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(54) **SYSTEM AND METHOD FOR PIN-TO-PIN NETWORK COMMUNICATIONS**

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(57) **ABSTRACT**

A system and method is provided for enabling wireless access to a computer network via communication between a remote (client) wireless device and a wireless device physically linked to the computer network. A bank of one or more wireless gateway devices may be cradled and connected to a network server. The wireless gateway devices may then act as a node on the wireless network, and remote wireless devices may send and receive messages to and from the wireless gateway devices using PIN-to-PIN messaging. The wireless gateway devices, when cradled, may communicate with any attached server or other network equipment, and may therefore act as a wireless gateway to the server or other network equipment.
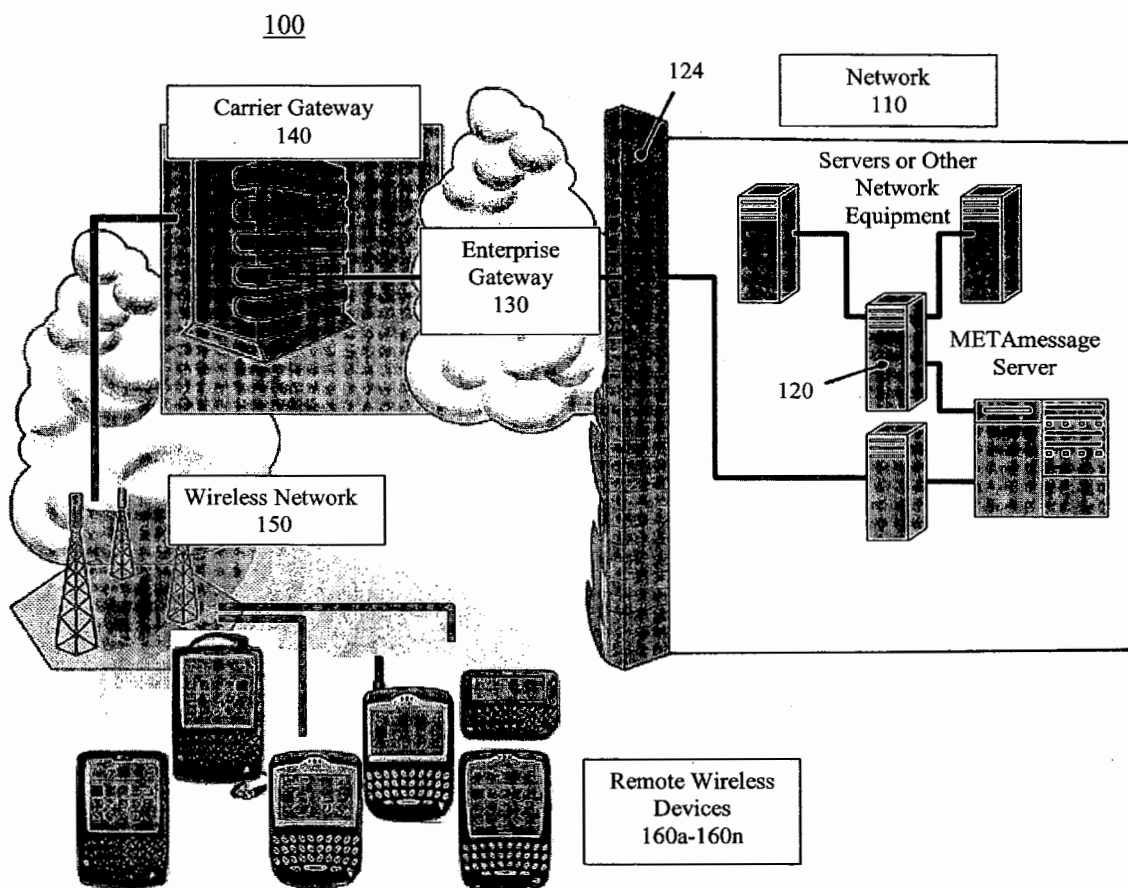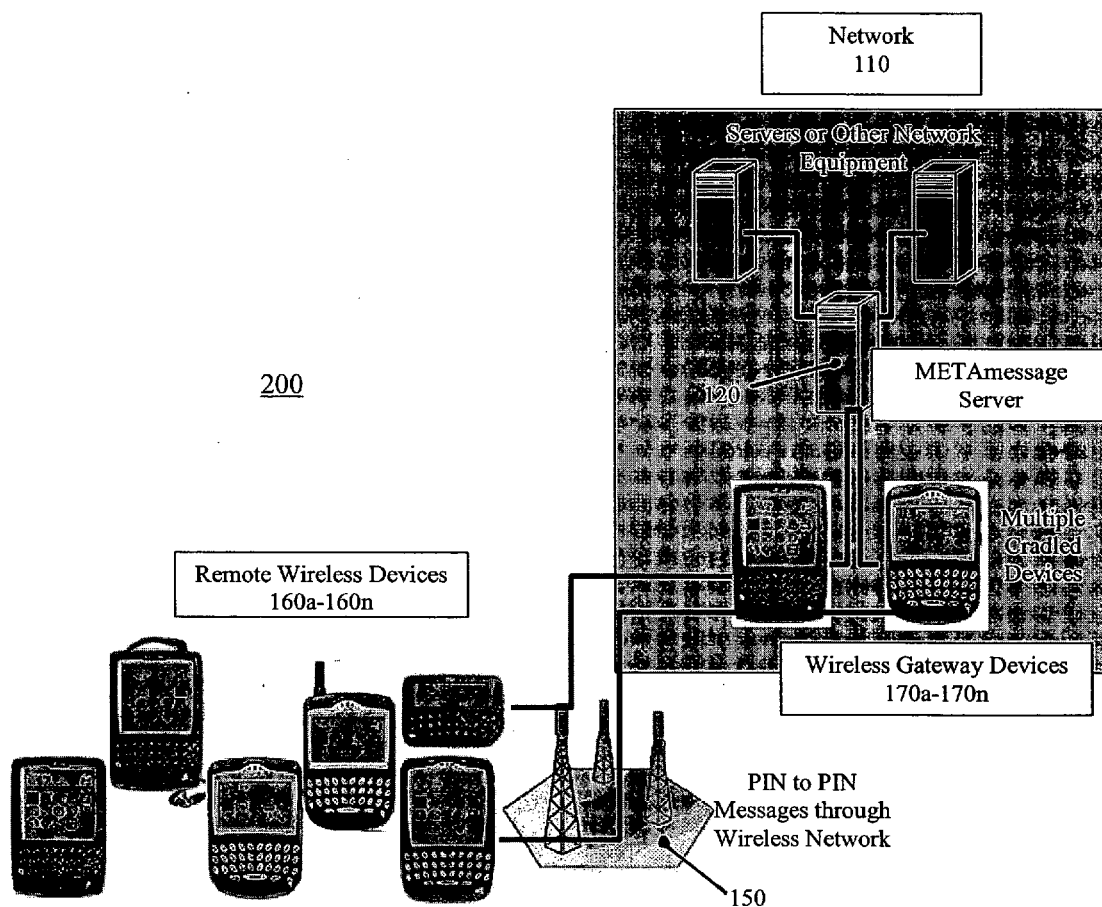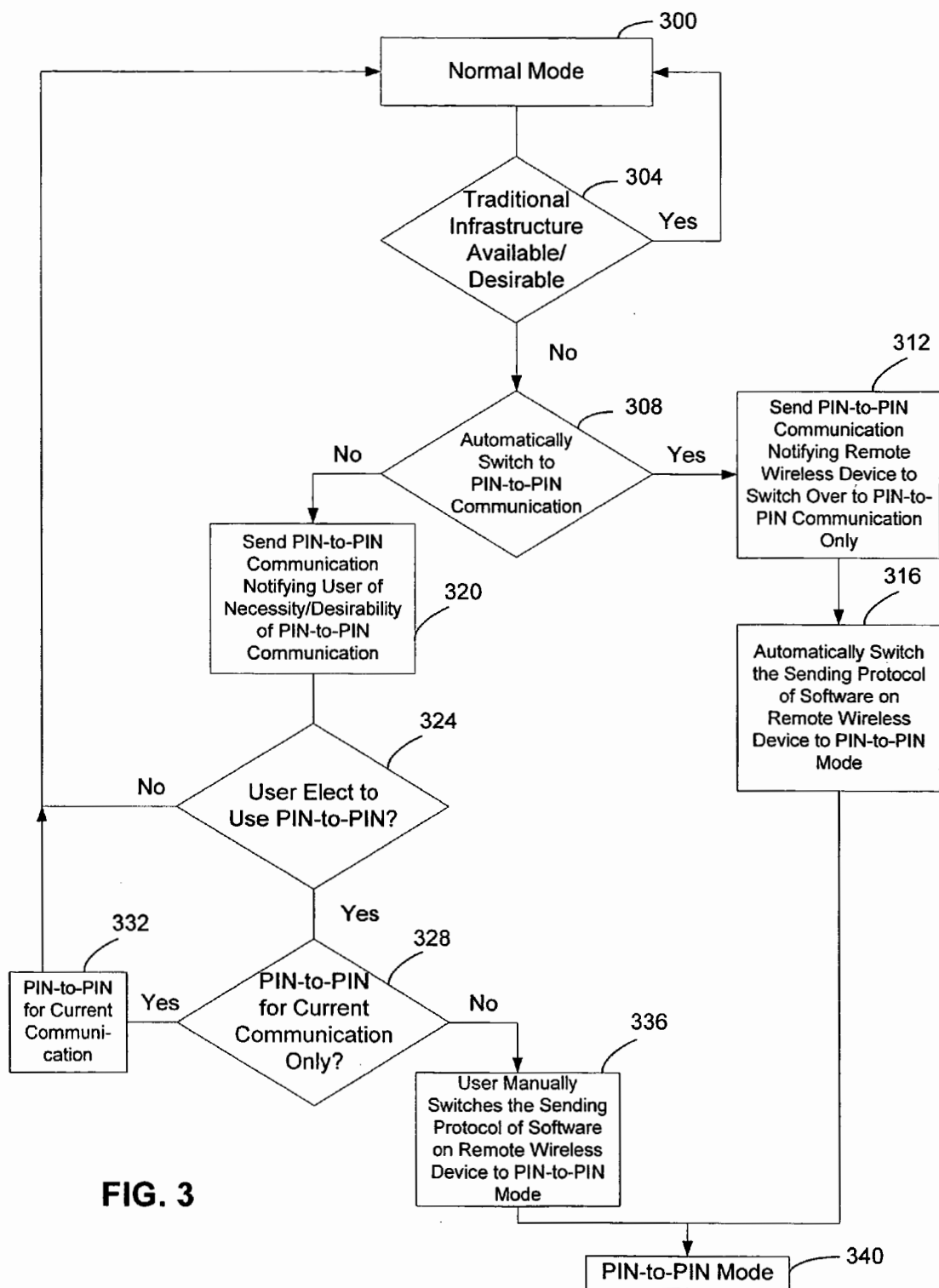
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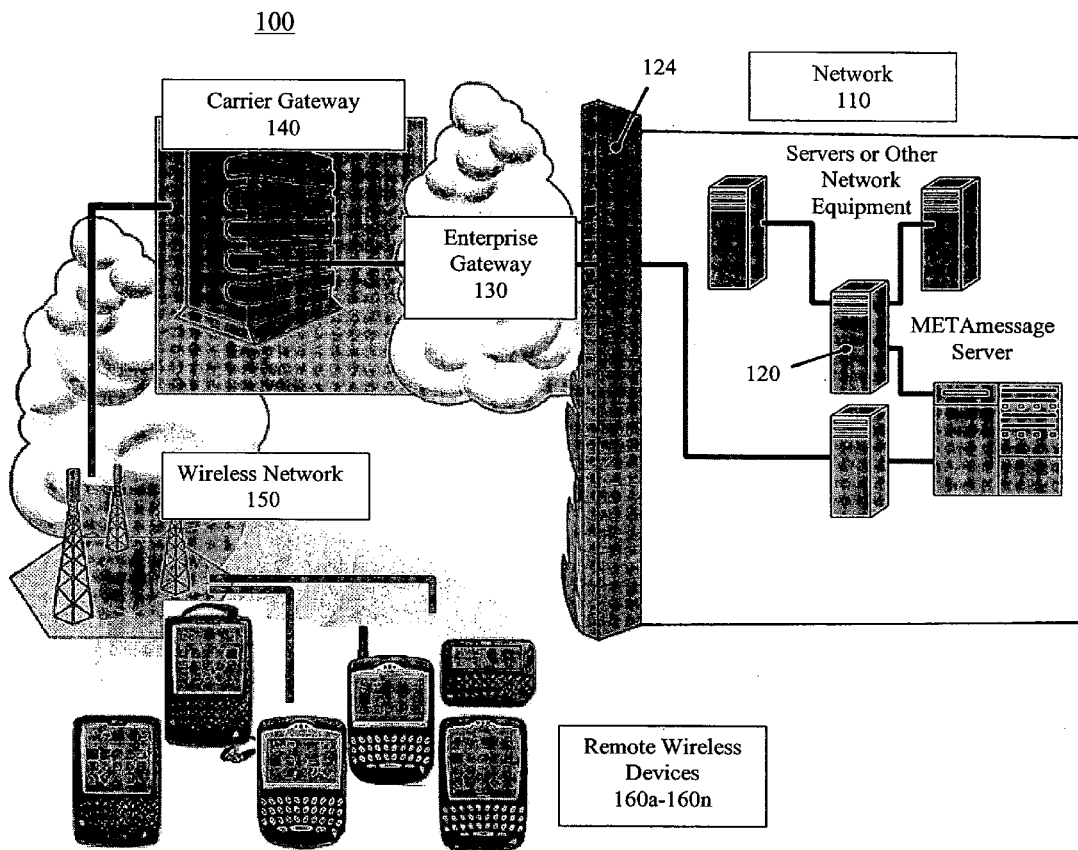
FIG. 1

**FIG. 2**

FIG. 3

## SYSTEM AND METHOD FOR PIN-TO-PIN NETWORK COMMUNICATIONS

### CROSS-REFERENCE TO RELATED APPLICATIONS

[0001]    This application claims priority to U.S. Provisional Patent Application Ser. No. 60/488,055, filed Jul. 18, 2003, which is incorporated herein by reference.

### FIELD OF THE INVENTION

[0002]    This invention relates to a system and method for enabling wireless access to a computer network via communication between a remote (client) wireless device and a wireless device physically linked to the computer network.

### BACKGROUND OF THE INVENTION

[0003]    Wireless computing devices such as, for example, the BlackBerry™ hand-held device by Research in Motion Limited, typically provide users with wireless access to important enterprise information. System infrastructures (or architectures) supporting such devices may generally comprise a wireless network, a carrier gateway, an enterprise gateway (e.g., the BlackBerry™ Enterprise Server or "BES"), and other back-end servers (e.g., Exchange, DB systems, document management systems, etc.), or other components.

[0004]    Wireless servers, such as Onset Technology's METAmessage server, may be provided to further enhance the features and functionality of known wireless systems (such as the BlackBerry™ system) by enabling users to access and manage information—data from document management programs, voicemail, SQL/ODBC databases, and CRM/ERP applications, email attachments, network files, web pages, contact information, etc.—from their wireless device.

[0005]    In disaster scenarios, such as that of Sep. 11, 2001, various components of a system infrastructure necessary to access important enterprise information from a wireless device may become unavailable. Connectivity to an enterprise may be lost, or back end systems such as BES and Exchange may not function. While wireless devices and wireless networks (e.g., the pager Mobitex and DataTac networks) may operate, as was the case on Sep. 11, 2001, they may still be ineffective if other components of the system infrastructure do not function.

[0006]    Certain wireless devices have a dedicated device number or "PIN" which may serve as the device's identifier on a network. PIN's also enable wireless devices on a network to communicate with one another via PIN-to-PIN messaging. This form of communication may occur from device to device through the wireless network, and without the need for a carrier gateway, enterprise gateway, or other system or server. This form of communication may also be quite valuable in the event of a disaster or other scenario if various components of a system infrastructure are comprised. One drawback associated with PIN-to-PIN messaging, however, is that a user must typically know the PIN address of the wireless device of a user that he or she wishes to communicate with. This may be an unlikely occurrence, as most users tend to remember e-mail addresses and/or

### SUMMARY OF THE INVENTION

[0007]    The invention solving these and other problems relates to a system and method for enabling wireless access to a computer network via communication between a remote (client) wireless device and a wireless device physically linked to the computer network.

[0008]    One embodiment of the invention enables users to retrieve the PIN addresses of other wireless devices, as well as interact with designated database systems, file directories, or other back end systems, even if portions of the system infrastructure are unavailable.

[0009]    According to an embodiment of the invention, a bank of one or more wireless devices may be cradled and connected to the network, a METAmessage server provided by Onset Technology, Inc., or other back-end server. For convenience, these cradled devices will be referred to herein as "wireless gateway devices." The wireless gateway devices may then act as a node on the wireless network, and remote wireless devices may send and receive messages to and from the wireless gateway devices using PIN-to-PIN messaging. The wireless gateway devices, when cradled, may communicate with any attached server or other network equipment, and may therefore act as a wireless gateway to the server or other network equipment. Accordingly, one or more components of the system architecture that may be unavailable may be bypassed, and a direct link from the devices to the network equipment may be provided.

[0010]    According to one embodiment, the addresses of the wireless gateway devices may be stored in a remote wireless device, or may be transmitted in case of emergency to the remote wireless device through a PIN-to-PIN message. The remote wireless device, which typically communicates with the enterprise systems through email or other data channels, may switch to PIN-to-PIN messaging either manually, through operation of the user, or automatically, in response to a received PIN-to-PIN message. The remote wireless device may store multiple addresses of wireless gateway devices, and may send each communication to more than one of those wireless gateway devices, for redundancy purposes. According to one embodiment, multiple METAmessage servers may be provided in different locations, to further make the solution redundant. The wireless gateway devices may be served by different wireless networks, for further redundancy.

[0011]    According to an embodiment of the invention, a user of a remote wireless device may have access to any information on the METAmessage (or other) server, or on any devices connected to it. As one example, a fax server provided with (or connected to) the METAmessage server, or even just a fax card, may provide the additional functionality of enabling users to print any of the information to any fax machine. This further enhances the solution to support lengthy documents that may not be easily read on the remote wireless device.

[0012]    These and other objects, features, and advantages of the invention will be apparent through the detailed description of the preferred embodiments and the drawings attached hereto. It is also to be understood that both the foregoing general description and the following detailed

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