor	Shaowei Pan
Art Unit	8703
Examiner Name	ANKUR JAIN
Attorney Docket Number	1082-0003

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7120435	B2	2006-10-10	Usher et al	
	2	7324478	B2	2008-01-29	Park et al	
	3	6704409	B1	2004-03-09	Dilip et al	
	4	7349412	B1	2008-03-25	Jones et al	
	5	6122499		2000-09-19	Magnusson	
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	7	7313399	B2	2007-12-25	Rhee et al	
	8	5623495		1997-04-22	Eng et al	

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	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	9	6141564	B1	2000-10-31	Bruner et al	
	10	6421325	B1	2002-07-16	Kikinis	
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	19	6791988	B1	2004-09-14	Hameleers et al	

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	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	20	6795444	B1	2004-09-21	Vo et al	
	21	6819652	B1	2004-11-16	Akhtar et al	
	22	6831903	B2	2004-12-14	Kang	
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	26	6879677	B2	2005-04-12	Trandal et al	
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	28	7050414	B2	2006-05-23	Lin	
	29	7072650	B2	2006-07-04	Stanforth	

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	1	20020015392	A1	2002-02-07	Musikka et al	
	2	20020169887	A1	2002-11-14	MeLampy et al	
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	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	11	20070202847	A1	2007-08-30	Pan	
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	1	0 365 885	EP		1990-05-02	Motorola, Inc		☐

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	Filing Date	2005-04-13
	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	1	PAN, SHAOWEI, US Patent Application No. 12/146,618, entitled SYSTEM AND METHOD TO CONTROL WIRELESS COMMUNICATIONS, filed June 26, 2008	☐
	2	PAN, SHAOWEI, US Patent Application No. 12/108,209, entitled SYSTEM AND METHOD TO CONTROL WIRELESS COMMUNICATIONS, filed April 23, 2008	☐
	3	PAN, SHAOWEI, US Patent Application No. 12/163,601, entitled FAULT TOLERANT DISTRIBUTED MOBILE ARCHITECTURE, filed June 27, 2008	☐
	4	PAN, SHAOWEI, US Patent Application No. 12/171,840, entitled OAMP FOR DISTRIBUTED MOBILE ARCHITECTURE, filed July 11, 2008	☐
	5	PAN, SHAOWEI, US Patent Application No. 12/172,639, entitled SYSTEM, METHOD, AND DEVICE FOR ROUTING CALLS USING A DISTRIBUTED MOBILE ARCHITECTURE, filed July 11, 2008	☐
	6	PAN, SHAOWEI, US Patent Application No. 12/238,269, entitled MULTIPLE IMSI CONNECTIONS, filed September 25, 2008	☐

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Examiner Signature		Date Considered	

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Application Number	11105173
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	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

CERTIFICATION STATEMENT

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

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jeffrey G. Toler/	Date (YYYY-MM-DD)	2008-10-01
Name/Print	Jeffrey G. Toler	Registration Number	38,342

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 1 hour 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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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.

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(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 365 885 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **89118458.2**

(51) Int. Cl.5: **H04B 7/204**

(22) Date of filing: **05.10.89**

(30) Priority: **28.10.88 US 263849**

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02.05.90 Bulletin 90/18

(84) Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE

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(54) Satellite cellular telephone and data communication system.

(57) A system for facilitating global cellular/trunked mobile communication is disclosed. This system permits communication with hand held and mobile mounted cellular telephones. The system permits two-way communications anywhere on or above the earth up to a particular height above the earth of several hundred nautical miles. The system employs a number of low-earth orbiting satellites (1,2, etc.) moving about the earth in orbit. Links (i) are provided from the satellites directly to the users and via the public switched telephone network (20) to other users (30). The satellites are interconnected via links (j) in a ring structure surrounding the earth. Switching is performed by each of the satellites. In addition, each of the satellites hands off a call as it moves out of the range of a particular user.

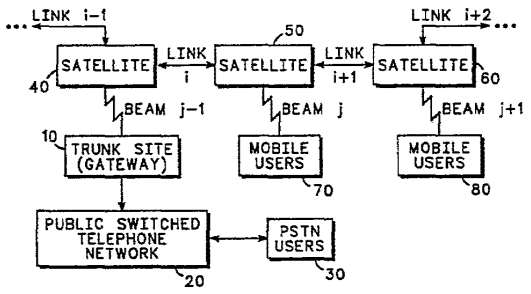


FIG. 2

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SATELLITE CELLULAR TELEPHONE AND DATA COMMUNICATION SYSTEM

Background of the Invention

The present invention pertains to global mobile communications and more particularly to a satellite cellular telephone and data communication system.

Present geostationary satellite communication systems allow point-to-point communication. That is, the satellite functions as a relay station or a "bent pipe". The satellite simply receives information from one point on earth and transmits it to another fixed point on earth.

One such point-to-point satellite communication system is shown in U.S. Patent 4,720,873. This system shows point-to-point communications through a satellite for network programming and advertising purposes.

Some basic multiplexing functions may be supplied within the satellites of a satellite communication system. One such system is shown in U.S. Patent 4,480,328. This patent teaches a satellite communication system in which the satellite is a relay station for TDMA multiplexed data.

The above-mentioned systems and other systems teach the use of a single satellite for communications from one point to another. These satellite systems show no selectivity or switching of data among a plurality of users.

Accordingly, it is an object of the present invention to provide a global low-earth orbiting multiple satellite cellular communication system which interfaces directly among a number of cellular telephone and data transmission equipped users and also interfaces these users to the public switched telephone network (PSTN).

Summary of the Invention

In accomplishing the object of the present invention, a novel satellite cellular telephone and data communication system is shown.

A satellite cellular telephone communication system establishes communication among a plurality of users. This communication system includes satellite switches positioned in low-earth orbit. Wireless communication links couple the users to the satellite switches. The satellite switches establish a communication link between selected ones of the users.

Each user's present location is determined and the system is periodically updated. Then the satellites relay these locations to the proper ground-based data base for storage. When a mobile user places a call, the satellite which is in his spatial vicinity handles the call. When a mobile user is called, the satellite switches route the call through the appropriate satellites to the called user's current location. Other user-unique data may also be stored at these same data base storage sites.

Brief Description of the Drawings

FIG. 1 is a layout diagram depicting the satellite switching system configuration of the present invention.

FIG. 2 is a block diagram depicting the interconnection of the satellite switching units with its association mobile users and interconnection to the public switched telephone network.

FIG. 3 is a projection of the areas served by a plane of cellular satellite switches about the earth.

FIG. 4 is a block diagram of a data base arrangement for a satellite cellular communication system.

Description of the Preferred Embodiment

Referring to FIG. 1, a satellite configuration for the satellite cellular telephone communication system is shown. In this configuration, a number of satellites are shown in low-earth orbit. A number of satellites are placed in each orbiting plane. There are several orbiting planes (3 through 8) as shown which are highly inclined in nature and provide switching coverage for the entire earth.

This satellite cellular structure is somewhat analogous to the present day cellular mobile telephone system. In that system, cellular sites are fixed and users are mobile. As a user travels from one cell site to another, his telephone call is handed off from one cellular switching unit to another.

In the present invention, users are relatively fixed at any given time while the satellites, which are the cells, are in continuous movement. With a hand-held or mobile mounted cellular telephone, connection to one of the satellite switches shown in FIG. 1 is made directly from the hand-held mobile mounted or remotely fixed telephone to one of the nearest satellite switches. Each satellite is moving about the earth. As the satellite which originally acted as the switching unit for a particular user leaves a cell of that switch, the user's call is "handed off" to the appropriate adjacent cell. Adjacent cells may be cells within one satellite or cells of other satellites located either in a particular

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orbiting plane or an adjacent orbiting plane. Users may "roam", but this roaming distance is relatively small compared to the traveling distance of the satellite switches.

Similar to the cellular mobile telephone system, the satellite cellular communication system provides spectral efficiency. This means that the same frequency may be simultaneously used by different satellite switches. Spectral efficiency is provided by the spatial diversity between the satellite switches and users.

The users may be located anywhere on a land mass, on the water or in the air at an altitude less than that of the low-earth orbiting satellites. For example, a person on one land mass could call a person on another land mass, a person on a boat or a person in an aircraft.

Low power hand-held mobile mounted or fixed radio telephones may be used in this system. The power requirement is less than 10 watts with present technology.

In this system, each satellite shown is a switching unit. Current satellite communication systems act primarily as a relay station or "bent pipe". That is, they provide fixed point-to-point communications. In the present invention, a switching function is provided within each of the orbiting satellites.

As previously mentioned, each of the orbiting planes of satellites is highly inclined in the preferred embodiment of the invention. Orbiting satellite planes with lower inclination are also workable. However, the lower inclination requires more satellite switching units and/or higher orbiting altitudes to achieve whole earth coverage than does the highly inclined orbiting satellite configuration.

In a preferred embodiment, highly inclined orbit configuration, it was found that satisfactory earth coverage could be accomplished with forty-eight (48) low earth orbiting satellites. These satellites could be arranged in six (6) highly inclined orbiting planes, eight (8) satellites per plane. Other configurations could be used. Other lower inclined orbiting arrangements would require substantially more satellites in order to achieve the same coverage of the earth as highly inclined configuration.

Each satellite contains a satellite switching unit, suitable antennas 11 (helical antennas for up/down links and lenses for cross links, for example) and an unfolding array of solar cells 12 along with storage batteries (not shown) connected to the solar cells to provide power for the switching unit. The satellite buses or vehicles themselves are low-earth orbiting satellites such as those commercially available. The satellites are put into orbit by a launching vehicle. When in orbit, the solar cell array is opened and the switching unit thereby activated. The satellites are then individually brought on line via standard telemetry, tracking and control (TT&C) channels to form the network.

As shown in FIG. 1, a user A with a hand-held telephone goes off-hook. This request for a channel is received by a particular satellite 1, as shown in FIG. 1. A frequency channel is assigned to the user and the caller's desired number is then routed through the system. Each satellite is a distributed local processor and determines how switching of the call is to occur. Satellite 1 switches the call to the appropriate cell contained either within its own cell complement or to the appropriate satellite cell complement. The path is determined by each satellite switching unit until the call is received by satellite 2. Satellite 2 then routes this call to the particular hand-held user B shown in FIG. 1.

Although two hand-held users are shown, the users may be on the water, in a moving vehicle, airborne or part of a PSTN where the link is through a gateway. Each satellite is a local processor. The system determines to which appropriate satellite or cell the call is to be switched. Each satellite determines an optimal path from itself to the next appropriate satellite. These determinations may be made based upon the office code portion of the telephone number of the called user.

Each satellite typically may project four (4) or more lobes onto the earth and contain four (4) or more corresponding cells for switching. These lobes of coverage are achieved via antennas (helical typically) with fixed beam widths appropriate to the number of lobes. Overlapping cells will be differentiated using present cellular techniques. These areas or lobes are shown in FIG. 3 for one particular plane of satellites about the earth. This figure depicts a high inclined orbiting satellite cellular switches. Each satellite determines the optimal path from it to the next satellite through which to route a particular call or data transmission. These satellite switches operate on data packets and therefore may transmit digital voice or data. Downlink and uplink data/digital voice is received on an FDM basis demodulated and then packetized for satellite-to-satellite communication.

FIG. 2 depicts the interconnection of a portion of one plane of satellites. In addition, the connection of the satellite to the satellite's corresponding mobile users and to the public switched telephone network is shown. Three satellites are shown. Satellite 40, Satellite 50 and Satellite 60. Satellite 40 is connected to Satellite 50 by link i. Satellite 50 is connected to Satellite 60 by link i+1. Satellite 60 is connected to the next sequential satellite of the plane (not shown) via link i+2. Satellite 40 is connected to the next preceding satellite (not shown) via link i-1. Each plane of satellites forms a ring of connected satellites around the earth.

As previously mentioned, the drawing of FIG. 2 shows one plane of the satellites. In addition, each

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satellite is connected to one or more satellites in other orbiting planes. That is, each satellite is connected to a previous and next satellite in its orbiting plane and to one or more satellites in other orbiting planes.

The intersatellite links link i-1, link i, etc. may be implemented via data transmission on a microwave beam or via a laser beam. Existing technologies currently provide for such data transmission.

Connection between the satellites and its mobile users is achieved by beams j-1, and j+1, for example. These beams correspond to the lobes shown in FIG. 3 and to the switching cells mentioned above. These beams are achieved via the satellite up/down link antennas which provide communication to users via the users omnidirectional antenna. The limit on the number of users that a particular satellite may handle at one time depends on bandwidth allocated plus power available on the satellite. Typically this number may be 50,000 users per satellite.

Satellite 40 is shown connected to a trunk site or gateway 10 via beam j-1. Any satellite, such as Satellite 40, is capable of transmitting and receiving data from a gateway, such as gateway 10. This gateway link can be accomplished using the packetized data similar to the satellite-to-satellite links.

Gateway 10 includes units which interconnect to the public switched telephone network (PSTN) 20. All public switched telephone network users 30 are connected to the public switched telephone network 20. As a result of the satellite 40 being connected through gateway 10 to PSTN 20, a mobile user of the satellite cellular system which is connected directly via a beam to a satellite may transmit voice or data via the satellite structure (satellite-to-satellite via corresponding links), through gateway 10, through the public switched telephone network 20 to selected users of the PSTN 30 or vice versa.

Each satellite provides several data transmission beams. These data transmission beams project the lobes of coverage shown in FIG. 3 which depicts four beams. Each satellite projects four such lobes. As shown in FIG. 2, a satellite may use one or more of its beams to provide interface to a gateway. At least one beam is required for establishing a link between each gateway and the satellite. Typically a satellite links to only one gateway. One gateway provides sufficient trunking to interconnect a number of mobile users to the public switched telephone network 20.

Each satellite performs internal switching among its four beams or cells. This is analogous to intraoffice switching for conventional telecommunication systems.

The up/down linking arrangement between the satellites and its mobile users or gateways via the beams may transmit and receive data in the range of approximately 2.1 to 3.9 GHz, for example. The present technology and band availability makes this a preferred data transmission range. However, the scope of the present invention is not limited to data transmission exclusively within this range.

As previously mentioned, the data (digital voice or data) is transmitted in packet form. As a result, high-speed data transmission as well as voice data transmission may be accomplished via the satellite system. Data transmission rates, given the present available bandwidths, are a least 1200 baud. However, with extended bandwidth, substantially higher data rates can be achieved by this system.

FIG. 4 depicts one satellite switching unit 100 directly connected to mobile users 120 via beam 102. Satellite 100 is connected to data base computer 110 via beam 104. Satellite 100 is also connected to data base computer 130 via beam 106. This connection may be direct via a beam 106 as shown in FIG. 4 or indirect through other satellites to data base computer 130.

A mobile user might "roam" or travel in a home area. The home area may be a city, such as New York, Los Angeles, etc. The data base computer 110 contains all the information relative to each of its mobile users. As long as a particular mobile user is operating within his home area, all the available information concerning that user is available at the local home area data base computer.

If, for example, a home area user in Los Angeles travels to New York City and attempts to use his satellite cellular telephone for communication, the data base computer in the user's new area, New York City, is not aware of the existence of that user. If data base computer 110 is the mobile user's home area, Los Angeles, data base computer 110 has all the information for this particular mobile user. As a result, the mobile user would not be allowed to place calls because he was not recognized by his home area's data base computer.

In order to overcome this problem, each mobile user is periodically interrogated by the system as to its location so when he goes off-hook, his call for service can be recognized and routed. However, since the data base of a particular user is stored in his home area data base computer via the satellite system, the satellite system first interrogates the home area to determine that he is no longer there and to obtain the user's switching information. When that determination is made, the new home area's data base computer can be updated to include this "roaming" user. As a result, this user is then allowed to originate and receive calls in his new area. Because the satellite system interrogates the user's home data base computer to determine

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his location, the user can be found throughout the entire satellite system. Thus, the system provides the capability for finding "roaming" users and establishing communications with them.

To facilitate tracking of each mobile user, each mobile telephone provides a control signal which is periodically monitored so that when a subscriber originates a call, the nearest satellite can track him and through the satellite network interrogate his home data base computer to determine his pertinent customer information. The mobile telephone may automatically indicate to the satellite network a new location for updating the data base computer. This control signal allows the incoming calls of "roaming" users to be validated via satellite-to-satellite linking to the home area's data base computer.

Each satellite in the satellite cellular communication system is self-navigating. That is, it uses the Global Positioning Satellite system (GPS) or time and ephemeris data from which to compute its location information. In addition, from the fixed location of the Global Positioning Satellite system or other vehicle, each satellite can determine its position and alter its course accordingly to stay within its proper orbit while providing switching services.

Each satellite may switch a call intrasatellite (within the particular switching unit or cell) or may connect the call via a microwave or laser links (link i, i+1, etc.) to another satellite within its plane or out of plane (adjacent). Each satellite may distinguish a particular telephone number and determine whether that number is within its own calling area or the area of another satellite. If it is within the area of another satellite, the call is cross-linked to the next appropriate satellite or cell which makes the same determination until the satellite serving that telephone number is reached. That satellite down-links to the particular mobile user sought to be called. Due to this structure, the satellite network provides a distributed nodal switching capability. Each satellite is a local switch for a particular area, but the area is constantly changing. Therefore, calls are handed-off as satellites move out of the range of a particular telephone user.

Various multiplexing techniques (i.e. FDMA, TDM CDMA, etc.) may be used to enhance the transmission capability between various satellites on the links as shown in FIG. 2.

Since the switching units of this system are orbiting the earth and relatively secure from tampering, this system provides the capability to support secure voice and data transmission via data encryption and decryption techniques commonly known in the art. Since the switching units enjoy the security of being hundreds of miles above the earth, the system also lends itself to military communication applications.

Although the current preferred embodiment of the invention has been illustrated, and that form described in detail, it will be readily apparent to those skilled in the art that various modifications may be made therein without departing from the spirit of the invention or from the scope of the appended claims.

Claims

1. A satellite cellular communication system for establishing communication among a plurality of users comprising:
satellite switching means (1,2, etc.) positioned in low- earth orbit; and
link means (i) for coupling said users to said satellite switching means whereby a communication link is established between selected ones of said users via said satellite switching means.

2. A satellite cellular communication system as claimed in claim 1, said satellite switching means including:
a plurality of satellite switching unit means (40-60 etc.) positioned surrounding the earth in low-earth orbit; and
second link means (j) for permitting multi-directional communication between one satellite switching unit means and any adjacent satellite switching unit means.

3. A satellite cellular communication system as claimed in claim 2, said second link means including microwave communication means.

4. A satellite cellular communication system as claimed in claim 2, said second link means including laser communication means.

5. A satellite cellular communication system as claimed in claim 2, said satellite switching unit means including:
antenna means (11) coupled to said plurality of users for establishing communication between said users and satellite switching unit means;
solar cell means (12) for providing power for said satellite switching unit means; and
storage battery means connected to said solar cell means for storing said power.

6. A satellite cellular communication system as claimed in claim 1, said satellite switching means including a plurality of cell means coupled to one another, one said cell means operating to hand-off said established communication link between users to another one of said cell means.

7. A satellite cellular communication system as claimed in claim 1, wherein each of said users is connected to said link means by cellular telephone means (A,B).

8. A satellite cellular communication system for establishing communication among a plurality of

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users comprising:
satellite switching means (1,2, etc.) positioned in low-earth orbit;
link means (j) for directly coupling certain ones of said users to said satellite switching means; and
public switched telephone network means (10,20) coupled to said satellite switching means via said link means, other ones of said users being connected to said public switched telephone network means, said public switched telephone network means operating to selectively connect users of said public switched telephone network means with users directly coupled to said satellite switching means via said link means.

9. A satellite cellular communication system as claimed in claim 8, wherein there is further included means for connecting (10) said link means to said public switched telephone network means, said means for connecting providing gateway facility services between said satellite switching means and said public switched telephone network means.

10. A satellite cellular communication system for establishing communication among a plurality of users comprising:
satellite switching means (1,2, etc.) positioned in low-earth orbit;
link means (j) for coupling said users to said satellite switching means whereby a communication link is established between selected ones of said users via said satellite switching means; and
data base means (110-130) coupled to said satellite switching means via said link means, said data base means for storing and transmitting switching information describing each of said plurality of users.

11. A satellite cellular communication system for establishing communication among a plurality of users comprising:
satellite switching means (1,2, etc.) positioned in low earth orbit;
link means (j) for coupling said users to said satellite switching means whereby a communication link is established between selected ones of said users via said satellite switching means;
cellular telephone means (A,B) having a control signal for connecting each of said users to said satellite switching means via said link means;
data base means (110-130) coupled to said satellite switching means via said link means, said data base means for storing and transmitting switching information describing each of said plurality of users; and said satellite switching means operating in response to said control signal of each of said user's cellular telephone means to update said data base means with a present location of each user.

12. A satellite cellular communication system for establishing communication among a plurality of users comprising:
satellite switching means (1,2, etc.) positioned in orbit about the earth; and
link means (j) for coupling said users to said satellite switching means whereby a communication link is established between selected ones of said users via said satellite switching means.

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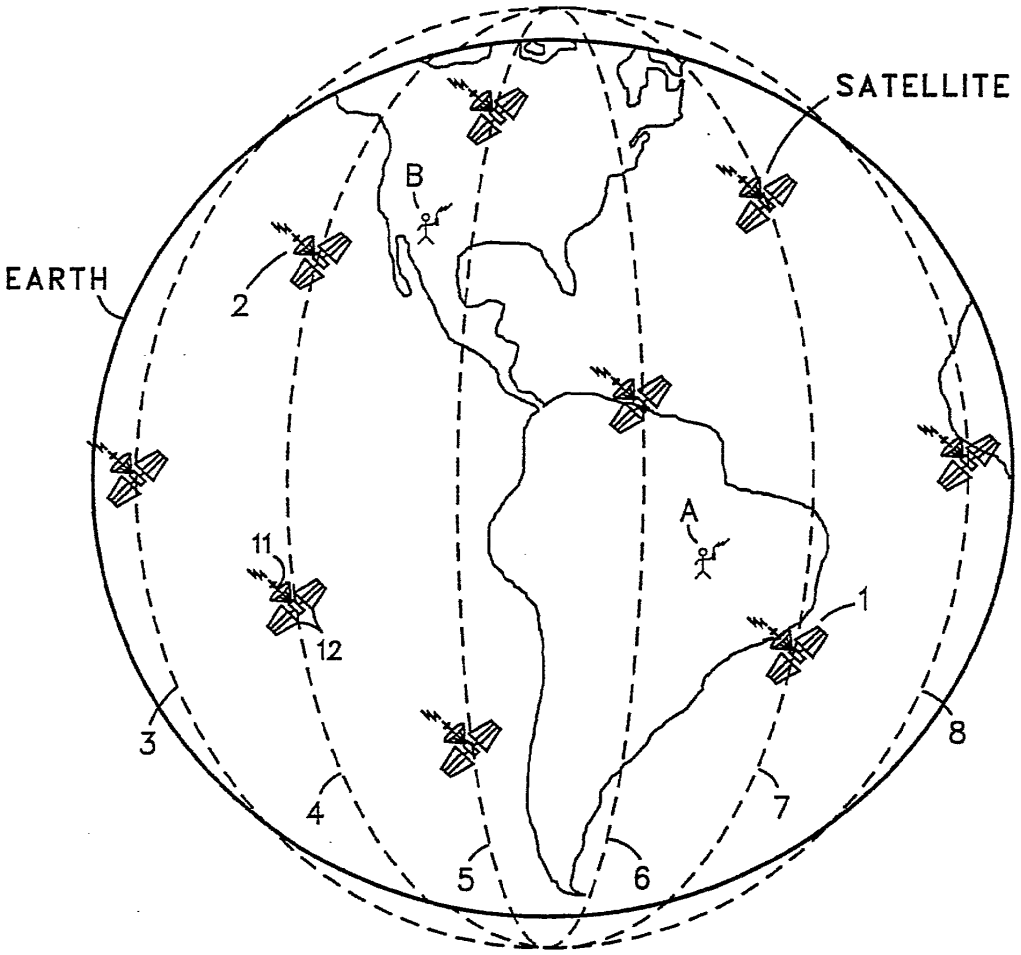


FIG. 1

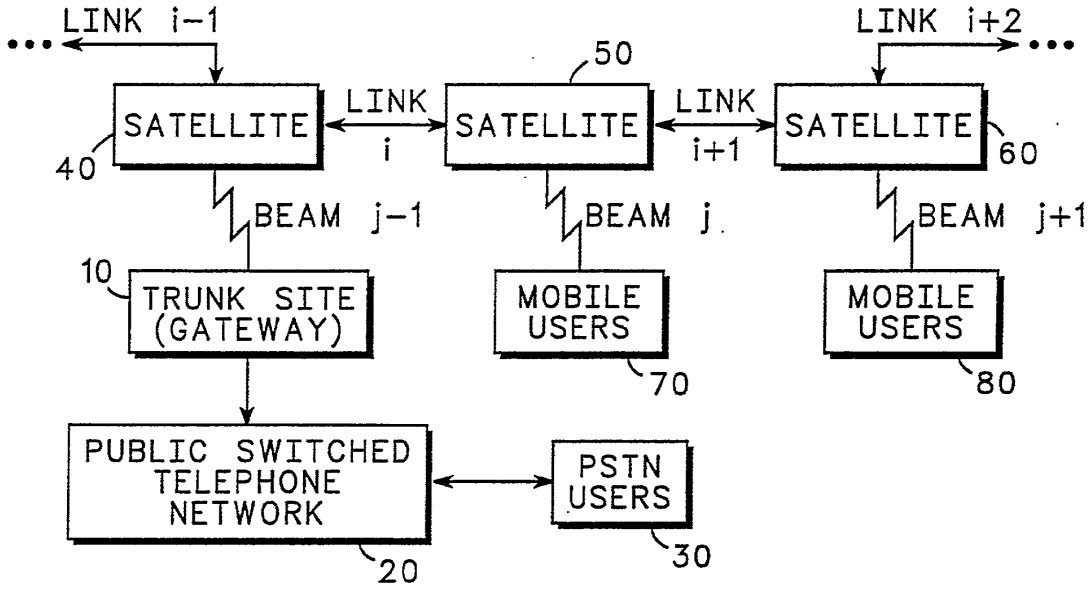
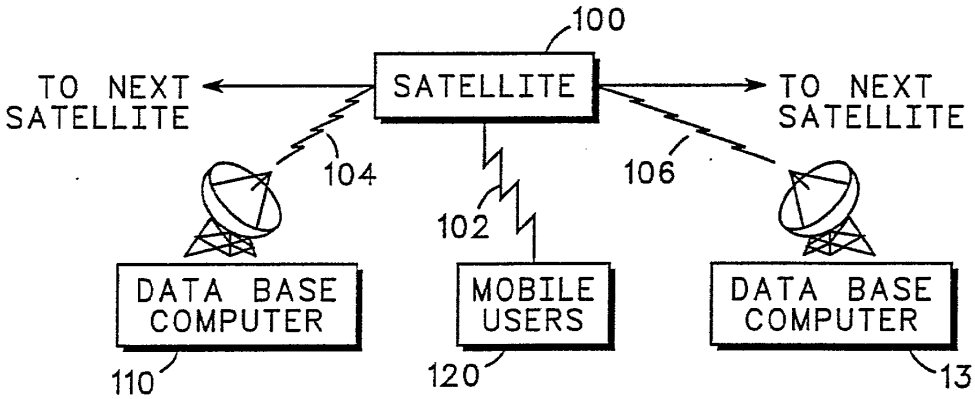

LINK i-1
LINK i+2
50
SATELLITE
LINK
i
SATELLITE
LINK
i+1
SATELLITE
40
60
BEAM j-1
BEAM j
BEAM j+1
10
TRUNK SITE
(GATEWAY)
MOBILE
USERS
MOBILE
USERS
70
80
PUBLIC SWITCHED
TELEPHONE
NETWORK
PSTN
USERS
20
30

FIG. 2

FIG. 4


100
TO NEXT
SATELLITE
SATELLITE
TO NEXT
SATELLITE
104
106
102
DATA BASE
COMPUTER
MOBILE
USERS
DATA BASE
COMPUTER
110
120
130

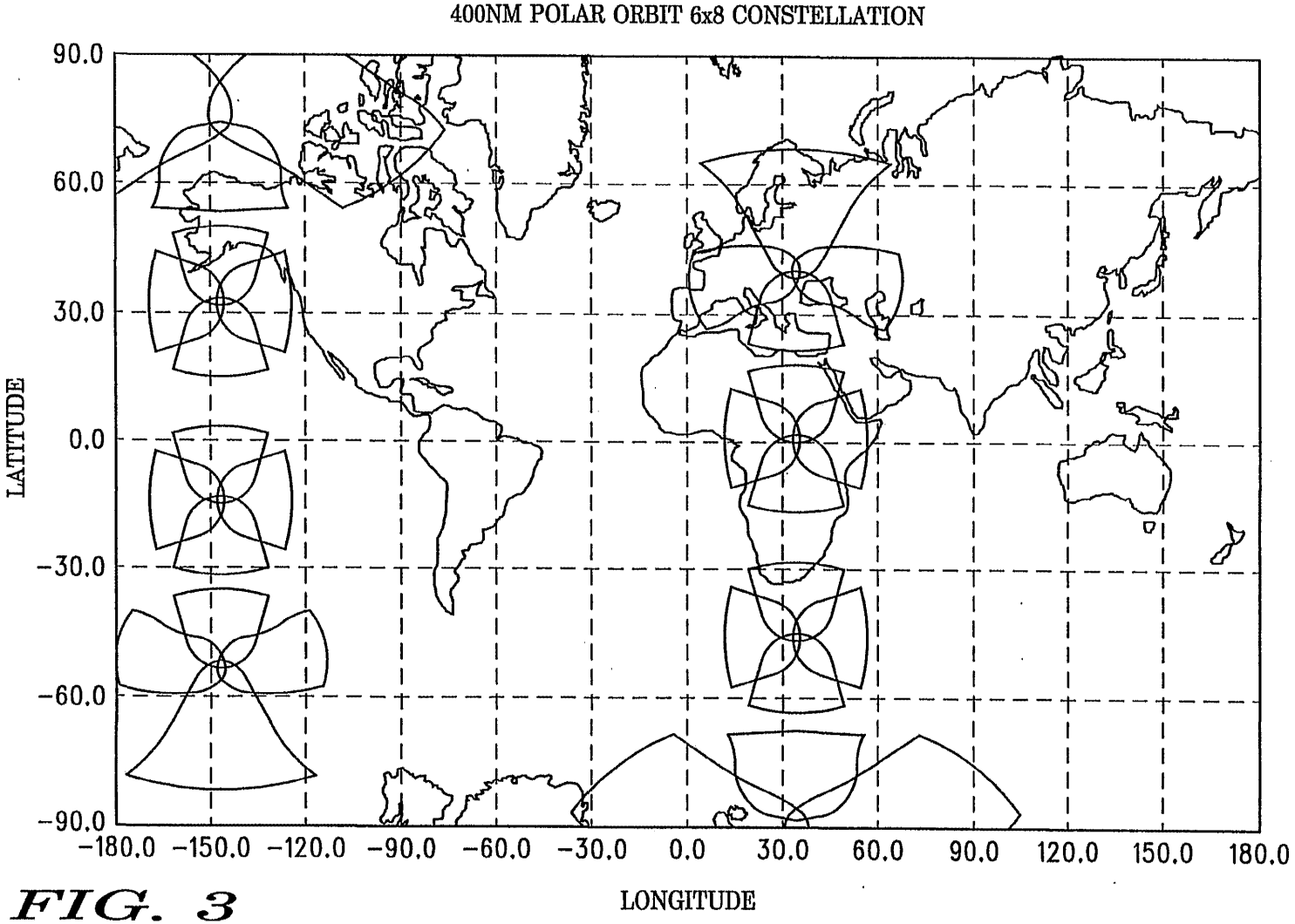


FIG. 3

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Electronic Patent Application Fee Transmittal	
Application Number:	11105173
Filing Date:	13-Apr-2005
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:	1082-0003
Filed as Small Entity	

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	2801	1	405	405
		Total in USD ($)		**405**

Electronic Acknowledgement Receipt	
EFS ID:	4045156
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	1082-0003
Receipt Date:	01-OCT-2008
Filing Date:	13-APR-2005
Time Stamp:	18:03:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$405
RAM confirmation Number	3415
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 1.19 (Document supply 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)	1082-0003_RCE.pdf	697161 26f3b12747c39c0ce0eab78b7198dd583f2e2269	no	3
Warnings:					
Information:					
2	Amendment After Final	1082-0003_Amd_aft_final.pdf	171237 9e99d3b9cf39fa0750ca1483dea697a3f83e949e	no	16
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Filed (SB/08)	1082-0003_IDS.pdf	609590 bc65010e112712cd7e8cf6bd164af702d02604e7	no	8
Warnings:					
Information:					
4	Foreign Reference	EP_0_365_885_A2.pdf	574697 3db79d66ba179fb31a7bf4c0225ae2be4b3c137d	no	9
Warnings:					
Information:					
5	NPL Documents	SN_12_146_618.pdf	3734306 2efba8298e15a5e702df1b0382803c7776a3a273	no	52
Warnings:					
Information:					
6	NPL Documents	SN_12_108_209.pdf	2276659 79bc4e5838ba7887cefe34aff83e9bcf8e2f01ea	no	34
Warnings:					
Information:					
7	NPL Documents	SN_12_163_601.pdf	2113721 f3868430d3371e839e01f6dc37447bf73d7928ae	no	32
Warnings:					
Information:					
8	NPL Documents	SN_12_171_840.pdf	1534424 050a7beb5cedaa94815dee75e9e9fe828142f592	no	28
Warnings:					
Information:					

9	NPL Documents	SN_12_172_639.pdf	2527988 42054abccee8d9692d05faebfecbe9574e120612	no	41
Warnings:					
Information:					
10	NPL Documents	SN_12_238_269.pdf	1443382 6628d4c909b5d0ca8e1c308524b619d7696e9c7c	no	21
Warnings:					
Information:					
11	Fee Worksheet (PTO-06)	fee-info.pdf	30029 52814fb5f1d1c7f82484e848def6fd00ea845919	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	15713194	

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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.

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 10/07/2008

AHOPKINS	SALE	#00000002	Mailroom Dt:	10/01/2008		502469	11105173
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/105,173	Filing Date 04/13/2005	☐ 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 ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	10/01/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 39	Minus	** 26	= 13	X $25 =	325	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 9	Minus	***5	= 4	X $105 =	420	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	745	OR	TOTAL ADD'L FEE	

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

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

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

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

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

Legal Instrument Examiner:
/DENISE HOPKINS/

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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 11/05/2008

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

EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	
MAIL DATE	DELIVERY MODE
11/05/2008	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.

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 203 of 310

Office Action Summary	Application No.	Applicant(s)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

-- 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 *01 October 2008*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-11,18-24 and 27-47* is/are pending in the application.

4a) Of the above claim(s) *1-10,18-24 and 44-47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11 and 27-43* 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 *01 October 2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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Page 204 of 310

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 1st, 2008 has been entered.

Election/Restrictions

2. Newly submitted **claims 44-47** are directed to inventions that are independent or distinct from the invention originally claimed for the following reasons: Claim 44 requires a separate search and consideration as a result of introducing, "receiving a call from a first mobile communication device at a first wireless transceiver," "forwarding the call from the first wireless transceiver to a distributed mobile architecture server," and "routing the call via the distributed mobile architecture server to a second wireless transceiver, to communicate with respect to a second mobile communication device." Claim 45 requires a separate search and consideration as a result of introducing a telephone network comprising: "a plurality of cellular coverage sites," and "wherein each of the distributed mobile architecture servers within each of the plurality of cellular coverage sites are interconnected by an Internet protocol data network; and wherein

telephony traffic received by the transceivers is switched and routed by one or more of the distributed mobile architecture servers." Claim 46 requires a separate search and consideration as a result of introducing, "a first wireless communication site including a first transmission antenna, a first base station coupled to the first transmission antenna, and a first computer system." Also, "a second wireless communication site including a second transmission antenna, a second base station coupled to the second transmission antenna, and a second computer system," and "an Internet protocol network coupled to the first computer system and the second computer system" require a separate search and consideration. Finally, claim 47 requires a separate search and consideration as a result of introducing, "wherein the distributed mobile architecture server is coupled to a cellular system mobile switching center, a switching transfer point of a stand-alone carrier, and a public switched telephone network."

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, **claims 44-47** are withdrawn from consideration as being directed to non-elected inventions. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

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

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

4. **Claims 11 and 27-43** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitation, “a first call detail record (CDR) generator embedded in the first computer readable medium" is considered new matter because the specification does not mention any type of physical generator. Paragraph 0065 of the Applicant’s specification only mentions how the DMA server 106 can provide call detail record (CDR) generation, but no mention as to what produces this generation and where this "producer" is located. The same argument applies to “a second call detail record (CDR) generator embedded in the second computer readable medium.” The claimed limitation, “a media gateway including group call logic to allow a group call between four or more mobile communication devices” is considered new matter because the specification does not mention anything about “four or more mobile communication devices” associated with a “media gateway.” Paragraph 0036 of the Applicant’s specification only mentions how the media gateway 226 can include group calling functionality…nothing about a number of mobile communication devices. The previous rejection for claim 11 is maintained, and claims 27-43 are rejected under 112 1st paragraph as a result of having dependencies from claim 11.

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 negatived by the manner in which the invention was made.

5. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al, US 2005/0176413 A1 (hereafter referenced as Lee), in view of Csapo et al, US Patent 6,411,825 (hereafter referenced as Csapo), and further in view of Bertino et al, US 2006/0046760 A1 (hereafter referenced as Bertino).

Regarding **Claim 11**, Lee teaches at least one distributed mobile architecture server comprising: “a computer readable medium” (see Paragraph 0136). Private BSC 20 from Figure 4 is read on by “distributed mobile architecture server,” because according to the Applicant’s specification, the DMA serves as a controlling apparatus to control external BTS's. Lee also teaches “a mobile switching center module embedded in the computer readable medium” (see Paragraph 0077 and Paragraph 0136). Lee also teaches “a base station controller module embedded in the computer readable medium” (see Paragraph 0077 and Paragraph 0136). Lee does not teach “wherein the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver." However, Csapo generally teaches "wherein the at least one distributed mobile architecture server is in direct physical connection with a wireless transceiver” (see Column 1 lines 59-67 and Column 2 lines 1-10). BSC 70 from Figure 3 is read on by “distributed mobile architecture server,” because according to the Applicant’s specification, the DMA serves as a controlling apparatus to control external

BTS's. Lee also does not teach “wherein telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server.” However, Csapo generally teaches “wherein telephony traffic received from the wireless transceiver is switchable by the at least one distributed mobile architecture server” (see Column 1 lines 59-67). “Switchable by the at least one distributed mobile architecture server” reads on how the BSC 70 diverts, or "switches" information/data to the MSC 72. Lee also does not teach "at least one rural base transceiver station coupled to the distributed mobile architecture server.” However, Csapo generally teaches "at least one rural base transceiver station coupled to the distributed mobile architecture server” (see Column 1 lines 59-67 and Colum 2 lines 1-10). The upper BTS 66 in Figure 3 could easily be located in a "rural" community, which can then be connected to the upper BSC 70. Lee also does not teach "a mobile switching center and base station controller coupled to the distributed mobile architecture server." However, Csapo generally teaches “a mobile switching center and base station controller coupled to the distributed mobile architecture server” (see Column 1 lines 59-67 and Column 2 lines 1-10). The lower "Base station controller" 70 is connected to the "mobile switching center" 72, which is further connected to the "distributed mobile architecture server” as defined above. Thus, the “mobile switching center and base station controller are coupled to the distributed mobile architecture server.” Lee also does not teach “at least one urban base transceiver station coupled to the mobile switching center and base station controller.” However, Csapo generally teaches “at least one urban base transceiver station coupled to the mobile switching center and base station controller” (see Column

1 lines 59-67 and Column 2 lines 1-10). Figure 3 discloses a "base transceiver station" 66, which is located below the other "rural base transceiver station." Thus, the lower base transceiver station 66 could easily be located in an "urban" community, which according to Figure 3, can then be "coupled to the mobile switching center and the" lower "base station controller" as defined above. It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Lee to incorporate the limitations of Csapo as taught by Csapo, for the purpose of increasing the versatility, feasibility, and system efficiency of the distributed mobile architecture by incorporating the limitations into the method and system for providing data service in interworking wireless public and private networks. The combination of Lee and Csapo does not teach "wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices." However, Bertino generally teaches "wherein the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices" (see Abstract, Paragraph 0009, and Paragraphs 0028 through 0031). "Program" reads on the ability of the group communication server 32 to determine whether it can bridge the communication or not, between the "four or more mobile communication devices." It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combination of Lee and Csapo so that the distributed mobile architecture server comprises a program to allow a group call between four or more mobile communication devices as taught by Bertino, for the purpose of increasing the versatility, feasibility, and system efficiency of the distributed mobile architecture by

incorporating the limitations into the method and system for providing data service in interworking wireless public and private networks of the combination.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Jain whose telephone number is 571-272-9747. The examiner can normally be reached on M-F, 7:30 am to 5:00 pm, EST, Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan can be reached on 571-272-7855. 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.

/Ankur Jain/

Examiner, Art Unit 2618

10/29/2008

/Yuwen Pan/

Primary Examiner, Art Unit 2618

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

✓	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	02/27/2008	09/09/2008	10/29/2008						
	1	N	N	N						
	2	N	N	N						
	3	N	N	N						
	4	N	N	N						
	5	N	N	N						
	6	N	N	N						
	7	N	N	N						
	8	N	N	N						
	9	N	N	N						
	10	N	N	N						
	11	✓	✓	✓						
	12	✓	✓	-						
	13	✓	✓	-						
	14	✓	✓	-						
	15	✓	✓	-						
	16	✓	✓	-						
	17	✓	✓	-						
	18	N	N	N						
	19	N	N	N						
	20	N	N	N						
	21	N	N	N						
	22	N	N	N						
	23	N	N	N						
	24	N	N	N						
	25		✓	-						
	26		✓	-						
	27			✓						
	28			✓						
	29			✓						
	30			✓						
	31			✓						
	32			✓						
	33			✓						
	34			✓						
	35			✓						
	36			✓						

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
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☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	02/27/2008	09/09/2008	10/29/2008						
	37			✓						
	38			✓						
	39			✓						
	40			✓						
	41			✓						
	42			✓						
	43			✓						
	44			N						
	45			N						
	46			N						
	47			N						

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Page 214 of 310

PTO/SB/08a (08-08)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	11105173
Filing Date	2005-04-13
First Named Inventor	Shaowei Pan
Art Unit	8703
Examiner Name	ANKUR JAIN
Attorney Docket Number	1082-0003

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7120435	B2	2006-10-10	Usher et al	
	2	7324478	B2	2008-01-29	Park et al	
	3	6704409	B1	2004-03-09	Dilip et al	
	4	7349412	B1	2008-03-25	Jones et al	
	5	6122499		2000-09-19	Magnusson	
	6	6678155	B1	2004-01-13	Bresniker	
	7	7313399	B2	2007-12-25	Rhee et al	
	8	5623495		1997-04-22	Eng et al	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.J./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	11105173
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	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	9	6141564	B1	2000-10-31	Bruner et al	
	10	6421325	B1	2002-07-16	Kikinis	
	11	6539237	B1	2003-03-25	Sayers et al	
	12	6584098	B1	2003-06-24	Dutnall	
	13	6611533	B1	2003-08-26	Liao et al	
	14	6614784	B1	2003-09-02	Glitho et al	
	15	6647426	B2	2003-11-11	Mohammed	
	16	6694134	B1	2004-02-17	Lu et al	
	17	6763226	B1	2004-07-13	McZeal Jr.	
	18	6763233	B2	2004-07-13	Bharatia	
	19	6791988	B1	2004-09-14	Hameleers et al	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.J./

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	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	20	6795444	B1	2004-09-21	Vo et al	
	21	6819652	B1	2004-11-16	Akhtar et al	
	22	6831903	B2	2004-12-14	Kang	
	23	6839356	B2	2005-01-04	Barany et al	
	24	6859652	B2	2005-02-22	Karabinis et al	
	25	6879582	B1	2005-04-12	Dhara et al	
	26	6879677	B2	2005-04-12	Trandal et al	
	27	6917813	B2	2005-07-12	Elizondo	
	28	7050414	B2	2006-05-23	Lin	
	29	7072650	B2	2006-07-04	Stanforth	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020015392	A1	2002-02-07	Musikka et al	
	2	20020169887	A1	2002-11-14	MeLampy et al	
	3	20040014466	A1	2004-01-22	Jesse et al	
	4	20040019539	A1	2004-01-29	Raman et al	
	5	20020045444	A1	2002-04-18	Usher et al	
	6	20040253949	A1	2004-12-16	Swensen et al	
	7	20060098661	A1	2006-05-11	Pan	
	8	20060234774	A1	2006-10-19	Pan et al	
	9	20080039144	A1	2008-02-14	Pan et al	
	10	20070232267	A1	2007-10-04	Pan	

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	Attorney Docket Number	1082-0003

	11	20070202847	A1	2007-08-30	Pan	
	12	20070287452	A1	2007-12-13	Pan	
	13	20080146158	A1	2008-06-19	Pan et al	
	14	20040156495	A1	2004-08-12	Chava et al	
	15	20030198325	A1	2003-10-23	Bayne	
	16	20030063721	A1	2003-04-03	Hirose	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	0 365 885	EP		1990-05-02	Motorola, Inc		☐

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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	Filing Date	2005-04-13
	First Named Inventor	Shaowei Pan
	Art Unit	8703
	Examiner Name	ANKUR JAIN
	Attorney Docket Number	1082-0003

	1	PAN, SHAOWEI, US Patent Application No. 12/146,618, entitled SYSTEM AND METHOD TO CONTROL WIRELESS COMMUNICATIONS, filed June 26, 2008	☐
	2	PAN, SHAOWEI, US Patent Application No. 12/108,209, entitled SYSTEM AND METHOD TO CONTROL WIRELESS COMMUNICATIONS, filed April 23, 2008	☐
	3	PAN, SHAOWEI, US Patent Application No. 12/163,601, entitled FAULT TOLERANT DISTRIBUTED MOBILE ARCHITECTURE, filed June 27, 2008	☐
	4	PAN, SHAOWEI, US Patent Application No. 12/171,840, entitled OAMP FOR DISTRIBUTED MOBILE ARCHITECTURE, filed July 11, 2008	☐
	5	PAN, SHAOWEI, US Patent Application No. 12/172,639, entitled SYSTEM, METHOD, AND DEVICE FOR ROUTING CALLS USING A DISTRIBUTED MOBILE ARCHITECTURE, filed July 11, 2008	☐
	6	PAN, SHAOWEI, US Patent Application No. 12/238,269, entitled MULTIPLE IMSI CONNECTIONS, filed September 25, 2008	☐

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EXAMINER SIGNATURE

Examiner Signature	/Ankur Jain/	Date Considered	10/29/2008

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /A.J./

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Shoawei Pan		
Title:	SYSTEM, METHOD, AND DEVICE FOR PROVIDING COMMUNICATIONS USING A DISTRIBUTED MOBILE ARCHITECTURE		
App. No.:	11/105,173	Filed:	April 13, 2005
Examiner:	JAIN, Ankur	Group Art Unit:	2618
Customer No.:	60533	Confirmation No.:	8703
Atty. Dkt. No.:	1082-0003		

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 Office Action mailed November 5, 2008 (the "Office Action"), please reconsider the above-identified application in light of the following amendments and remarks.

Microsoft - Exhibit 1002
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CLAIM AMENDMENTS:

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

1. (Withdrawn) A method of providing telephone communication, comprising allowing a group call between four or more participants, each participant calling from a separate telephone device communicating with a base transceiver station that is coupled to a distributed mobile architecture server.

2. (Withdrawn) The method of claim 1, further comprising providing full duplex calling capability between all participants via one or more of the distributed mobile architecture servers.

3. (Withdrawn) The method of claim 2, further comprising allowing one or more participants to disconnect from the group call without effecting other participants remaining on the group call.

4. (Withdrawn) The method of claim 3, further comprising providing full duplex calling capability between the remaining participants via the one or more distributed mobile architecture server.

5. (Withdrawn) The method of claim 4, further comprising allowing one or more added participants to connect to the group call.

6. (Withdrawn) The method of claim 5, further comprising providing full duplex calling capability between the additional participants via the one or more distributed mobile architecture servers.

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7. (Withdrawn) A system, comprising:

four or more mobile communication devices; and

a distributed mobile architecture server, the distributed mobile architecture server comprising a program to allow a group call between the four or more mobile communication devices.

8. (Withdrawn) The system of claim 8, wherein the program further comprises an instruction to provide full duplex calling capability between all of the mobile communication devices.

9. (Withdrawn) The system of claim 8, wherein the program further comprises an instruction to allow one or more of the mobile communication devices to disconnect from the group call without effecting other participants remaining on the group call.

10. (Withdrawn) The system of claim 9, wherein the program further comprises an instruction for allowing one or more additional telephones to connect to the group call.

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11. (Currently Amended) A system, comprising:

a first distributed mobile architecture server comprising:

a first computer readable medium;

a first mobile switching center module embedded in the first computer readable medium; and

a first base station controller module embedded in the first computer readable medium; and

a first call detail record (CDR) ~~generator~~ generation program embedded in the first computer readable medium;

wherein the first distributed mobile architecture server is in direct physical connection with a first wireless transceiver; and

a second distributed mobile architecture server, comprising:

a second computer readable medium;

a second mobile switching center module embedded in the second computer readable medium;

a second base station controller module embedded in the second computer readable medium; and

a second call detail record (CDR) ~~generator~~ generation program embedded in the second computer readable medium;

~~a media gateway including group call logic~~ a program to allow a group call between four or more mobile communication devices, wherein the program is embedded in the second computer readable medium;

wherein the second distributed mobile architecture server is in direct physical connection with a second wireless transceiver;

wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via a peer-to-peer connection.

12. – 17. (Canceled).

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18. (Withdrawn) A system, comprising:

at least one distributed mobile architecture server;

at least one base transceiver station coupled to the distributed mobile architecture server;

a public switched telephone network coupled to the distributed mobile architecture server; and

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

19. (Withdrawn) The system of claim 18, wherein the four or more communication devices are mobile communication devices that are in communication with the distributed mobile architecture server via the at least one base transceiver station.

20. (Withdrawn) The system of claim 18, wherein at least one of the four or more communication devices is in communication with the distributed mobile architecture server via the public switched telephone network.

21. (Withdrawn) The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via an E1 connection.

22. (Withdrawn) The system of claim 18, wherein the distributed mobile architecture server is coupled to the public switched telephone network via a T1 connection.

23. (Withdrawn) A system, comprising:

at least one portable distributed mobile architecture server mounted in a vehicle;

at least one portable base transceiver station coupled to the distributed mobile architecture server and mounted in the vehicle;

wherein the distributed mobile architecture server comprises a program to allow a group call between four or more communication devices.

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24. (Withdrawn) The system of claim 23, wherein the four or more communication devices communicate via the portable base station transceiver and the distributed mobile architecture server.

25. – 26. (Canceled).

27. (Previously Presented) The system of claim 11, wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the first distributed mobile architecture server moves from a first location to a second location.

28. (Previously Presented) The system of claim 27, wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the second distributed mobile architecture server moves from a third location to a fourth location.

29. (Previously Presented) The system of claim 11, wherein the first distributed mobile architecture server further comprises:

a first home locator resource embedded in the first computer readable medium; and

a first visitor locator resource embedded in the first computer readable medium.

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30. (Previously Presented) The system of claim 29, wherein the first distributed mobile architecture server further comprises:

a first operations, administration, maintenance, and provisioning (OAMP) module embedded in the first computer readable medium;

a first authentication, authorization, and accounting (AAA) module embedded in the first computer readable medium;

a first packet data server node (PDSN) gateway embedded in the first computer readable medium; and

a first gateway general packet radio service (GPRS) support node (GGSN) embedded in the first computer readable medium.

31. (Previously Presented) The system of claim 11, wherein the second distributed mobile architecture server further comprises:

a second home locator resource embedded in the second computer readable medium; and

a second visitor locator resource embedded in the second computer readable medium.

32. (Previously Presented) The system of claim 31, wherein the second distributed mobile architecture server further comprises:

a second operations, administration, maintenance, and provisioning (OAMP) module embedded in the second computer readable medium;

a second authentication, authorization, and accounting (AAA) module embedded in the second computer readable medium;

a second packet data server node (PDSN) gateway embedded in the second computer readable medium; and

a second gateway general packet radio service (GPRS) support node (GGSN) embedded in the second computer readable medium.

33. (Previously Presented) The system of claim 11, wherein the first distributed mobile architecture server is located in a city area, and wherein the second distributed mobile architecture server is located in an urban fringe area.

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34. (Previously Presented) The system of claim 11, wherein the first distributed mobile architecture server includes administrative information corresponding to one or more wireless telephone device subscribers.

35. (Previously Presented) The system of claim 34, wherein the first distributed mobile architecture server further comprises a first gateway to a public switched telephone network.

36. (Previously Presented) The system of claim 35, wherein the first distributed mobile architecture server further comprises a first media gateway.

37. (Previously Presented) The system of claim 36, wherein the first distributed mobile architecture server further comprises a first Internet phone gateway.

38. (Previously Presented) The system of claim 37, wherein the first distributed mobile architecture server further comprises a first signaling system seven (SS7) gateway.

39. (Previously Presented) The system of claim 38, wherein the first distributed mobile architecture server further comprises a first Session Initiation Protocol gateway.

40. (Previously Presented) The system of claim 11, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server comprises a first cellular radio network controller.

41. (Previously Presented) The system of claim 40, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server further comprises a first cellular selection/distribution unit.

42. (Previously Presented) The system of claim 41, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server further comprises a first call protocol controller.

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43. (Previously Presented) The system of claim 42, wherein the first call protocol controller communicates with the first wireless transceiver of the first distributed mobile architecture server.

44. – 47. (Canceled).

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REMARKS

Applicant thanks Examiner Jain and Primary Examiner Pan for the interview conducted on January 6, 2009. Claims 11 and 27-43 are pending in the application. Claims 44-47 have been cancelled without prejudice or disclaimer. Claim 11 has been amended. No new matter has been added. Support for the claim amendments may be found in at least paragraphs 0025, 0036, 0045, 0057, 0065, 0069 and Figure 2 of the application.

Claims 44-47

The Office has indicated that claims 44-47 are directed to inventions that are independent or distinct from the invention originally claimed. In the interest of advancing prosecution, claims 44-47 have been cancelled without prejudice or disclaimer.

Claims 11 and 27-43 are Allowable

A. 35 U.S.C. § 112 Rejections

The Office has rejected claims 11 and 27-43 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In the interview conducted on January 6, 2009, Examiner Jain and Primary Examiner Pan indicated that the amendments to claim 11 were sufficient to overcome the §112 rejections. Applicant requests that the Office withdraw the §112 rejections of claims 11 and 27-43.

B. 35 U.S.C. § 103 Rejections

The Office has rejected claim 11, under 35 U.S.C. §103(a), as being unpatentable over U.S. Published Application No. 2005/0176413 ("Lee"), in view of U.S. Patent No. 6,411,825 ("Csapo"), and further in view of U.S. Published Application No. 2006/0046760 ("Bertino"). Applicant respectfully traverses the rejections.

The cited portions of Lee, Csapo and Bertino, individually or in combination, do not disclose or suggest the specific combination of claim 11. For example, the cited portions of the above-cited references fail to disclose or suggest a first call detail record (CDR) generation program embedded in the first computer readable medium of the first distributed mobile architecture (DMA) server or a second call detail record (CDR) generation program embedded in the second computer readable medium of the second DMA server, as in claim 11.

In contrast to claim 11, the cited portions of Lee describe a method and system for providing data service in interworking wireless public and private networks. *See* Lee, Title. In

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further contrast to claim 11, the cited portions of Csapo describe a telecommunication base station transceiver subsystem that can be configured to provide single or multi-carrier frequency service. *See* Csapo, Abstract. In further contrast to claim 11, the cited portions of Bertino describe an "optimistic talk-permit reliability enhancement in a push-to-talk system." *See* Bartino, Title. The cited portions of Lee, Csapo and Bertino fail to disclose or suggest a CDR generation program embedded in a computer readable medium.

The cited portions of Lee, Csapo and Bertino, individually or in combination, do not disclose or suggest a system capable of storing billing records at a DMA server. Since the DMA servers include administrative and call record storage capability, the DMA servers 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 server is detached from the network (e.g., a link to a PSTN goes down). The call records can be stored at each of the DMA servers (rather than at another site). The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a first CDR generation program embedded in the first computer readable medium of the first DMA server or a second CDR generation program embedded in the second computer readable medium of the second DMA server, as in claim 11.

As a further example, the cited portions of the above-cited references fail to disclose or suggest that telephony traffic received at the first wireless transceiver of the first DMA server is transmitted from the first DMA server to the second DMA server via a peer-to-peer connection, as in claim 11. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a communications system where telephony traffic received at the first wireless transceiver of the first DMA server is transmitted from the first DMA server to the second DMA server via a peer-to-peer connection, as in claim 11.

Therefore, the cited portions of the above-cited references fail to disclose or suggest the specific combination of claim 11. Hence, claim 11 is allowable.

Claims 27-43 are allowable, at least by virtue of their dependence from claim 11. Further, the dependent claims recite additional elements not disclosed or suggested by the cited portions of the above-cited references.

For example, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a communications system where telephony traffic

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received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the first distributed mobile architecture server moves from a first location to a second location, as in claim 27. The cited portions of the above-cited references fail to disclose or suggest a first DMA server that can receive, switch, route, and communicate calls to other DMA servers (e.g. a second DMA server), while the first DMA server is moving (e.g. moving from a first location to a second location). The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest these features of claim 27. For this additional reason, claim 27 is allowable.

As a further example, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a communications system where telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the second distributed mobile architecture server moves from a third location to a fourth location, as in claim 28. The cited portions of the above-cited references fail to disclose or suggest a first DMA server that can receive, switch, route, and communicate calls to other DMA servers (e.g. a second DMA server), while the first DMA server is moving (e.g. moving from a first location to a second location) and while the second DMA server is moving (e.g. moving from a third location to a fourth location). The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 28.

Further, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest a multi-mobility system that allows for communication while a mobile phone user (e.g., mobile communications device) is in motion, and while both the first DMA server and the second DMA server are also in motion. For example, the multi-mobility system of claim 28 provides benefits in a disaster type situation or other situations, where mobility is important. The system of claim 28 allows "triple mobility" in that the end user device (e.g., mobile phone), the DMA server, and the network (overlap of DMA server coverage areas) are all mobile. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 28. For these additional reasons, claim 28 is allowable.

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As another example, the cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest that the first DMA server further comprises a first home locator resource (HLR) and a first visitor locator resource (VLR) embedded in the first computer readable medium, as in claim 29. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 29. For this additional reason, claim 29 is allowable.

As another example, the cited portions of the above-cited references fail to disclose or suggest that the second DMA server further comprises a second HLR and a second VLR embedded in the second computer readable medium, as in claim 31. The cited portions of Lee, Csapo and Bertino, individually or in combination, fail to disclose or suggest this feature of claim 31. For this additional reason, claim 31 is allowable.

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.

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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,

1-8-2009
Date

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Page 234 of 310

Electronic Acknowledgement Receipt

EFS ID:	4584830
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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/jeaneaux jordan
Filer Authorized By:	Jeffrey G. Toler
Attorney Docket Number:	1082-0003
Receipt Date:	09-JAN-2009
Filing Date:	13-APR-2005
Time Stamp:	12:56:13
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		1082-0003_Response_to_Non-Final_Office_Action.pdf	1217968 8f1d62d40ba02e3a43531bc71b115e741da0326e	yes	14

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	14
Warnings:			
Information:			
	Total Files Size (in bytes):	1217968	

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

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

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

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

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 11/105,173	Filing Date 04/13/2005	☐ 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 ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	01/09/2009	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 35	Minus	** 39	= 0	X $26 =	0	OR	X $ =	
	Independent (37 CFR 1.16(h))	* 5	Minus	***9	= 0	X $110 =	0	OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

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

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

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

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

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

Legal Instrument Examiner:
/BRENDA HARRISON/

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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 01/12/2009

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EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
01/12/2009	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.	Applicant(s)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

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

(1) *ANKUR JAIN*. (3) *Yuwen Pan*.

(2) *Roy Salvagio*. (4)_____.

Date of Interview: *06 January 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: *11*.

Identification of prior art discussed: _____.

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: *A discussion of how Applicant's proposed claim amendments overcome the 112 rejections*.

(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.

/Duc Nguyen/
Supervisory Patent Examiner, Art Unit 2618

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NOTICE OF ALLOWANCE AND FEE(S) DUE

60533 7590 03/09/2009

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AUSTIN, TX 78759

EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 03/09/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

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	06/09/2009

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

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

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

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

If the SMALL ENTITY is shown as NO:

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

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

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

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

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

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

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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 03/09/2009

TOLER LAW GROUP
8500 BLUFFSTONE COVE
SUITE A201
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.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

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	06/09/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
JAIN, ANKUR	2618	455-519000

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

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

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

2. For printing on the patent front page, list

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

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

1 _____

2 _____

3 _____

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

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

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

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

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

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

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

❑ A check is enclosed.

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

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

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

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

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

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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

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

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UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 03/09/2009

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

EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 03/09/2009

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 640 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 640 day(s).

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

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

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

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

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Notice of Allowability	Application No.	Applicant(s)	
	11/105,173	PAN, SHAOWEI	
	Examiner	Art Unit	
	ANKUR JAIN	2618	

-- 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 *09 January 2009*.

2. ☒ The allowed claim(s) is/are *11 and 27-43*.

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

   * Certified copies not received: _____.

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

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

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

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

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

Attachment(s)

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

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EXAMINER'S AMENDMENT

1. 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 Attorney Roy Salvagio on February 24th, 2009.

The application has been amended as follows:

1) **Delete claims 1-10 and 18-24.**

2) **In claim 11 line 21, delete "between" and replace with "among."**

Allowable Subject Matter

2. Claims 11 and 27-43 are allowed.

3. The following is an examiner's statement of reasons for allowance: see Applicant's remarks filed on January 9th, 2009 on pages 10-13.

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

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANKUR JAIN whose telephone number is (571)272-9747. The examiner can normally be reached on M-F, 9:00 am to 4:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan, can be reached on 571-272-7855. 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.

/Ankur Jain/
Examiner, Art Unit 2618
02/24/2009

/Yuwen Pan/
Primary Examiner, Art Unit 2618

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

SEARCHED			
Class	Subclass	Date	Examiner
455	561	2/24/2009	AJ

SEARCH NOTES		
Search Notes	Date	Examiner
Searched databases USPAT, US-PGPUB, EPO, JPO, DERWENT, and IBM_TDB. EAST Search History is attached.	2/24/2009	AJ

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
455	561	2/24/2009	AJ

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

ORIGINAL						INTERNATIONAL CLASSIFICATION											
CLASS		SUBCLASS				CLAIMED						NON-CLAIMED					
455		561				H	0	4	M	1 / 00 (2006.0)							
CROSS REFERENCE(S)																	
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																
455	519																

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17	8	33										
	2		18	9	34										
	3		19	10	35										
	4		20	11	36										
	5		21	12	37										
	6		22	13	38										
	7		23	14	39										
	8		24	15	40										
	9		25	16	41										
	10		26	17	42										
1	11	2	27	18	43										
	12	3	28		44										
	13	4	29		45										
	14	5	30		46										
	15	6	31		47										
	16	7	32												

/ANKUR JAIN/ Examiner.Art Unit 2618	02/24/2009	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	18	
/YUWEN PAN/ Primary Examiner.Art Unit 2618	02/27/2009	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	11	2

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
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	Examiner	Art Unit
	ANKUR JAIN	2618

✓	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	02/27/2008	09/09/2008	10/29/2008	02/26/2009					
	1	N	N	N	-					
	2	N	N	N	-					
	3	N	N	N	-					
	4	N	N	N	-					
	5	N	N	N	-					
	6	N	N	N	-					
	7	N	N	N	-					
	8	N	N	N	-					
	9	N	N	N	-					
	10	N	N	N	-					
1	11	✓	✓	✓	=					
	12	✓	✓	-	-					
	13	✓	✓	-	-					
	14	✓	✓	-	-					
	15	✓	✓	-	-					
	16	✓	✓	-	-					
	17	✓	✓	-	-					
	18	N	N	N	-					
	19	N	N	N	-					
	20	N	N	N	-					
	21	N	N	N	-					
	22	N	N	N	-					
	23	N	N	N	-					
	24	N	N	N	-					
	25		✓	-	-					
	26		✓	-	-					
2	27			✓	=					
3	28			✓	=					
4	29			✓	=					
5	30			✓	=					
6	31			✓	=					
7	32			✓	=					
8	33			✓	=					
9	34			✓	=					
10	35			✓	=					
11	36			✓	=					

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	11105173	PAN, SHAOWEI
	Examiner	Art Unit
	ANKUR JAIN	2618

✓	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	02/27/2008	09/09/2008	10/29/2008	02/26/2009					
12	37			✓	=					
13	38			✓	=					
14	39			✓	=					
15	40			✓	=					
16	41			✓	=					
17	42			✓	=					
18	43			✓	=					
	44			N	-					
	45			N	-					
	46			N	-					
	47			N	-					

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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	466	455/519.CCLS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2009/02/24 14:31
S1	12	("20010036173" | "20010055298" | "20020058502" | "20030153343" | "20040018829" | "6411825" | "6515985" | "6751207" | "6760325" | "6807431" | "6807432" | "H001918").PN.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 12:28
S2	37	((SHAOWEI) near2 (PAN)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2008/02/26 14:17
S3	1	S2 AND ((rural AND urban AND mobile AND server).CLM.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:19
S4	1	11/105173.APP.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:20
S5	15	DMA ADJ server	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 14:44
S6	51	(DMA or (distributed ADJ mobile ADJ architecture)) WITH (BTS or (base ADJ station$2))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 15:03
S7	5	((distributed ADJ mobile ADJ architecture)) WITH (BTS or (base ADJ station$2))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/26 15:08
S8	162	(server) near5 (program$4) near5 (group or party or parties or team$2 or users) near5 (call)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:27

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S9	23	S8 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:27
S10	1	((group ADJ call ADJ server) near5 (program $6)) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:32
S11	3	((group ADJ call) near5 server near5 program $6) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:33
S12	10	((group) near5 server near5 program$6) AND (455/518,519.CCLS.)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 10:34
S13	1	"6411825".pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 11:35
S14	1	"6411825".pn. AND (BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 11:36
S15	1	"20060046760"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
S16	1	"20060046760" AND (program WITH server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
S17	1	"20060046760" AND (program SAME server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:12
S18	13	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$).did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/02/27 12:48

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S19	4	S18 AND (E1)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:48
S20	4	S18 AND (E1 or T1)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:48
S21	6	(E1 or T1) WITH DMA WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:51
S22	16	(E1 or T1) WITH server WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:53
S23	752	(BSC or MSC) WITH (E1 or T1) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:58
S24	384	S23 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:58
S25	3	S24 AND 455/518,519.CCLS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:59
S26	209	(BSC or MSC) WITH ((E1 or T1) near7 (connect$4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 12:59
S27	134	S26 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
S28	188	(BSC or MSC) WITH ((E1 or T1) near5 (connect$4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
S29	118	S28 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:00
S30	92	(BSC or MSC) WITH ((E1) near7 (connect $4)) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:10

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S31	50	S30 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 13:10
S32	5240	(BSC or MSC) WITH (wireless) WITH (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:40
S33	1343	(BSC or MSC) near5 (wireless) near5 (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:41
S34	28	(BSC or MSC) near5 (wireless ADJ connection) near5 (MSC or BSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:41
S35	198	(BSC) near5 wireless near5 (MSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:49
S36	115	S35 AND "455".CLAS.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 14:50
S37	16	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$ or US-20040204097-$ or US-20040233892-$ or US-20040259556-$). did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/02/27 15:03
S38	3	S37 AND (micro $2wave or microwave)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 15:04
S39	1	"20030100342"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/02/27 15:34

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S40	4	((BSC) near5 (includ$4 or compris$4 or consist $4)) SAME ((memory or database$3 or server $3) WITH (MSC near5 (module$2)) WITH (BSC near5 (module $2)))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:31
S41	2	"20050176413" AND (medium WITH module)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:35
S42	1	"6411825".pn.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:38
S43	0	"6411825".pn. AND (traffic$4 WITH switch $4 WITH base WITH control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:40
S44	0	"6411825".pn. AND (traffic$4 SAME switch $4 SAME base SAME control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:40
S45	1	"6411825".pn. AND (traffic$4 SAME base SAME control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 14:40
S46	1	"6411825".pn. AND (PMU WITH control$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/07/21 15:01
S47	1	11/105173.APP.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 11:59
S48	61898	11/105173.APP. (area SAME station SAME mobile urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 12:56
S49	1	11/105173.APP. AND (area SAME station SAME mobile urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 12:56
S50	0	11/105173.APP. AND (area SAME station SAME within SAME urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 12:59

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S51	1	11/105173.APP. AND (server SAME vehicle SAME mount$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 13:00
S52	2	"20050176413" AND (medium WITH data WITH read$6)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 14:29
S53	2	"20050176413" AND (module$3 WITH data WITH read$6)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 14:29
S54	1	"6411825".pn. AND (traffic$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:31
S55	1	"6411825".pn. AND ((user$3 or traffic$4 or mobile$3) SAME (base) SAME (controller $4))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:36
S56	1	"6411825".pn. AND ((traffic$4 or user$3 or mobile$3) WITH (BSC) WITH (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:43
S57	1	"6411825".pn. AND ((BSC) WITH (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:44
S58	1	"6411825".pn. AND ((BSC) SAME (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:44
S59	0	"6411825".pn. AND ((control$6) WITH (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:44
S60	1	"6411825".pn. AND ((control$6) SAME (MSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:45
S61	1	"6411825".pn. AND (center)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:45
S62	1	"6411825".pn. AND (MSC)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/08 15:45

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S63	1	11/105173.APP. AND (area SAME within SAME urban)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:01
S64	1	11/105173.APP. AND (server WITH vehicle $2)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:06
S65	18	(US-20030153343-$ or US-20060046760-$ or US-20040018829-$ or US-20020058502-$ or US-20010055298-$ or US-20010036173-$ or US-20040204097-$ or US-20040233892-$ or US-20040259556-$ or US-20030100342-$ or US-20050176413-$). did. or (US-6411825-$ or US-6807432-$ or US-6807431-$ or US-6760325-$ or US-6751207-$ or US-6515985-$ or US-H001918-$).did.	US-PGPUB; USPAT	OR	ON	2008/09/09 10:16
S66	0	S65 AND (vehicle$2 WITH (controller$2 or BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:17
S67	3	(vehicle$2 WITH (mount$4) WITH (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:18
S68	139	(vehicle$2 SAME (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:19
S69	39	(vehicle$2 WITH (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:19
S70	5	(vehicle$2 WITH locat $4 WITH (BSC))	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/09/09 10:24
S71	1	11/105173.APP.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:09

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S72	1	11/105173.APP. AND (detail WITH record$3)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:10
S73	0	11/105173.APP. AND (traffic WITH server WITH mov$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:25
S74	1	11/105173.APP. AND (traffic WITH server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:25
S75	0	11/105173.APP. AND (gateway WITH call)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:28
S76	1	11/105173.APP. AND (gateway)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:28
S77	1	11/105173.APP. AND (gateway SAME group $3)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:29
S78	1	11/105173.APP. AND (server SAME transceiv $4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:30
S79	0	11/105173.APP. AND (traffic SAME first SAME second SAME server)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:32
S80	0	11/105173.APP. AND (traffic SAME first SAME peer)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 12:32
S81	0	11/105173.APP. AND (server WITH transceiver WITH contact$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 14:20
S82	1	11/105173.APP. AND (server WITH transceiver)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 14:20
S83	1	11/105173.APP. AND (gateway SAME group)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 14:30

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Microsoft v. Lemko- IPR2023-00530
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S84	1	11/105173.APP. AND (traffic SAME server$3 SAME peer)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 14:52
S85	1	11/105173.APP. AND (traffic SAME server$3)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	OR	ON	2008/10/28 14:53

2/24/2009 2:31:37 PM
C:\Documents and Settings\ajain1\My Documents\EAST\Workspaces\11105173.wsp

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Page 258 of 310

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.:	11/105,173	Filed:	April 13, 2005
Examiner:	JAIN, Ankur	Group Art Unit:	2618
Customer No.:	60533	Confirmation No.:	8703
Atty. Dkt. No.:	1082-0003		

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

AMENDMENT AFTER ALLOWANCE (37 C.F.R. § 1.312)

Dear Sir:

This Amendment is being submitted following the Notice of Allowance mailed on March 9, 2009, and prior to payment of the issue fee.

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CLAIM AMENDMENTS:

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

1. – 10. (Canceled).

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11. (Currently amended) A system, comprising:

a first distributed mobile architecture server comprising:

a first computer readable medium;

a first mobile switching center module embedded in the first computer readable medium; ~~and~~

a first base station controller module embedded in the first computer readable medium; and

a first call detail record (CDR) generation program embedded in the first computer readable medium[[;]],

wherein the first distributed mobile architecture server is in direct physical connection with a first wireless transceiver; and

a second distributed mobile architecture server, comprising:

a second computer readable medium;

a second mobile switching center module embedded in the second computer readable medium;

a second base station controller module embedded in the second computer readable medium; ~~and~~

a second call detail record (CDR) generation program embedded in the second computer readable medium; and

a program to allow a group call among four or more mobile communication devices, wherein the program is embedded in the second computer readable medium[[;]],

wherein the second distributed mobile architecture server is in direct physical connection with a second wireless transceiver;

wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via a peer-to-peer connection.

12. – 26. (Canceled).

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27. (Previously presented) The system of claim 11, wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the first distributed mobile architecture server moves from a first location to a second location.

28. (Previously presented) The system of claim 27, wherein telephony traffic received at the first wireless transceiver of the first distributed mobile architecture server is transmitted from the first distributed mobile architecture server to the second distributed mobile architecture server via the peer-to-peer connection while the second distributed mobile architecture server moves from a third location to a fourth location.

29. (Currently amended) The system of claim 11, wherein the first distributed mobile architecture server further comprises:

a first home ~~locator resource~~ location register embedded in the first computer readable medium; and

a first visitor ~~locator resource~~ location register embedded in the first computer readable medium.

30. (Previously presented) The system of claim 29, wherein the first distributed mobile architecture server further comprises:

a first operations, administration, maintenance, and provisioning (OAMP) module embedded in the first computer readable medium;

a first authentication, authorization, and accounting (AAA) module embedded in the first computer readable medium;

a first packet data server node (PDSN) gateway embedded in the first computer readable medium; and

a first gateway general packet radio service (GPRS) support node (GGSN) embedded in the first computer readable medium.

31. (Currently amended) The system of claim 11, wherein the second distributed mobile architecture server further comprises:

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a second home ~~locator resource~~ location register embedded in the second computer readable medium; and

a second visitor ~~locator resource~~ location register embedded in the second computer readable medium.

32. (Previously presented) The system of claim 31, wherein the second distributed mobile architecture server further comprises:

a second operations, administration, maintenance, and provisioning (OAMP) module embedded in the second computer readable medium;

a second authentication, authorization, and accounting (AAA) module embedded in the second computer readable medium;

a second packet data server node (PDSN) gateway embedded in the second computer readable medium; and

a second gateway general packet radio service (GPRS) support node (GGSN) embedded in the second computer readable medium.

33. (Previously presented) The system of claim 11, wherein the first distributed mobile architecture server is located in a city area, and wherein the second distributed mobile architecture server is located in an urban fringe area.

34. (Previously presented) The system of claim 11, wherein the first distributed mobile architecture server includes administrative information corresponding to one or more wireless telephone device subscribers.

35. (Previously presented) The system of claim 34, wherein the first distributed mobile architecture server further comprises a first gateway to a public switched telephone network.

36. (Previously presented) The system of claim 35, wherein the first distributed mobile architecture server further comprises a first media gateway.

37. (Previously presented) The system of claim 36, wherein the first distributed mobile architecture server further comprises a first Internet phone gateway.

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38. (Previously presented) The system of claim 37, wherein the first distributed mobile architecture server further comprises a first signaling system seven (SS7) gateway.

39. (Previously presented) The system of claim 38, wherein the first distributed mobile architecture server further comprises a first Session Initiation Protocol gateway.

40. (Previously presented) The system of claim 11, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server comprises a first cellular radio network controller.

41. (Previously presented) The system of claim 40, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server further comprises a first cellular selection/distribution unit.

42. (Previously presented) The system of claim 41, wherein the first base station controller module embedded in the first computer readable medium of the first distributed mobile architecture server further comprises a first call protocol controller.

43. (Previously presented) The system of claim 42, wherein the first call protocol controller communicates with the first wireless transceiver of the first distributed mobile architecture server.

44. – 47. (Canceled).

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REMARKS

Applicant thanks the Examiner for the Notice of Allowance mailed March 9, 2009. Claims 11, 29, and 31 have been amended to correct typographical errors.

CONCLUSION

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,

4-20-2009
Date

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Attorney for Applicant
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(512) 327-5515 (phone)
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Electronic Acknowledgement Receipt

EFS ID:	5185916
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	1082-0003
Receipt Date:	20-APR-2009
Filing Date:	13-APR-2005
Time Stamp:	19:23:09
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	Amendment after Notice of Allowance (Rule 312)	312amendment.pdf	499379 e8f74a289acab427b9402295897367ce482a4557	no	7

Warnings:	
Information:	

Total Files Size (in bytes):	499379

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

60533 7590 05/04/2009

TOLER LAW GROUP
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SUITE A201
AUSTIN, TX 78759

EXAMINER	
JAIN, ANKUR	
ART UNIT	PAPER NUMBER
2618	
MAIL DATE	DELIVERY MODE
05/04/2009	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.

Response to Rule 312 Communication	Application No.	Applicant(s)
	11/105,173	PAN, SHAOWEI
	Examiner	**Art Unit**
	ANKUR JAIN	2618

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

1. ☒ The amendment filed on *20 April 2009* under 37 CFR 1.312 has been considered, and has been:

a) ☐ entered.

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

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

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

/Yuwen Pan/
Primary Examiner, Art Unit 2618

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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)

TOLER LAW GROUP
8500 BLUFFSTONE COVE
SUITE A201
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.

Genevieve Williams	(Depositor's name)
Genevieve Williams	(Signature)
May 6, 2009	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/105,173	04/13/2005	Shaowei Pan	1082-0003	8703

TITLE OF INVENTION:

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

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$1055	06/09/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS

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 TOLER LAW GROUP
3 Jeffrey G. Toler

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	Shaumburg, IL

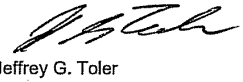
Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☑ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:
- ☑ Issue Fee
- ☑ Publication Fee (No small entity discount permitted)
- ☑ Advance Order - # of Copies _1

4b. Payment of Fee(s):
- ☐ A check in the amount of the fee(s) is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☑ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 50-2469

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).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.
NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature  Date 5-6-2009

Typed or printed name Jeffrey G. Toler Registration No. 38,342

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

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Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 270 of 310

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	11105173
Filing Date:	13-Apr-2005
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/Genevieve Williams
Attorney Docket Number:	1082-0003

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	2501	1	755	755
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1055**

Electronic Acknowledgement Receipt	
EFS ID:	5287504
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	1082-0003
Receipt Date:	06-MAY-2009
Filing Date:	13-APR-2005
Time Stamp:	15:43:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1055
RAM confirmation Number	1889
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 1.19 (Document supply fees) Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	**Document Description**	**File Name**	**File Size(Bytes)/ Message Digest**	**Multi Part /.zip**	**Pages (if appl.)**
1	Issue Fee Payment (PTO-85B)	IssueFeeTransmittal.pdf	348596 cdeab0140d2cba326c7db790bb5b5fa3b6cf9be3	no	2
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	31884 63e9ae007824c688dd412cf9be7be4cf048fa6b5	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	380480		

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<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.

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.
11/105,173	06/16/2009	7548763	1082-0003	8703

60533 7590 05/27/2009

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 625 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 Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Shaowei Pan, Kildeer, IL;

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 276 of 310

PTO/SB/47 (03-09)
Approved for use through 03/31/2012. OMB 0651-0016
U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE
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"FEE ADDRESS" INDICATION FORM

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Alexandria, VA 22313-1450

- OR -

Fax to:
571-273-6500

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
7,548,763	11/105,173

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 that 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 A DDRESS.
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:	13351932
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	1082-0003
Receipt Date:	26-JUL-2012
Filing Date:	13-APR-2005
Time Stamp:	17:33:46
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	Post Allowance Communication - Incoming	1082-0003_Fee_Address.pdf	237135 26279e6d9555c840b382960ed14110ad9bcb2fa2	no	1

Warnings:	
Information:	

Total Files Size (in bytes):	237135

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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CHANGE OF CORRESPONDENCE ADDRESS
Patent

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

Patent Number	7,548,763
Issue Date	06-16-2009
Application Number	11/105,173
Filing Date	04-13-2005
First Named Inventor	Shaowei Pan
Attorney Docket Number	1082-0003

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**

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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.

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PTO/AIA/81A (02-15)
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PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Patent Number	7548763
Issue Date	06/16/2009
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 _____.

SIGNATURE of Applicant or Patent Owner

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

DocuSign Envelope ID: C2EEFF74-2438-4C68-BB96-3A9FD48558B8

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	42458551
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	1082-0003
Receipt Date:	15-APR-2021
Filing Date:	13-APR-2005
Time Stamp:	03:57:30
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	US7548763_11105173_373_STATEMENT.pdf	243871 ff9d49053e1e951dcf3c1240fe5b8189984a6af1	no	3
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	US7548763_11105173_POA.pdf	240608 03064fa7a1735d94e8bb3684b65afde4a733c5f2	no	2
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.					
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			Total Files Size (in bytes):	484479	

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New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

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

DocuSign Envelope ID: C2EEFF74-2438-4C68-BB96-3A9FD48558B8

PTO/AIA/96 (08-12)
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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 Corporation

Application No./Patent No.: 7548763 Filed/Issue Date: 06/16/2009

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

Lemko 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 016504, Frame 0589, 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.

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.

PTO/AIA/96 (08-12)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

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
F77975C858434BF...
Signature

April 7, 2021
Date

Dr. Shaowei Pan
Printed or Typed Name

Chief Technology Office, Lemko Corporation
Title or Registration Number

DocuSign Envelope ID: C2EEFF74-2438-4C68-BB96-3A9FD48558B8

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
11/105,173	04/13/2005	Shaowei Pan		137424

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:

X 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
11/105,173	04/13/2005	Shaowei Pan	1082-0003

CONFIRMATION NO. 8703

POWER OF ATTORNEY NOTICE

15346
Lemko Corporation
One Pierce Place
Suite 700
Itasca, IL 60143

OC000000125122273

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/

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 289 of 310

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
11/105,173	04/13/2005	Shaowei Pan	

CONFIRMATION NO. 8703

171308
Lemko Corporation c/o Cygan Law Offices, P.C.
2300 Barrington Road
Suite 400
Hoffman Estates, IL 60169

POA ACCEPTANCE LETTER

OC000000125122334

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	REQUEST ID
11/105,173	04/13/2005	Shaowei Pan		139657

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:

X 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.:	11/105,173	Confirmation No.:	8703
Patent No:	7548763	Group Art Unit:	2618
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,

/Joseph T. Cygan/

Joseph T. Cygan May 24, 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

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 292 of 310

Electronic Acknowledgement Receipt

EFS ID:	42807230
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	13-APR-2005
Time Stamp:	19:47:07
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	US7548763_LEMKO_CORRECTION_TO_LARGE_ENTITY_STATUS.pdf	21137 f642aa84825138e7167aeeca88ba55c8b6de7a63	no	1

Warnings:

Information:	
Total Files Size (in bytes):	21137

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.

Best Available Copy

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

→ 15712736500
18477288569
05/24/2021 5:37 PM
PAGE 2/3 * RCVD AT 5/24/2021 8:37:09 PM [Eastern Daylight Time] * SVR:W-PTOFAX-003/12 * DNIS:2736500 * CSID:18477288569 * ANI:2064716113 * DURATION (mm-ss):02-09

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.
11/105,173	04/13/2005	Shaowei Pan		8703

171308 7590 08/24/2021

Lemko Corporation c/o Cygan Law Offices, P.C.
2300 Barrington Road
Suite 400
Hoffman Estates, IL 60169

EXAMINER	
JAIN, ANKUR	

ART UNIT	PAPER NUMBER
2618	

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. 7,548,763	:	
Issue Date: June 16, 2009	:	DECISION ON PETITION
Application No. 11/105,173	:	
Filing or 371(c) Date: April 13, 2005	:	
Attorney Docket No.	:	

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 can not be accepted because is unsigned.

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-Web[1]

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.:	11/105,173	Confirmation No.:	8703
Patent No:	7548763	Group Art Unit:	2618
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"). The Notice states that the petition filed May 24, 2021 could not be accepted because it was unsigned.

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:

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 300 of 310

FEE DESCRIPTION; SMALL ENTITY	FEE CODE	AMOUNT PAID	DATE PAID
11.5 Year Maintenance Fee	2553	$3,850.00	4/23/2021
Surcharge – 11.5 year – late payment within 6 months	2556	$250.00	4/23/2021
	TOTAL:	**$4,100.00**	

FEES DESCRIPTION; UNDISCOUNTED	FEE CODE	AMOUNT DUE	DEFICIENCY DUE
11.5 Year Maintenance Fee	1553	$7,700.00	$3,850.00
Petition for the delayed payment of the fee for maintaining a patent in force	1556	$500.00	$250.00
	TOTAL:	**$8,200.00**	**$4,100.00**

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

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 301 of 310

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

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 302 of 310

Electronic Acknowledgement Receipt

EFS ID:	43789872
Application Number:	11105173
International Application Number:	
Confirmation Number:	8703
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:	13-APR-2005
Time Stamp:	20:06:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	US7548763_11105173_LEMKO_PETITION_FOR_RECONSIDERATION_16SEP2021.pdf	72477 f9428b6fba7e7bf9367a6d081e745d9a8e35de27	no	3

Warnings:

Information:	
Total Files Size (in bytes):	72477

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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SEP 16 2021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	11/105,173	Confirmation No.:	8703
Patent No:	7548763	Group Art Unit:	2618
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 5:52
USPTO
RECEIPTS ACCOUNTING
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"). The Notice states that the petition filed May 24, 2021 could not be accepted because it was unsigned.

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:

PAGE 4/10 * RCVD AT 9/16/2021 8:27:45 PM [Eastern Daylight Time] * SVR:W-PTOFAX-001/19 * DNIS:2738300 * CSID:18477288569 * ANI:6308830780 * DURATION (mm-ss):04-13

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 305 of 310

FEE DESCRIPTION; SMALL ENTITY	FEE CODE	AMOUNT PAID	DATE PAID
11.5 Year Maintenance Fee	2553	$3,850.00	4/23/2021
Surcharge – 11.5 year – late payment within 6 months	2556	$250.00	4/23/2021
	TOTAL:	**$4,100.00**	

FEES DESCRIPTION; UNDISCOUNTED	FEE CODE	AMOUNT DUE	DEFICIENCY DUE
11.5 Year Maintenance Fee	1553	$7,700.00	$3,850.00
Petition for the delayed payment of the fee for maintaining a patent in force	1556	$500.00	$250.00
	TOTAL:	**$8,200.00**	**$4,100.00**

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

PAGE 5/10 * RCVD AT 9/16/2021 8:27:45 PM [Eastern Daylight Time] * SVR:W-PTOFAX-001/19 * DNIS:2738300 * CSID:18477288569. * ANI:6308830780 * DURATION (mm-ss):04-13

Microsoft - Exhibit 1002
Microsoft v. Lemko- IPR2023-00530
Page 306 of 310

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

PAGE 6/10 * RCVD AT 9/16/2021 8:27:45 PM [Eastern Daylight Time] * SVR:W-PTOFAX-001/19 * DNIS:2738300 * CSID:18477288569 * ANI:6308830780 * DURATION (mm-ss):04-13

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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** **X 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.
11/105,173	04/13/2005	Shaowei Pan		8703

171308 7590 10/05/2021

Lemko Corporation c/o Cygan Law Offices, P.C.
2300 Barrington Road
Suite 400
Hoffman Estates, IL 60169

EXAMINER	
JAIN, ANKUR	

ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
10/05/2021	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. 7,548,763	:	
Issue Date: June 16, 2009	:	DECISION ON PETITION
Application No. 11/105,173	:	
Filing or 371(c) Date: April 13, 2005	:	
Attorney Docket No.	:	

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