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(56) Related Art
US 6873841 B1 (SAGAR) 29 March 2005
US 6741855 B1 (MARTIN et al.) 25 May 2004
US 2006/0101117 A1 (YABE et al.) 11 May 2006
US 7076241 B1 (ZONDERVAN) 11 July 2006
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2009238286 16 Nov 2009

Abstract

ELECTRONIC MAIL VIA MOBILE TELEPHONY

Disclosed is a method of providing electronic mail to a mobile phone. The method comprises formatting, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message; sending the one or more e-mail summary messages to the mobile phone; formatting, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and sending the formatted message to the mobile phone.

2009238286 16 Nov 2009

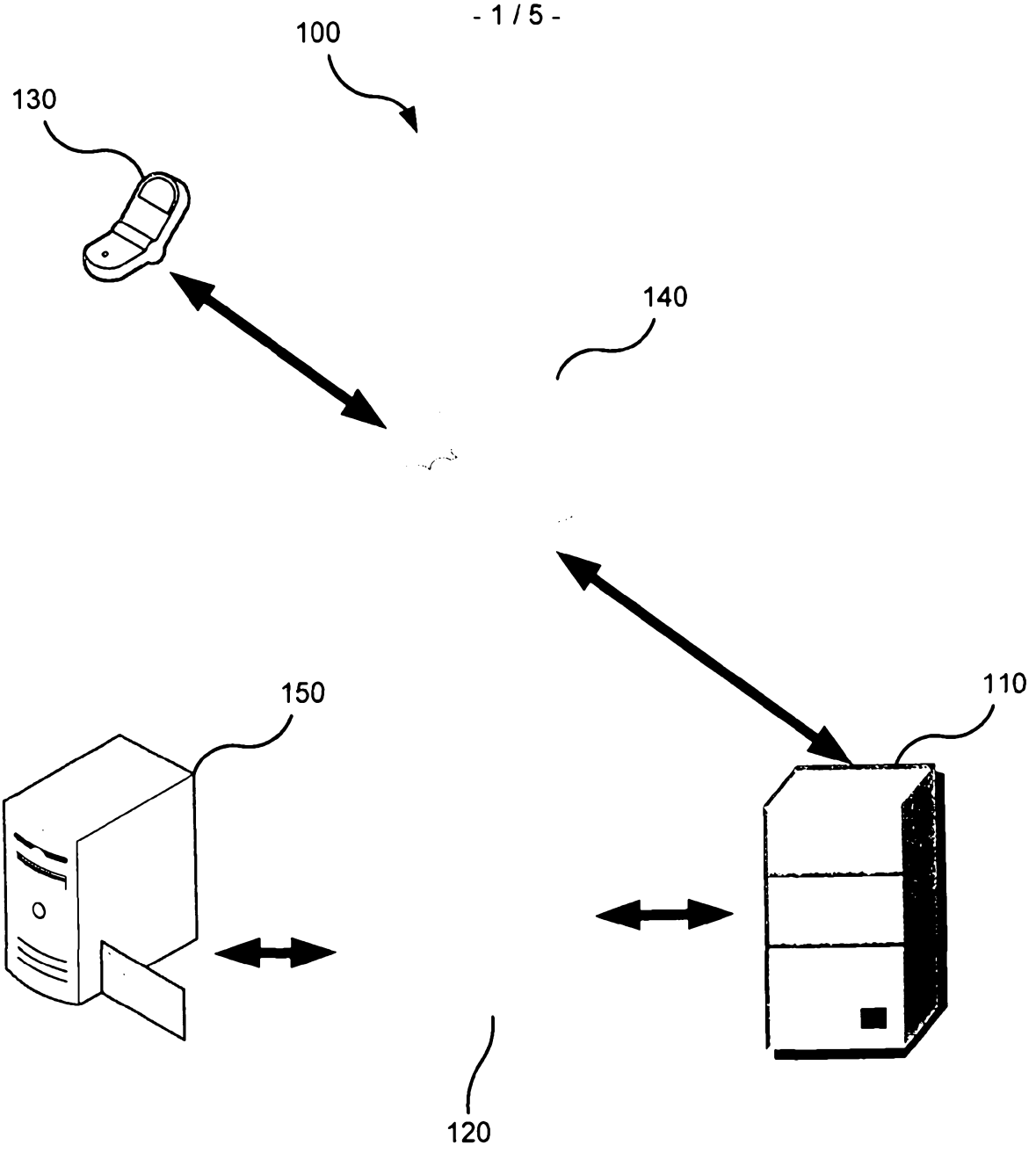

Fig. 1

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COMPLETE SPECIFICATION

FOR A STANDARD PATENT

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Invention Title:	Electronic mail via mobile telephony

The following statement is a full description of this invention, including the best method of performing it known to me/us:

ELECTRONIC MAIL VIA MOBILE TELEPHONY

Technical Field

The present invention relates generally to mobile telephony and, in particular, to receiving electronic mail over mobile telephones.

Background

Electronic mail, or e-mail, has become a dominant medium of communication between people for both commercial and personal purposes. E-mail functionality was originally limited to desktop computing devices hard-wired to a computer network. At the same time, the rise of portable personal communication devices such as mobile phones has provided people with the experience of receiving messages instantly, wherever they are. It is therefore unsurprising that mobile telephones such as the BlackBerry® that provide e-mail sending and receiving functions have proven popular.

E-mail messages are unlimited in length and can contain non-text elements such as images and graphics. By contrast, messages under the short message standard (SMS), which are all that conventional mobile phones support, are limited to twelve hundred (1200) or fewer text characters. Mobile phones providing e-mail functionality therefore require more complex design, with greater capacity, screen size, and processing power than conventional mobile phones. This increased complexity comes at a significant cost, which is why e-mail-enabled mobile phones have hitherto largely been limited to business users. There is therefore a need for technology which will allow e-mail to be at least viewed on, and preferably sent from, conventional mobile phones.

Summary

2009238286 16 Nov 2009

It is an object of the present invention to substantially overcome, or at least ameliorate, one or more disadvantages of existing arrangements.

According to a first aspect of the present disclosure, there is provided a method of providing electronic mail to a mobile phone. The method comprises formatting, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message; sending the one or more e-mail summary messages to the mobile phone; formatting, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and sending the formatted message to the mobile phone.

According to a second aspect of the present disclosure, there is provided an exchange server adapted to provide electronic mail to a mobile phone. The exchange server comprises a memory, and a processor adapted to format, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message; send the one or more e-mail summary messages to the mobile phone; format, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and send the formatted message to the mobile phone.

According to a third aspect of the present disclosure, there is provided a computer program being executable by a computer apparatus to make the computer apparatus perform the method described above.

2009238286 16 Nov 2009

According to a fourth aspect of the present disclosure, there is provided a computer readable medium having a computer program recorded therein, the computer program being executable by a computer apparatus to make the computer apparatus perform the method described above.

According to a fifth aspect of the present disclosure, there is provided a system comprising: one or more mail servers; one or more mobile phones, each mobile phone corresponding to an e-mail account with one of the mail servers; and an exchange server adapted to communicate with the mail servers via an electronic computer network and the mobile phones via a telephone network. The exchange server is adapted to format, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message; send the one or more e-mail summary messages to the mobile phone; format, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and send the formatted message to the mobile phone.

Description of the Drawings

At least one embodiment of the present invention will now be described with reference to the drawings, in which:

Fig. 1 shows a system within which the embodiments of the invention may be practised;

Figs. 2A and 2B form a schematic block diagram of a general purpose computer system on which the servers in the system of Fig. 1 may be implemented;

Fig. 3 is a flow diagram illustrating a method of providing e-mail service to a registered mobile phone in the system of Fig. 1; and

Fig. 4 is a sequence diagram illustrating the sequence of messages passing between the entities in the system of Fig. 1 according to the method of Fig. 3.

Detailed Description

Where reference is made in any one or more of the accompanying drawings to steps and/or features, which have the same reference numerals, those steps and/or features have for the purposes of this description the same function(s) or operation(s), unless the contrary intention appears.

Fig. 1 shows a system 100 within which the embodiments of the invention may be practised. The system 100 comprises an exchange server 110 associated with an exchange, and a mobile phone 130 associated with a customer. The exchange server 110 and mobile phone 130 are adapted to communicate with each other in bidirectional fashion via the telephone network 140 using a conventional telephone message protocol such as SMS or the Multimedia Message Standard (MMS), which allows longer and more varied messages than SMS and which is becoming more widely supported. The exchange server 110 is also adapted to communicate bidirectionally with a mail server 150 via a computer network 120, which may be a local area network (LAN) or a wide-area network (WAN), using a conventional e-mail protocol such as IMAP.

Figs. 2A and 2B collectively form a schematic block diagram of a general purpose computer system 200, upon which the exchange server 110 of the system 100 of Fig. 1 may be implemented. As seen in Fig. 2A, the computer system 200 is formed by a computer module 201, input devices such as a keyboard 202, a mouse pointer device 203, a

scanner 226, a camera 227, and a microphone 280, and output devices including a printer 215, a display device 214 and loudspeakers 217. An external Modulator-Demodulator (Modem) transceiver device 216 may be used by the computer module 201 for communicating to and from the telephone network 140 via a connection 221. Where the connection 221 is a conventional telephone line, the modem 216 may be a traditional "dial-up" modem. Alternatively, where the connection 221 is a high capacity (eg: cable) connection, the modem 216 may be a broadband modem. A wireless modem may also be used for wireless connection to the telephone network 140.

The computer module 201 typically includes at least one processor unit 205, and a memory unit 206 for example formed from semiconductor random access memory (RAM) and semiconductor read only memory (ROM). The module 201 also includes an number of input/output (I/O) interfaces including an audio-video interface 207 that couples to the video display 214, loudspeakers 217 and microphone 280, an I/O interface 213 for the keyboard 202, mouse 203, scanner 226, camera 227 and optionally a joystick (not illustrated), and an interface 208 for the external modem 216 and printer 215. In some implementations, the modem 216 may be incorporated within the computer module 201, for example within the interface 208. The computer module 201 also has a network interface 211 which, via a connection 223, permits coupling of the computer system 200 to the computer network 120. The interface 211 may be formed by an Ethernet™ circuit card, a wireless Bluetooth™ or an IEEE 802.11 wireless arrangement.

The interfaces 208 and 213 may afford either or both of serial and parallel connectivity, the former typically being implemented according to the Universal Serial Bus (USB) standards and having corresponding USB connectors (not illustrated). Storage devices 209 are provided and typically include a hard disk drive (HDD) 210. Other storage

devices such as a floppy disk drive and a magnetic tape drive (not illustrated) may also be used. An optical disk drive 212 is typically provided to act as a non-volatile source of data. Portable memory devices, such optical disks (eg: CD-ROM, DVD), USB-RAM, and floppy disks for example may then be used as appropriate sources of data to the system 200.

The components 205 to 213 of the computer module 201 typically communicate via an interconnected bus 204 and in a manner which results in a conventional mode of operation of the computer system 200 known to those in the relevant art. Examples of computers on which the described arrangements can be practised include IBM-PC's and compatibles, Sun Sparcstations, Apple Macs™ or alike computer systems evolved therefrom.

The method of Fig. 3, to be described below, may be implemented as one or more software application programs 233 executable within the computer system 200 in its capacity as the exchange server 110. In particular, the steps of the method of Fig. 3 are effected by instructions 231 in the software 233 that are carried out within the computer system 200. The software instructions 231 may be formed as one or more code modules, each for performing one or more particular tasks. The software may also be divided into two separate parts, in which the code modules in the first part perform the methods and the corresponding code modules in a second part manage a user interface between the first part and a user of the computer system 200.

The software 233 is typically loaded into the computer system 200 from a computer readable medium, and is then typically stored in the HDD 210, as illustrated in Fig. 2A, or the memory 206, after which the software 233 can be executed by the computer system 200. In some instances, the application programs 233 may be supplied to the user

encoded on one or more CD-ROM 225 and read via the corresponding drive 212 prior to storage in the memory 210 or 206. Alternatively the software 233 may be read by the computer system 200 from the network 140 or loaded into the computer system 200 from other computer readable media. Computer readable storage media refers to any storage medium that participates in providing instructions and/or data to the computer system 200 for execution and/or processing. Examples of such storage media include floppy disks, magnetic tape, CD-ROM, a hard disk drive, a ROM or integrated circuit, USB memory, a magneto-optical disk, or a computer readable card such as a PCMCIA card and the like, whether or not such devices are internal or external of the computer module 201. Examples of computer readable transmission media that may also participate in the provision of software, application programs, instructions and/or data to the computer module 201 include radio or infra-red transmission channels as well as a network connection to another computer or networked device, and the Internet or Intranets including e-mail transmissions and information recorded on Websites and the like.

The second part of the application programs 233 and the corresponding code modules mentioned above may be executed to implement one or more graphical user interfaces (GUIs) to be rendered or otherwise represented upon the display 214. Through manipulation of typically the keyboard 202 and the mouse 203, a user of the computer system 200 and the application may manipulate the interface in a functionally adaptable manner to provide controlling commands and/or input to the applications associated with the GUI(s). Other forms of functionally adaptable user interfaces may also be implemented, such as an audio interface utilizing speech prompts output via the loudspeakers 217 and user voice commands input via the microphone 280.

Fig. 2B is a detailed schematic block diagram of the processor 205 and a "memory" 234. The memory 234 represents a logical aggregation of all the memory devices (including the HDD 210 and semiconductor memory 206) that can be accessed by the computer module 201 in Fig. 2A.

When the computer module 201 is initially powered up, a power-on self-test (POST) program 250 executes. The POST program 250 is typically stored in a ROM 249 of the semiconductor memory 206. A program permanently stored in a hardware device such as the ROM 249 is sometimes referred to as firmware. The POST program 250 examines hardware within the computer module 201 to ensure proper functioning, and typically checks the processor 205, the memory (209, 206), and a basic input-output systems software (BIOS) module 251, also typically stored in the ROM 249, for correct operation. Once the POST program 250 has run successfully, the BIOS 251 activates the hard disk drive 210. Activation of the hard disk drive 210 causes a bootstrap loader program 252 that is resident on the hard disk drive 210 to execute via the processor 205. This loads an operating system 253 into the RAM memory 206 upon which the operating system 253 commences operation. The operating system 253 is a system level application, executable by the processor 205, to fulfil various high level functions, including processor management, memory management, device management, storage management, software application interface, and generic user interface.

The operating system 253 manages the memory (209, 206) in order to ensure that each process or application running on the computer module 201 has sufficient memory in which to execute without colliding with memory allocated to another process. Furthermore, the different types of memory available in the system 200 must be used properly so that each process can run effectively. Accordingly, the aggregated memory

234 is not intended to illustrate how particular segments of memory are allocated (unless otherwise stated), but rather to provide a general view of the memory accessible by the computer system 200 and how such is used.

The processor 205 includes a number of functional modules including a control unit 239, an arithmetic logic unit (ALU) 240, and a local or internal memory 248, sometimes called a cache memory. The cache memory 248 typically includes a number of storage registers 244 - 246 in a register section. One or more internal buses 241 functionally interconnect these functional modules. The processor 205 typically also has one or more interfaces 242 for communicating with external devices via the system bus 204, using a connection 218.

The application program 233 includes a sequence of instructions 231 that may include conditional branch and loop instructions. The program 233 may also include data 232 which is used in execution of the program 233. The instructions 231 and the data 232 are stored in memory locations 228-230 and 235-237 respectively. Depending upon the relative size of the instructions 231 and the memory locations 228-230, a particular instruction may be stored in a single memory location as depicted by the instruction shown in the memory location 230. Alternately, an instruction may be segmented into a number of parts each of which is stored in a separate memory location, as depicted by the instruction segments shown in the memory locations 228-229.

In general, the processor 205 is given a set of instructions which are executed therein. The processor 205 then waits for a subsequent input, to which it reacts to by executing another set of instructions. Each input may be provided from one or more of a number of sources, including data generated by one or more of the input devices 202, 203, data received from an external source across the network 140, data retrieved from one of

the storage devices 206, 209 or data retrieved from a storage medium 225 inserted into the corresponding reader 212. The execution of a set of the instructions may in some cases result in output of data. Execution may also involve storing data or variables to the memory 234.

The method of Fig. 3 uses input variables 254, that are stored in the memory 234 in corresponding memory locations 255-258. The method of Fig. 3 produces output variables 261, that are stored in the memory 234 in corresponding memory locations 262-265. Intermediate variables may be stored in memory locations 259, 260, 266 and 267.

The register section 244-246, the arithmetic logic unit (ALU) 240, and the control unit 239 of the processor 205 work together to perform sequences of micro-operations needed to perform "fetch, decode, and execute" cycles for every instruction in the instruction set making up the program 233. Each fetch, decode, and execute cycle comprises:

(a) a fetch operation, which fetches or reads an instruction 231 from a memory location 228;

(b) a decode operation in which the control unit 239 determines which instruction has been fetched; and

(c) an execute operation in which the control unit 239 and/or the ALU 240 execute the instruction.

Thereafter, a further fetch, decode, and execute cycle for the next instruction may be executed. Similarly, a store cycle may be performed by which the control unit 239 stores or writes a value to a memory location 232.

Each step or sub-process in the method of Fig. 3 is associated with one or more segments of the program 233, and is performed by the register section 244-247, the ALU

240, and the control unit 239 in the processor 205 working together to perform the fetch, decode, and execute cycles for every instruction in the instruction set for the noted segments of the program 233.

The method of Fig. 3 may alternatively be implemented in dedicated hardware such as one or more integrated circuits performing the functions or sub functions of Fig. 3. Such dedicated hardware may include graphic processors, digital signal processors, or one or more microprocessors and associated memories.

The user of the mobile phone 130 is assumed to have an electronic mail account with the mail server 150. The exchange server 110 in the system 100 acts as a mail client to the mail server 150 on behalf of the user of the mobile phone 130, effectively providing basic e-mail services to the mobile phone 130 which has no more than conventional functionality. For this purpose, the exchange server 110 relays e-mails obtained from the mail server 150 via the computer network 120 to the mobile phone 130 formatted as messages, via the telephone network 140. For example, SMS messages are supported by most conventional mobile phones. The exchange server 110 also optionally sends e-mails, reformatted from messages received from the mobile phone 130, via the telephone network 140, via the computer network 120 to the mail server 150.

Electronic mail accounts typically require a user to identify themselves with a username and a password in order to send and receive e-mail via the mail server 150. Before the method of Fig. 3 is invoked for the first time, the user of the mobile phone 130 registers for e-mail service with the exchange server 110. This involves informing the exchange server 110 of the username and password of the e-mail account held by the user of the mobile phone 130 with the mail server 150, as well as the number of the registered mobile phone 130 on which the e-mail service is to be provided. In return, the user of the

registered mobile phone 130 receives a number *N* on which the mobile phone 130 may send prompting messages to the exchange server 110. The registration may be for "receive e-mail only" or for "receive and send e-mail".

The exchange server 110 uses the username and password of the e-mail account to monitor the user's e-mail account by accessing the mail server 150 over the computer network 120 in conventional fashion. E-mail messages remain on the mail server 150 for later retrieval by the user of the registered mobile phone 130 over the network 120 independently of the exchange server 110, regardless of the number of times the method of Fig. 3 is executed.

The system 110 may comprise more than one mobile phone 130 and more than one mail server 150, on condition that each mobile phone 130 has a corresponding e-mail account on a mail server 150. On registration, each registered mobile phone 130 is provided with the number *N* on which the mobile phone 130 may send prompting messages to the exchange server 110. The exchange server 110 is able to identify the registered mobile phone 130 that sent the prompting message through the "caller ID" field that is included with the prompting message. The exchange server 110 is therefore able to execute the method of Fig. 3 independently for each registered mobile phone 130.

Fig. 3 is a flow diagram illustrating a method 300 of providing e-mail service to the registered mobile phone 130. The method 300 is performed by the exchange server 110 in the system 100. One or more steps of the method 300 may be implemented as software resident on the hard disk drive 210 and being controlled in its execution by the processor 205 of the computer system 200 acting as the exchange server 110. The method 300 will be described with reference to Fig. 4, which illustrates a sequence 400 of messages passing between the entities in the system 100. The entities labelled 410, 420,

and 430 in Fig. 4 may be identified with the mail server 150, the exchange server 110, and the registered mobile phone 130, respectively. The method 300 will be described by way of example with reference to Figs. 3 and 4.

The method 300 is carried out in response to the sending of a prompting message 440, for example an SMS message, by the mobile phone 130 to the exchange server 110 using the number *N* that was allocated to the mobile phone 130 on registration for the e-mail service. The sending of the prompting message is shown as a step 310 in dashed outline in Fig. 3 to show that it does not strictly form part of the method 300. The prompting message 440 comprises a predetermined word or phrase and a number, indicating the user's desire to review that number of the most recent e-mails in the user's e-mail account (for example, the ten most recent e-mails if the prompting message 440 is "Last 10").

The method 300 properly begins at step 330, where the exchange server 110 retrieves any new e-mails from the mail server 150 through the processor 205 sending a request 445 for new e-mails to the mail server 150 and receiving any new e-mails in a response 450 from the mail server 150. Step 340 follows, at which the exchange server 110 formats the desired number of the most recent e-mails received from the mail server 150, including any in the message 450, into a group of respective "e-mail summary" messages 455, and sends the e-mail summary messages 455 to the mobile phone 130. Each e-mail summary message 455 in the group summarises the corresponding e-mail. In one implementation, each e-mail summary message 455 contains the subject information, but not the content, of the corresponding e-mail.

Each e-mail summary message 455 in the group also includes a "reply-to" number. The "reply-to" numbers are drawn from a pool of telephone numbers that have

been leased from a telecommunications carrier by the operator of the exchange server 110. The "reply-to" number included with each e-mail summary message 455 in the group is different from those included with all other e-mail summary messages 455 in the group. However, "reply-to" numbers can be shared with other registered mobile phones 130, and between different "message groups" sent to the same registered mobile phones 130 at different times.

On receipt of the group of e-mail summary message 455, in the example of Fig. 4, the user selects one of the e-mail summary messages 455 for full review of the corresponding e-mail. In another example, the user may select a plurality of the e-mail summary messages 455 for full review of the corresponding e-mails.

The method 300 continues at step 350, where the exchange server 110 receives a "more information" message 460 from the mobile phone 130. The "more information" message 460 arrives on the "reply-to" number included with the selected e-mail summary message 455, allowing the exchange server 110 to identify the corresponding e-mail message. In the case where two or more "more information" messages 460 arrive on same the "reply-to" number substantially simultaneously, the exchange server 110 uses the "caller ID" field of each "more information" message 460 to identify the registered mobile phone 130 from which each "more information" message 460 originated, and thereby identifies the corresponding e-mail message.

The "more information" message 460 contains a predetermined word or phrase, e.g. "Get all", "Rest", or "More", indicating the user's desire to review the full content of the e-mail corresponding to the selected e-mail summary message 455. In response, at step 360 the exchange server 110 formats the corresponding e-mail into a message 465, and sends the message 465 to the mobile phone 130. The formatted e-mail message 465

comprises at least a portion of the content of the corresponding e-mail. In one implementation, the formatted e-mail message follows the SMS standard, which is widely supported among conventional mobile phones. An e-mail that is too long to fit into an SMS message, or an e-mail containing non-text content such as images, graphics, sound files, attachments, etc. may be formatted into a message 465 following the Multimedia Message Standard (MMS).

If the mobile phone 130 is registered to "receive e-mail only" as described above, the method 300 concludes after step 360. Alternatively, if the mobile phone 130 is registered to "receive and send e-mail" as described above, the method 300 continues to step 370 (shown in dashed outline in Fig. 3), where the exchange server 110 receives a reply message 470 from the mobile phone 130 containing a reply to the e-mail corresponding to the formatted e-mail message 465. At step 380 (shown in dashed outline in Fig. 3), the exchange server 110 formats the content of the reply message 470 into an e-mail 475, which the exchange server 110 then sends to the mail server 150. The method 300 then concludes.

Steps 330 and 380 are carried out according to the e-mail protocol on which the mail server 150 communicates with the exchange server 110 over the computer network 120. Steps 340 to 370 are carried out according to the messaging protocol on which the mobile phone 130 communicates with the exchange server 110 over the telephone network 140.

The arrangements described are applicable to the telecommunications industries.

The foregoing describes only some embodiments of the present invention, and modifications and/or changes can be made thereto without departing from the scope and spirit of the invention, the embodiments being illustrative and not restrictive.

2009238286 16 Nov 2009

The claims defining the invention are as follows:

1. A method of providing electronic mail to a mobile phone, the method comprising:

formatting, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message;

sending the one or more e-mail summary messages to the mobile phone;

formatting, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and

sending the formatted message to the mobile phone.

2. A method according to claim 1, further comprising:

formatting a third message received from the mobile phone into an e-mail, and

sending the e-mail to a mail server.

3. A method according to claim 1, wherein each e-mail summary message includes a telephone number.

4. A method according to claim 3, wherein the second message is received from the mobile phone on the telephone number comprised by the one e-mail summary message.

5. A method according to claim 1, wherein the first message comprises a number, and the first formatting step formats that number of the most recent e-mails into respective e-mail summary messages.

6. An exchange server adapted to provide electronic mail to a mobile phone, the exchange server comprising:

a memory; and

a processor adapted to:

format, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message;

send the one or more e-mail summary messages to the mobile phone;

format, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and

send the formatted message to the mobile phone.

7. A computer program being executable by a computer apparatus to make the computer apparatus perform a method of providing electronic mail to a mobile phone, the computer program comprising:

code for formatting, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message;

code for sending the one or more e-mail summary messages to the mobile phone;

code for formatting, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and

code for sending the formatted message to the mobile phone.

8. A computer readable medium having a computer program recorded therein for providing electronic mail to a mobile phone, the computer program comprising:

code for formatting, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message;

code for sending the one or more e-mail summary messages to the mobile phone;

code for formatting, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and

code for sending the formatted message to the mobile phone.

9. A system comprising:

one or more mail servers;

one or more mobile phones, each mobile phone corresponding to an e-mail account with one of the mail servers; and

an exchange server adapted to communicate with the mail servers via an electronic computer network and the mobile phones via a telephone network, the exchange server being adapted to:

format, in response to a first message from the mobile phone, one or more e-mails into one or more respective e-mail summary messages each summarising a corresponding e-mail message;

send the one or more e-mail summary messages to the mobile phone;

format, in response to a second message received from the mobile phone in reply to one of the e-mail summary messages, the e-mail corresponding to the one e-mail summary message into a formatted message comprising at least a portion of content of the corresponding e-mail; and

send the formatted message to the mobile phone.

10. A method of providing electronic mail to a mobile phone, the method being substantially as hereinbefore described with reference to any one of the embodiments as that embodiment is shown in the accompanying drawings.

11. An exchange server adapted to provide electronic mail to a mobile phone, the exchange server being substantially as hereinbefore described with reference to any one of the embodiments as that embodiment is shown in the accompanying drawings.

12. A computer program being executable by a computer apparatus to make the computer apparatus perform a method of providing electronic mail to a mobile phone, the

computer program being substantially as hereinbefore described with reference to any one of the embodiments as that embodiment is shown in the accompanying drawings.

13. A computer readable medium having a computer program recorded therein for providing electronic mail to a mobile phone, the computer program being substantially as hereinbefore described with reference to any one of the embodiments as that embodiment is shown in the accompanying drawings.

14. A system being substantially as hereinbefore described with reference to any one of the embodiments as that embodiment is shown in the accompanying drawings.

DATED this sixteenth Day of November, 2009

TRAITEL COMMUNICATIONS PTY LTD

Patent Attorneys for the Applicant

SPRUSON&FERGUSON

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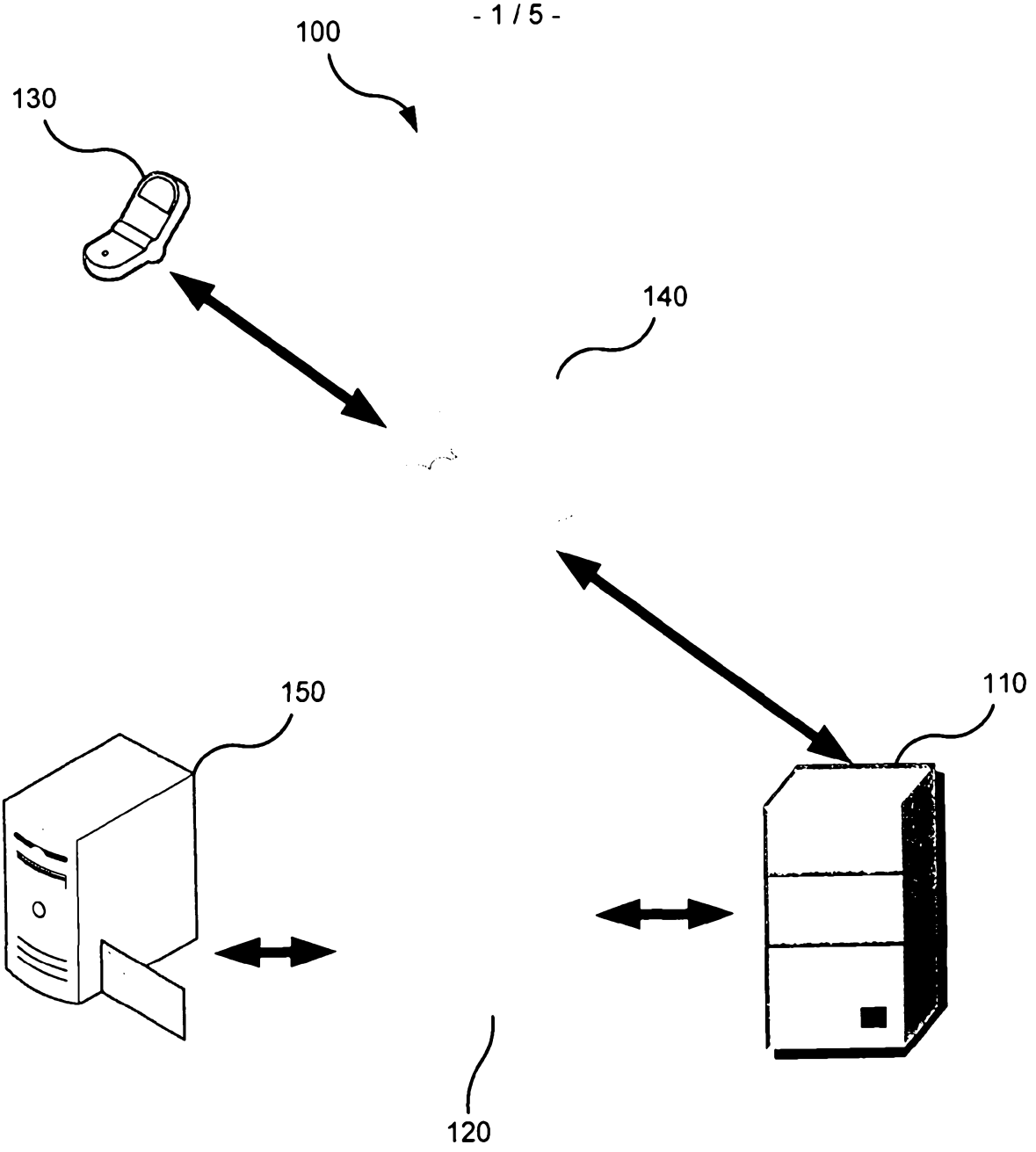

Fig. 1

2009238286 16 Nov 2009

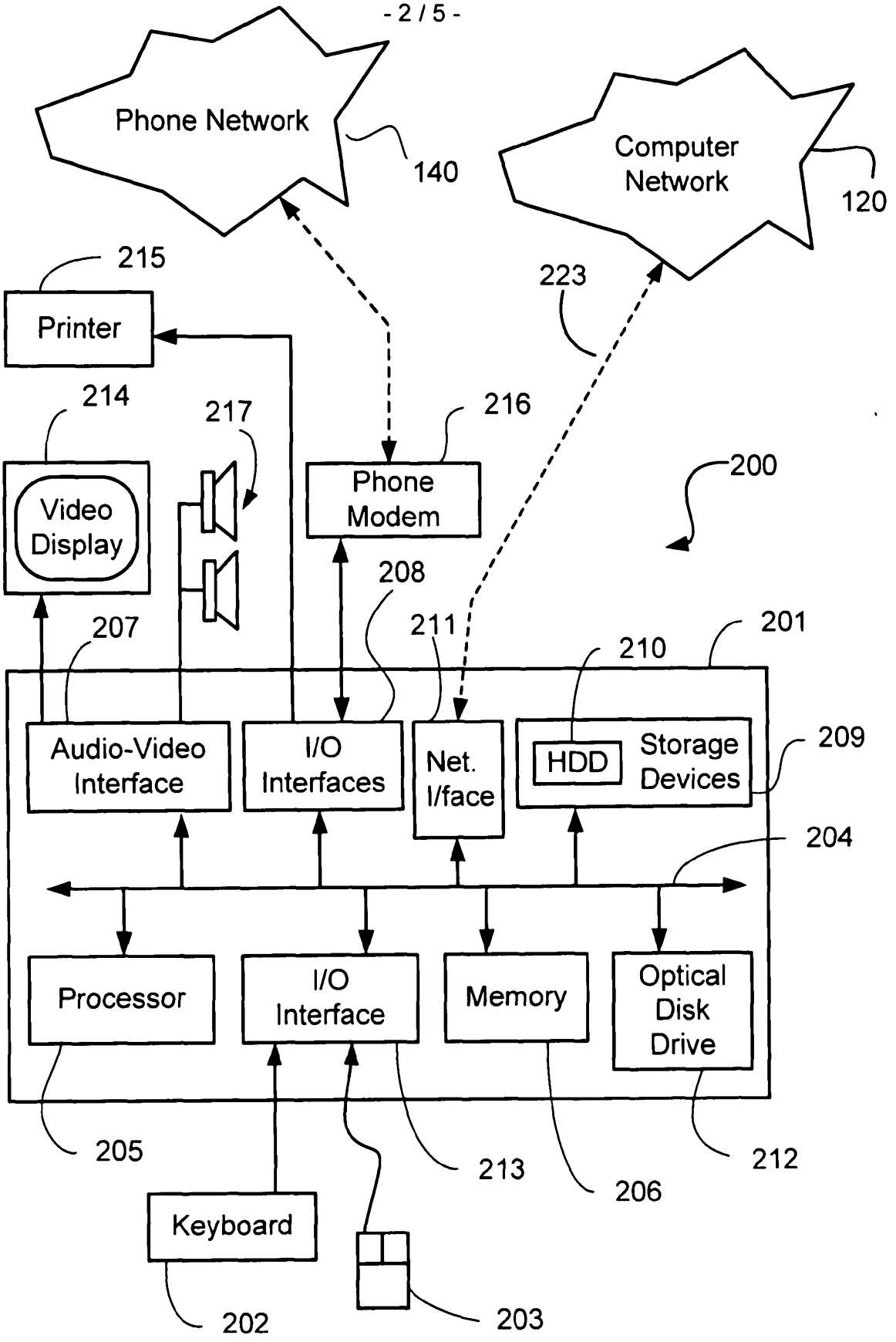

Fig. 2A

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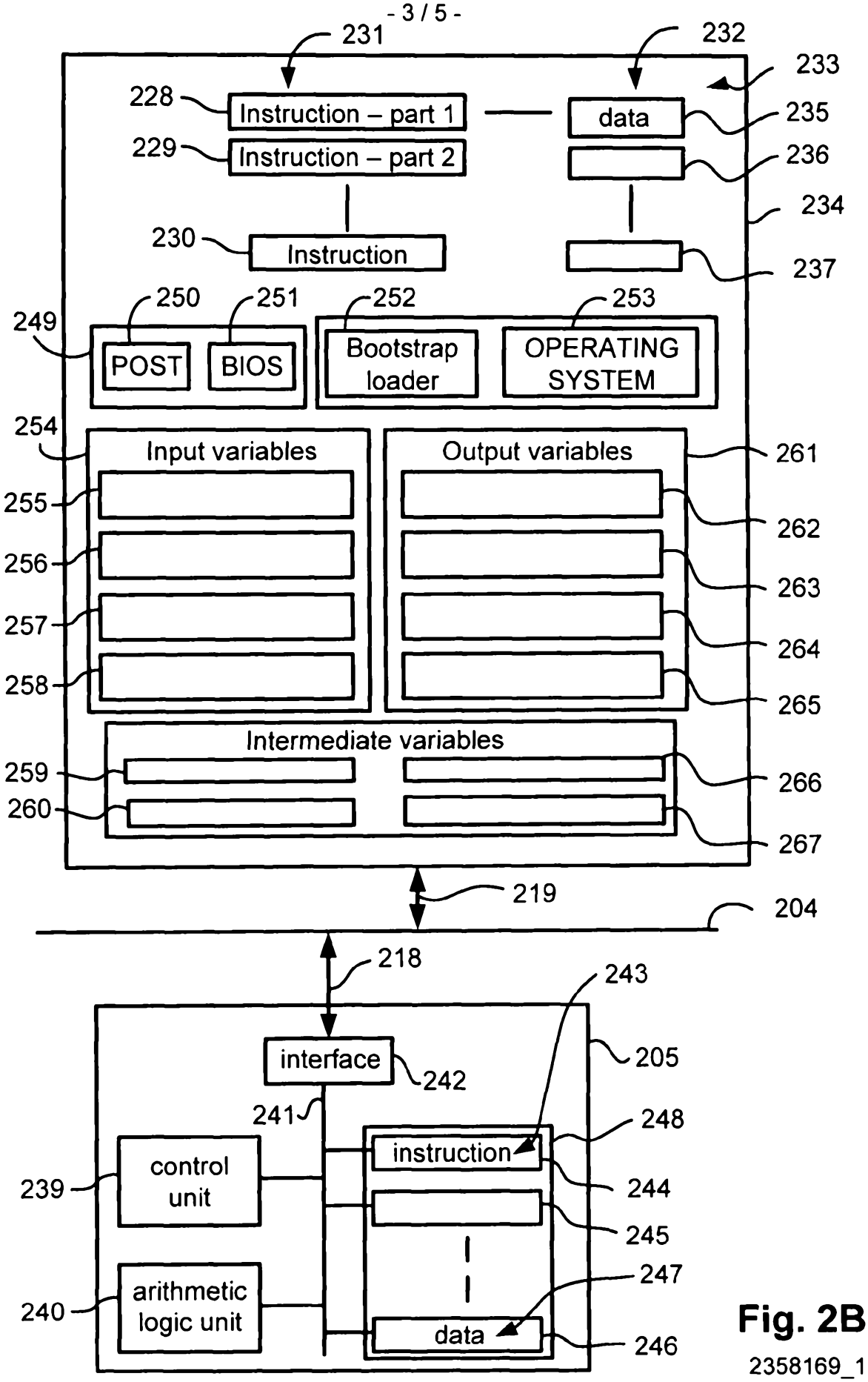

Fig. 2B

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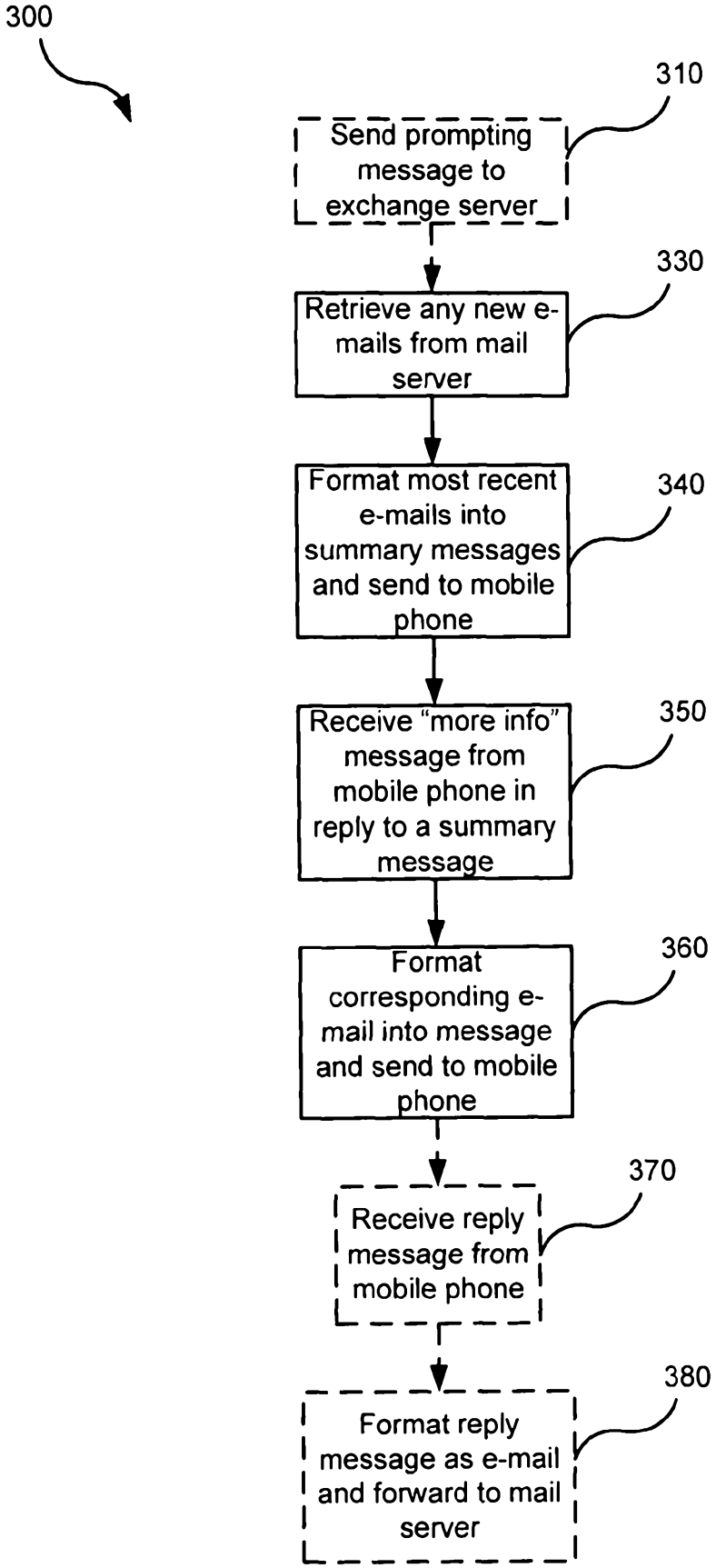

Fig. 3

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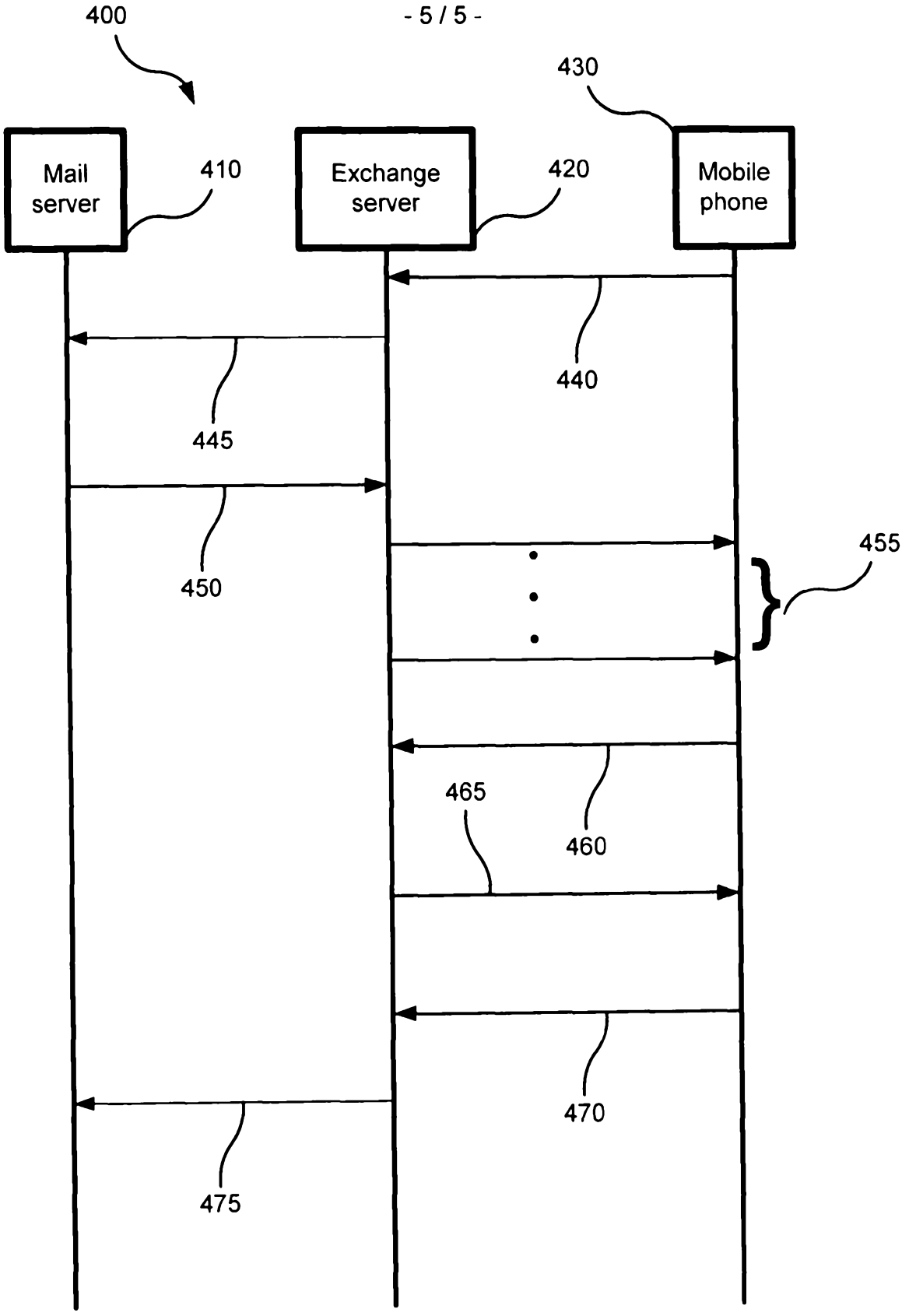

Fig. 4