

WLAN/GSM/CDMA” networks, which in the context of the present invention, is meant to include the aforementioned communication standards or any other existing and future standards of wireless and wired transmission technologies. As such, the integrated terminal of the present invention is not meant to be limited to WLAN, GSM and CDMA technologies, and the subsequent specific description utilization and explanation of certain characteristics previously recited as being characteristics of the above standards are not intended to be limited to such technologies.

**[0098]** FIG. 4 introduces to utilize the user home computer, with Internet access, as a Virtual Mobile Server for the integrated terminal of the present invention, wherein the key characteristics are:

**[0099]** The Virtual Mobile Server, basically a User Home Computer Server, has a fixed Home IP address, connecting to the wireline Internet through Fibre, Cable Modem, Ethernet or DSL (Digital Subscriber Loop), but not limited thereto.

**[0100]** The Virtual Mobile Server, as set forth above, maintains an updated copy of the Connection Table from the aforementioned Mobile Switching Center (MSC) or Mobile Gateway.

**[0101]** One Virtual Mobile Server, as set forth above, can support one or multiple integrated terminals of the present invention, wherein many such terminals can share the same Virtual Mobile Server.

**[0102]** The Virtual Mobile Server, as set forth above, supports such important services and applications as “Mobile Secretary”, “Mobile Office”, “User Webpage”, “Voice Mailbox”, “Short Message Service (SMS) and Multimedia Message Service (MMS)”, “Game Center”, “Document Center” “SDM Center”, etc., but not limited thereto.

**[0103]** The Virtual Mobile Server, as set forth above, also provides the integrated terminal of the present invention of Special Services Management such as Location management, Emergency call management, Security and Safety management, Access Optimization, and Operation and Maintenance management, etc., but not limited thereto.

**[0104]** Basically, any computer server with Internet connection and with a fixed IP address can be configured to be an aforementioned Virtual Mobile Server, associated with the integrated terminal of the present invention.

**[0105]** FIG. 5 defines a prototype Integrated Wired and Wireless Terminal of the present invention, wherein the key characteristics are:

**[0106]** The prototype integrated terminal of the present invention supports various connection modes, for example, wired networks via USB or Cable port, Wireless LAN, Wireless PAN, cdma2000, WCDMA, GSM/GPRS, TD-SCDMA, OFDM or any user defined standards, wherein the network access priority order is defined by the terminal user, for example, Wired USB/Cable mode has the first priority order in the prototype terminal.

**[0107]** “SDM (Software Defined Module) Interface/Slot” is utilized to plug-in the External Card—an external memory card or processing card as set forth above, to install or change the communication standards module including

wireless air-interfaces. Additionally, this SDM Slot is also utilized for inserting the system testing module.

**[0108]** In addition to the aforementioned SDM External Card method, the communication standards module can also be downloaded and installed from the Internet through the Network Interface Unit (NIU), as set forth above, wherein the modules may be downloaded from the Virtual Mobile Server, as set forth above.

**[0109]** The prototype integrated terminal of the present invention supports all available services including voice, data and video, and other user defined services.

**[0110]** The prototype integrated terminal of the present invention supports flexible input modes including Keyboard Input (screen keyboard), Information Recognition (including voice recognition and/or text recognition), Bluetooth/ Ultra Wide Band wireless Input and other user defined input methods.

**[0111]** Additionally, the prototype integrated terminal of the present invention comprises capabilities to connect with the Virtual Mobile Server, as set forth above, whenever the Internet access is available and the bandwidth allows, to enhance the communication services and applications, retrieve useful information, reconfigure the system setup and optimize the network access control, etc.

**[0112]** The integrated terminal system and method of the present invention is not meant to be limited to the aforementioned prototype terminal, and the subsequent specific description utilization and explanation of certain characteristics previously recited as being characteristics of this prototype terminal are not intended to be limited to such technologies.

**[0113]** Since many modifications, variations and changes in detail can be made to the described preferred embodiment of the invention, it is intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents.

What is claimed is:

1. An integrated communication terminal for next generation mobile telecommunications said system comprising:
  - a) Open Wireless Architecture (OWA) BIOS (Basic Input/Output System) defining the basic open platform to support various wireless air interfaces including existing standards and future standards, b) Wireless LAN & Wireless PAN Interface providing the short range wireless network access including wireless local area network, wireless personal area network and other broadband wireless access networks, c) Voice-over-IP Unit providing a state-of-the-art solution to transmit real-time voice service over IP (Internet Protocol) networks, d) Software Defined Module (SDM) supporting multiple wireless standards, wherein said different standards modules can be stored in the said integrated terminal, or in the external memory and/or processing card, or downloaded from the Internet, e) Open RF/IF (radio frequency & intermediate frequency) Subsystem supporting said various wireless standards running in different frequency bands, and supporting new wireless transceiver technologies including smart antenna, MIMO (multiple input, multiple output),