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**Moran et al.**

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(54) **NOTEBOOK COMPUTER AND CELL PHONE ASSEMBLY**

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**Related U.S. Application Data**

(60) Division of application No. 12/605,501, filed on Oct. 26, 2009, now Pat. No. 8,340,721, which is a continuation-in-part of application No. 12/415,116, filed on Mar. 31, 2009, and a continuation-in-part of application No. 12/151,079, filed on May 3, 2008, now Pat. No. 8,260,348.

(60) Provisional application No. 61/108,610, filed on Oct. 27, 2008, provisional application No. 61/043,179, filed on Apr. 8, 2008, provisional application No. 61/069,987, filed on Mar. 19, 2008.

(51) **Int. Cl.**
***H04B 1/38*** (2006.01)
***G06F 1/00*** (2006.01)
*H04M 3/00* (2006.01)

(52) **U.S. Cl.**
USPC ..... **455/557**; 713/323; 455/573; 379/373.02

(58) **Field of Classification Search**
USPC ..... 455/557; 713/323
See application file for complete search history.

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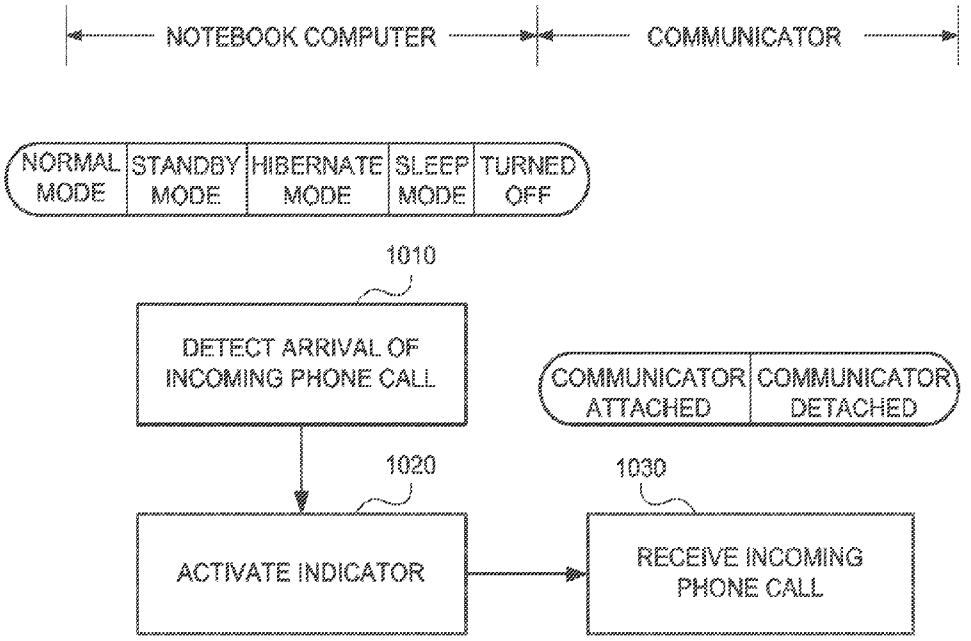
(57) **ABSTRACT**

A communication system including, a computer including a controller operable to transition between a plurality of power modes, including a normal power mode and at least one power saving mode, an amplifier that may be enabled or disabled by the controller, to receive audio data from said controller, and a battery to supply power to the controller and to the amplifier, and a communicator coupled to the computer, including a modem to communicate over a wireless network, to enable the amplifier, and to transmit audio data to the amplifier, and a power supply to supply power to the modem.

**13 Claims, 7 Drawing Sheets**



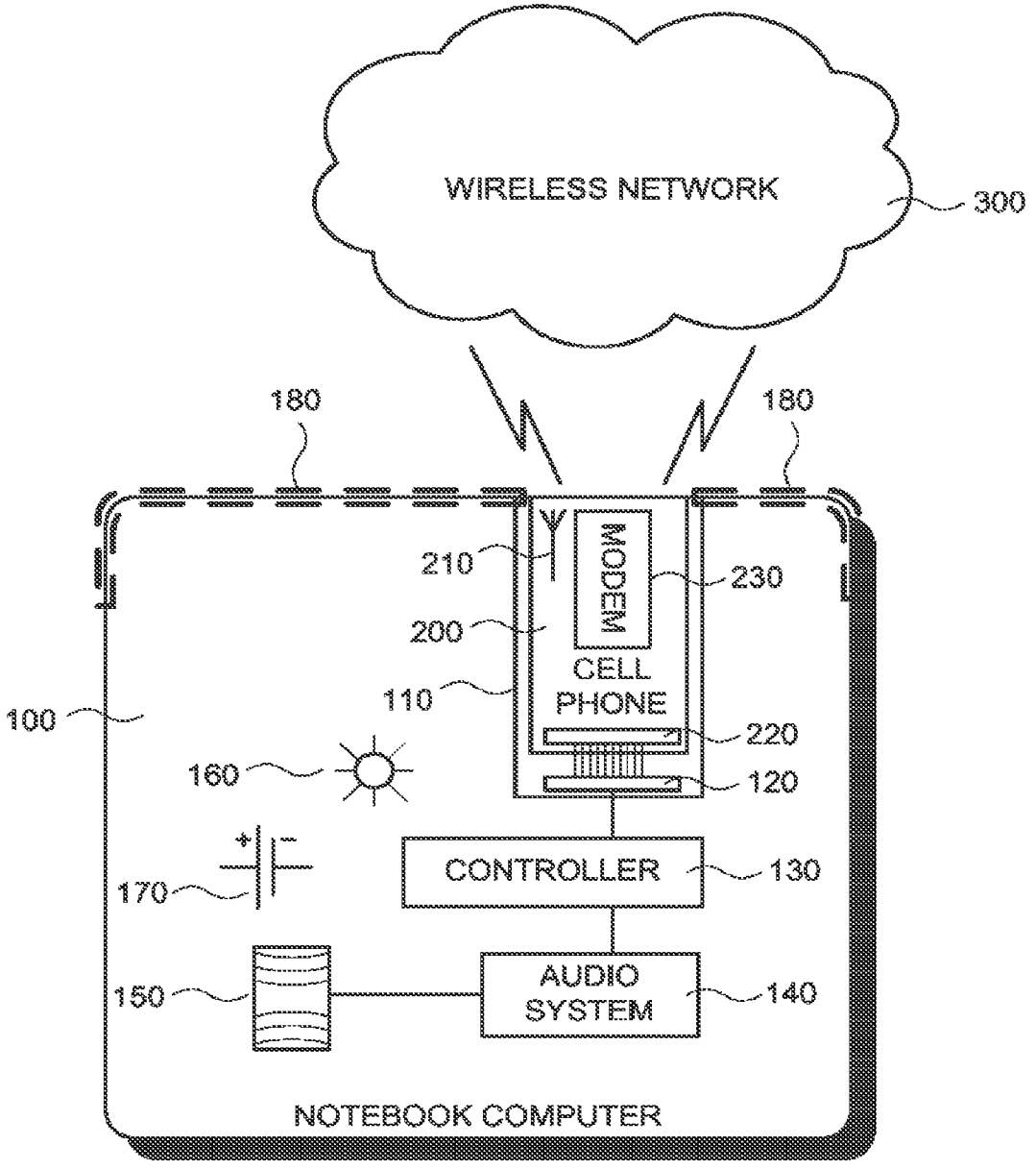

WIRELESS NETWORK
300
180
180
210
MODEM
230
200
CELL PHONE
110
100
220
160
120
170
CONTROLLER
130
150
AUDIO SYSTEM
140
NOTEBOOK COMPUTER

FIG. 1

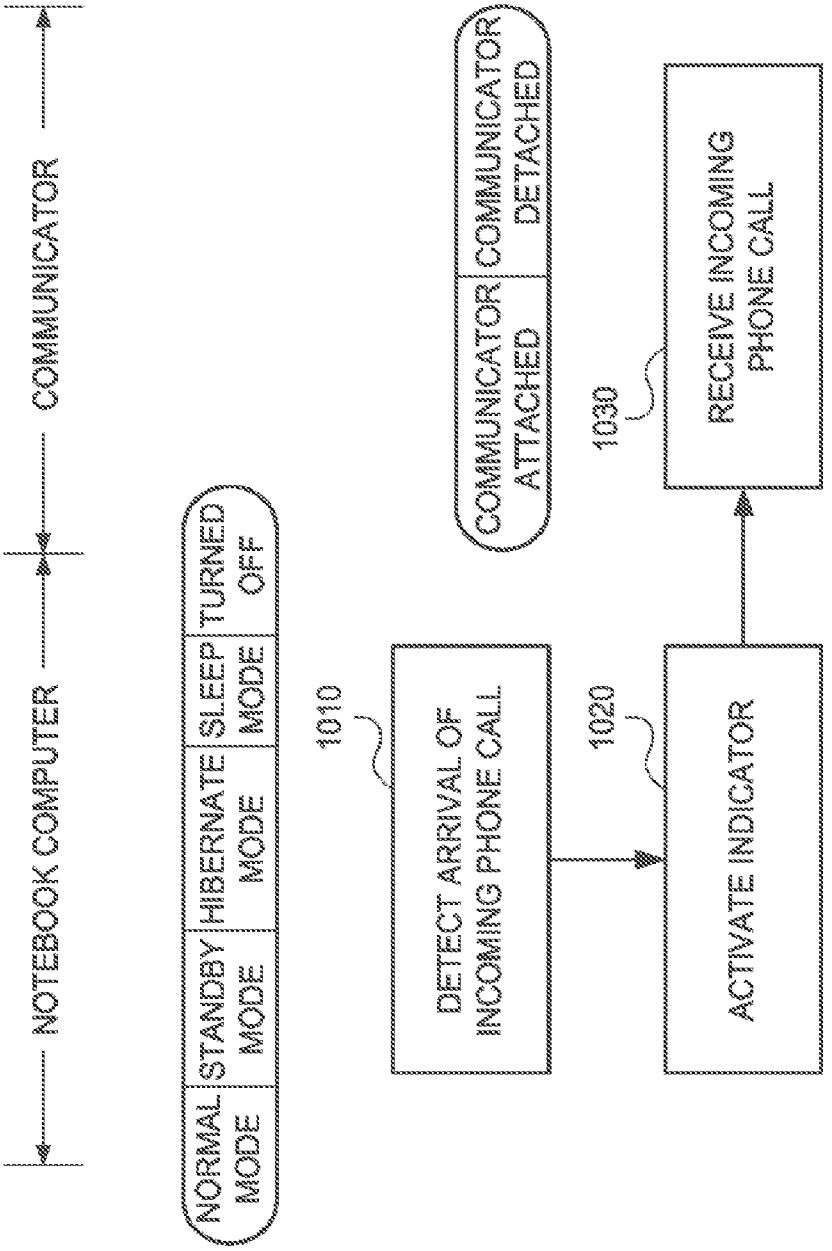

NOTEBOOK COMPUTER
COMMUNICATOR
NORMAL MODE
STANDBY MODE
HIBERNATE MODE
SLEEP MODE
TURNED OFF
COMMUNICATOR ATTACHED
COMMUNICATOR DETACHED
1010
DETECT ARRIVAL OF INCOMING PHONE CALL
1020
ACTIVATE INDICATOR
1030
RECEIVE INCOMING PHONE CALL

FIG. 2

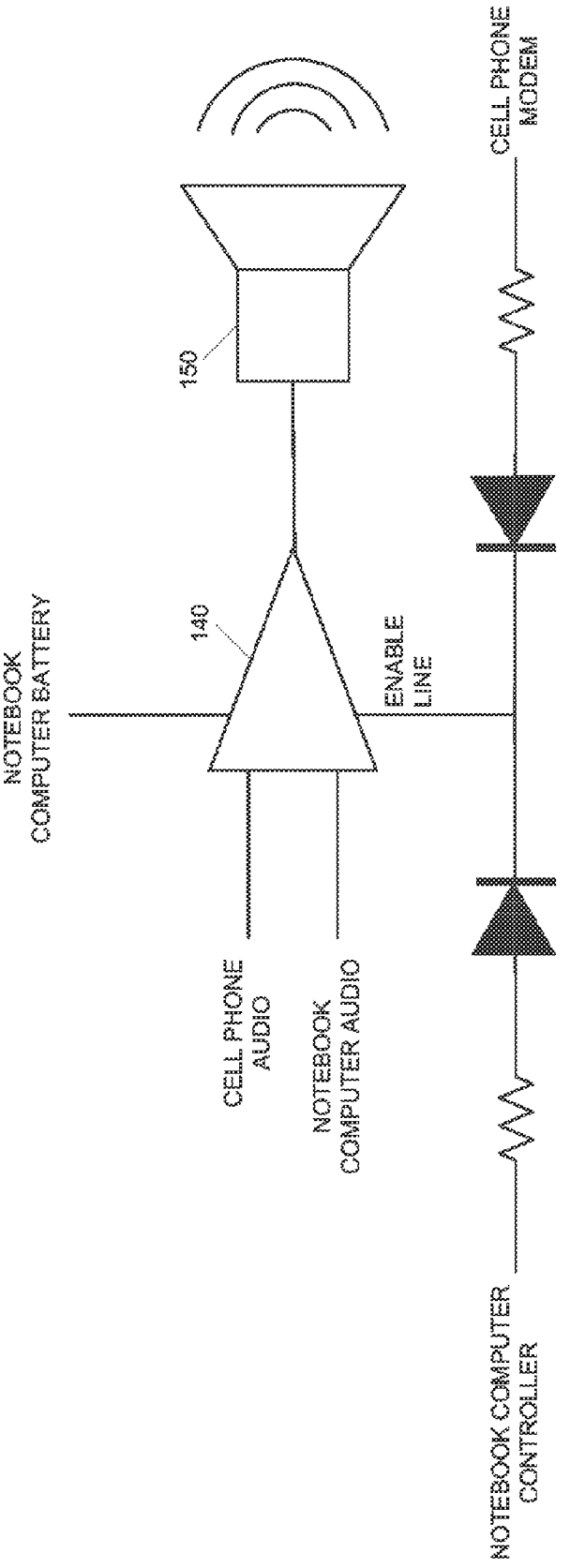

CELL PHONE MODEM
150
140
NOTEBOOK COMPUTER BATTERY
ENABLE LINE
CELL PHONE AUDIO
NOTEBOOK COMPUTER AUDIO
NOTEBOOK COMPUTER CONTROLLER

FIG. 3

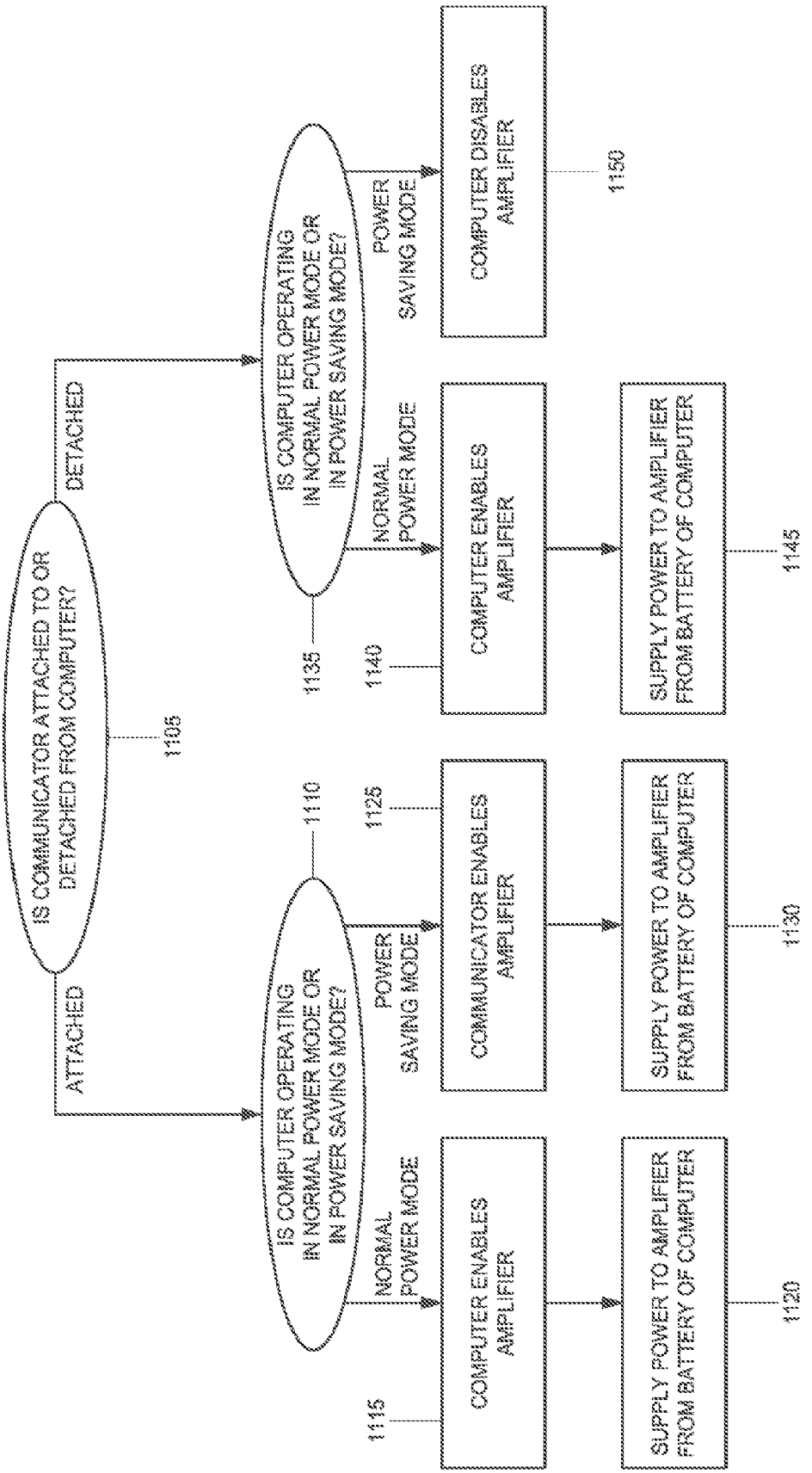
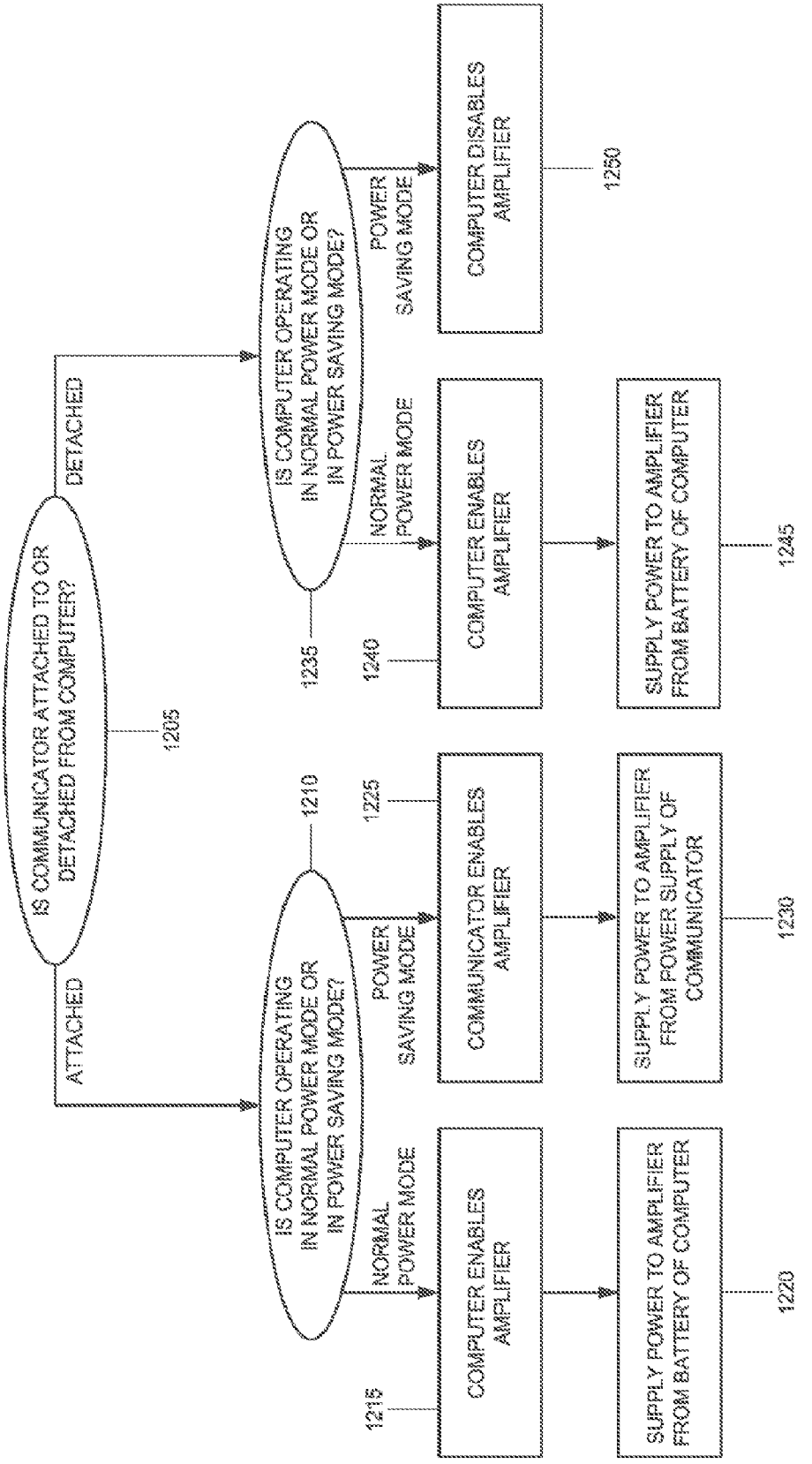

IS COMMUNICATOR ATTACHED TO OR DETACHED FROM COMPUTER?
1105
ATTACHED
DETACHED
IS COMPUTER OPERATING IN NORMAL POWER MODE OR IN POWER SAVING MODE?
1110
NORMAL POWER MODE
POWER SAVING MODE
1115
COMPUTER ENABLES AMPLIFIER
1120
SUPPLY POWER TO AMPLIFIER FROM BATTERY OF COMPUTER
1125
COMMUNICATOR ENABLES AMPLIFIER
1130
SUPPLY POWER TO AMPLIFIER FROM BATTERY OF COMPUTER
IS COMPUTER OPERATING IN NORMAL POWER MODE OR IN POWER SAVING MODE?
1135
NORMAL POWER MODE
POWER SAVING MODE
1140
COMPUTER ENABLES AMPLIFIER
1145
SUPPLY POWER TO AMPLIFIER FROM BATTERY OF COMPUTER
COMPUTER DISABLES AMPLIFIER
1150

FIG. 4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DETACHED
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NORMAL POWER MODE
POWER SAVING MODE
1215
1220
1225
1230
COMPUTER ENABLES AMPLIFIER
COMMUNICATOR ENABLES AMPLIFIER
SUPPLY POWER TO AMPLIFIER FROM BATTERY OF COMPUTER
SUPPLY POWER TO AMPLIFIER FROM POWER SUPPLY OF COMMUNICATOR
IS COMPUTER OPERATING IN NORMAL POWER MODE OR IN POWER SAVING MODE?
1235
NORMAL POWER MODE
POWER SAVING MODE
1240
1245
1250
COMPUTER ENABLES AMPLIFIER
SUPPLY POWER TO AMPLIFIER FROM BATTERY OF COMPUTER
COMPUTER DISABLES AMPLIFIER

FIG. 5

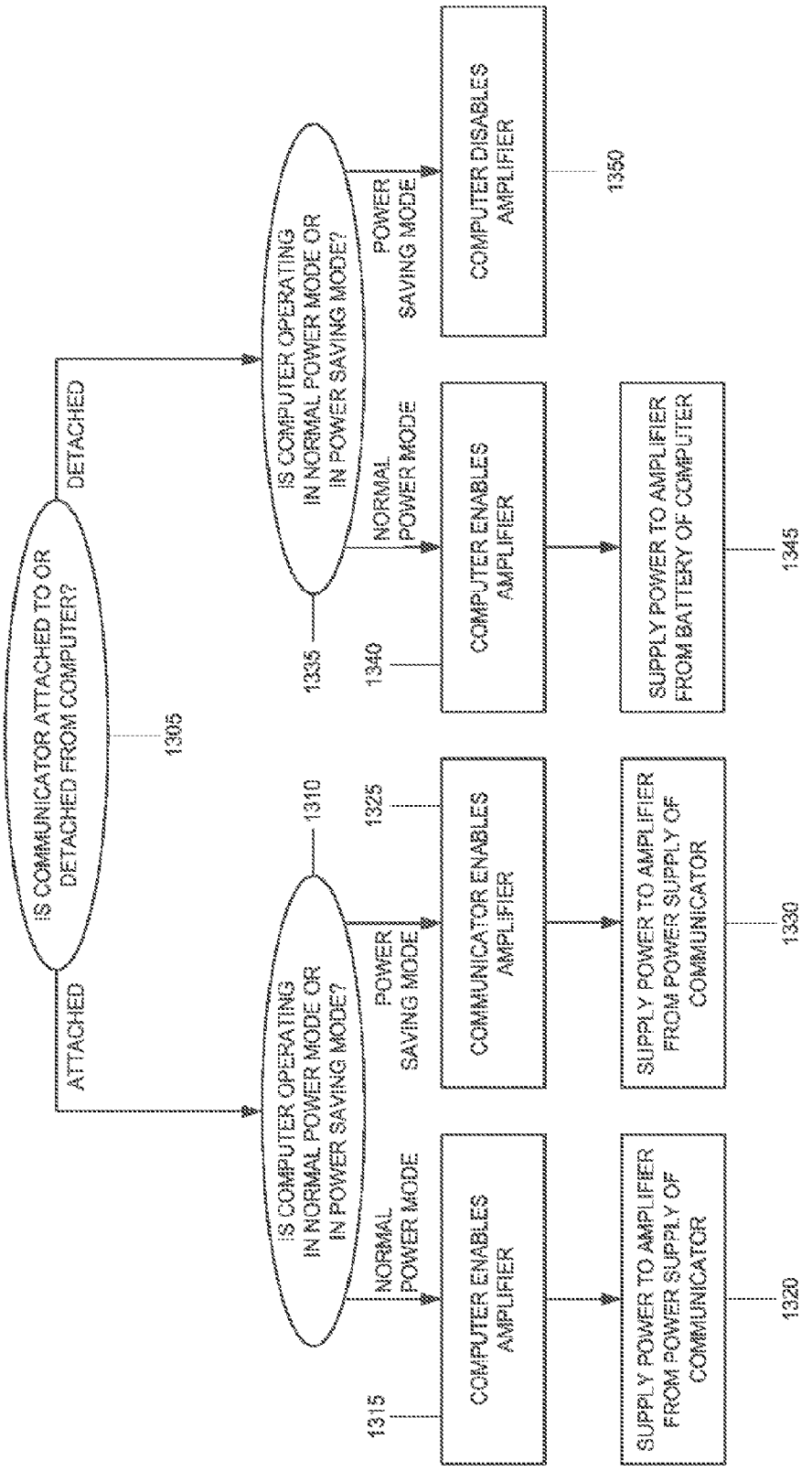
IS COMMUNICATOR ATTACHED TO OR DETACHED FROM COMPUTER?
1305
ATTACHED
DETACHED
IS COMPUTER OPERATING IN NORMAL POWER MODE OR IN POWER SAVING MODE?
1310
NORMAL POWER MODE
POWER SAVING MODE
1315
COMPUTER ENABLES AMPLIFIER
SUPPLY POWER TO AMPLIFIER FROM POWER SUPPLY OF COMMUNICATOR
1320
COMMUNICATOR ENABLES AMPLIFIER
1325
SUPPLY POWER TO AMPLIFIER FROM POWER SUPPLY OF COMMUNICATOR
1330
IS COMPUTER OPERATING IN NORMAL POWER MODE OR IN POWER SAVING MODE?
1335
NORMAL POWER MODE
POWER SAVING MODE
1340
COMPUTER ENABLES AMPLIFIER
SUPPLY POWER TO AMPLIFIER FROM BATTERY OF COMPUTER
1345
COMPUTER DISABLES AMPLIFIER
1350

FIG. 6

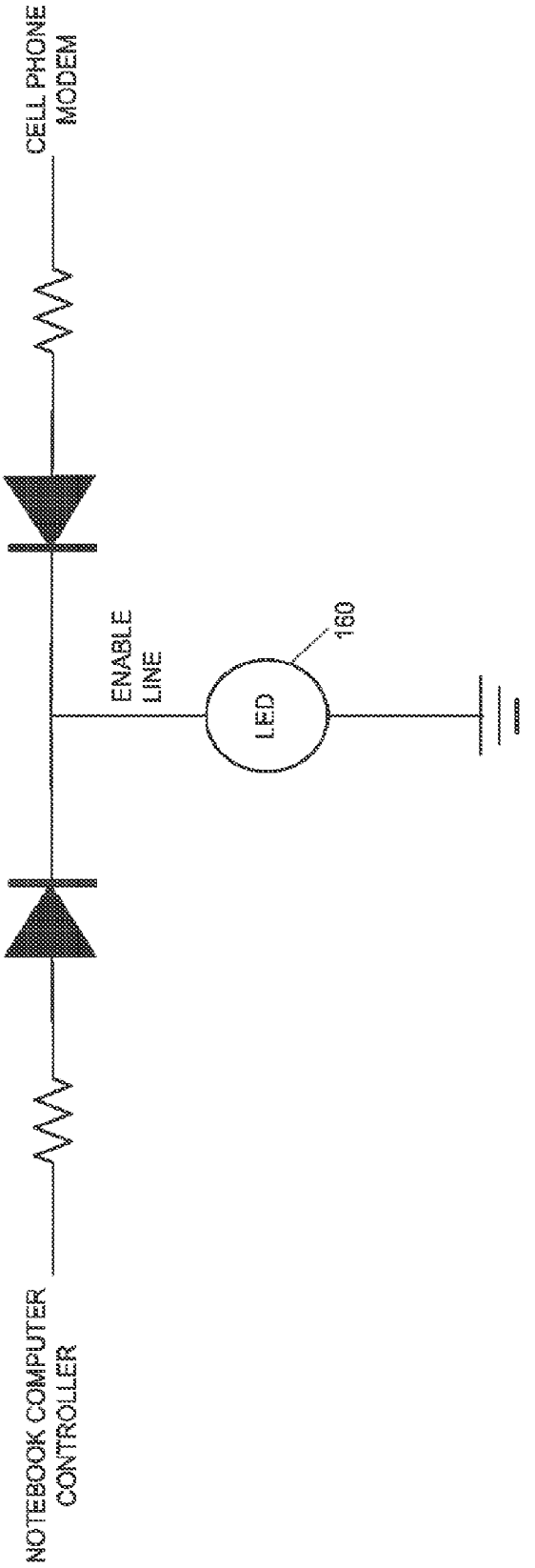
CELL PHONE MODEM
ENABLE LINE
160
LED
NOTEBOOK COMPUTER CONTROLLER

FIG. 7

# NOTEBOOK COMPUTER AND CELL PHONE ASSEMBLY

## CROSS REFERENCES TO RELATED APPLICATIONS

This application is a divisional of U.S. Ser. No. 12/605,501, entitled NOTEBOOK COMPUTER AND CELL PHONE ASSEMBLY, filed on Oct. 26, 2009 now U.S. Pat. No. 8,340,721 by inventors Dov Moran, Eyal Bychkov, Uri Ron and Itay Sherman. U.S. Ser. No. 12/605,501 is a continuation-in-part of assignee's pending application U.S. Ser. No. 12/415,116, entitled MODULAR CELL PHONE FOR FIXED MOBILE CONVERGENCE, filed on Mar. 31, 2009 by inventors Itay Sherman, Eyal Bychkov and Uri Ron, which claims priority from U.S. Provisional Application No. 61/043,179, entitled MODULAR CELL PHONE FOR FIXED MOBILE CONVERGENCE, filed on Apr. 8, 2008 by inventors Itay Sherman, Eyal Bychkov and Uri Ron.

U.S. Ser. No. 12/605,501 is also a continuation-in-part of assignee's application U.S. Ser. No. 12/151,079, entitled MODULAR CELL PHONE FOR LAPTOP COMPUTERS, filed on May 3, 2008 U.S. Pat. No. 8,260,348 by inventor Itay Sherman, which claims priority from U.S. Provisional Application No. 61/069,987, entitled MODULAR CELL PHONE FOR LAPTOP COMPUTERS, filed on Mar. 19, 2008 by inventor Itay Sherman.

U.S. Ser. No. 12/605,501 claims benefit of U.S. Provisional Application No. 61/108,610, entitled NOTEBOOK COMPUTER AND CELL PHONE ASSEMBLY, filed on Oct. 27, 2008 by inventors Dov Moran, Eyal Bychkov and Uri Ron.

## FIELD OF THE INVENTION

The present invention relates to computers with cell phone functionality.

## BACKGROUND OF THE INVENTION

People often travel with small computers, such as notebook computers, for mobile access to their data files and applications. People also often travel with cell phones, for cellular communication. It is thus of advantage to have one assembly that combines the notebook computers with the cell phone. Currently notebook computers have wireless modems, which are used to provide voice over IP services, such as Skype. Some notebook computers have small built-in cameras, which are used to provide video conferencing services. However, when conducting private conversations, users prefer to hold a small handheld device that can be conveniently held close to their ears and used quietly.

## SUMMARY OF THE DESCRIPTION

Aspects of the present invention relate to a notebook computer that includes a small cell phone which can be detached from the notebook computer and used in private quiet conversation. When the cell phone is attached or otherwise in communication with the notebook computer, the notebook computer enables voice over IP, instant messaging, and other communication applications; and if the notebook computer includes a camera, then the cell phone further enables video conferencing.

As such, embodiments of the present invention provide a notebook computer and cell phone assembly, with a cell phone that "pops out" of the computer for use as a standalone handset. Moreover, there is a seamless transition with no interruption of cellular service when the cell phone is detached from or re-attached to the computer.



Further aspects of the present invention relate to enabling and powering an amplifier of the notebook computer when the cell phone is attached to the notebook computer, regardless of whether the notebook computer is in a normal power mode or in a power saving mode such as standby mode, hibernate mode, sleep mode or turned off. The amplifier is used to provide speaker output for a phone call, and to indicate that a call is incoming, or such other call status.

Three alternative embodiments for enabling and powering the amplifier, when the cell phone is attached to the notebook computer, may be used; namely,

(i) powering the amplifier from the notebook computer battery regardless of the power state of the notebook computer,

(ii) powering the amplifier from the notebook computer battery when the notebook computer is in a normal power mode, and powering the amplifier from the cell phone power supply when the notebook computer is in a power saving node, and

(iii) powering the amplifier from the cell phone power supply regardless of the power state of the notebook computer.

Similar embodiments are used for powering an LED indicator of the computer, when the cell phone is attached to the computer. The LED indicator is lit to indicate an incoming call, an ongoing call, or such other call status.

There is thus provided in accordance with an embodiment of the present invention a computer and cell phone assembly, including a communicator including a modem to communicate over a wireless network, and a notebook computer, including a pouch for physically to attach the communicator to the notebook computer, and a connection indicator to indicate arrival of an incoming phone call from the wireless network when the communicator is attached to the notebook computer, wherein the communicator is operative to receive the incoming phone call whether it remains attached to the notebook computer or whether it is subsequently detached from the notebook computer.

There is additionally provided in accordance with an embodiment of the present invention a method for communication, including indicating, by a notebook computer having a communicator attached thereto, arrival of an incoming phone call from a mobile network, and receiving, by communicator, the incoming call whether the communicator remains attached to the notebook computer or whether the communicator is subsequently detached from the notebook computer.

There is further provided in accordance with an embodiment of the present invention a communication system including a computer including a controller operable to transition between a plurality of power modes, including a normal power mode and at least one power saving mode, an amplifier that may be enabled or disabled by the controller, to receive audio data from said controller, and a battery to supply power to the controller and to the amplifier, and a communicator coupled to the computer, including a modem to communicate over a wireless network, to enable the amplifier, and to transmit audio data to the amplifier, and a power supply to supply power to the modem.

There is yet further provided in accordance with an embodiment of the present invention a method for enabling and powering an amplifier of a computer when a communicator is attached to the computer, including if the computer is operating in a normal power mode, then enabling, by the computer, the amplifier, if the computer is operating in a

power saving mode, then enabling, by the communicator, the amplifier, and supplying power from a battery of the computer to the amplifier.

There is moreover provided in accordance with an embodiment of the present invention a method for enabling and powering an amplifier of a computer when a communicator is attached to the computer, including if the computer is operating in a normal power mode, then enabling, by the computer, the amplifier, and supplying power from a battery of the computer to the amplifier, and if the computer is operating in a power saving mode, then enabling, by the communicator, the amplifier, and supplying power from a power supply of the communicator to the amplifier.

There is additionally provided in accordance with an embodiment of the present invention a method for enabling and powering an amplifier of a computer when a communicator is attached to the computer, including if the computer is operating in a normal power mode, then enabling, by the computer, the amplifier, if the computer is operating in a power saving mode, then enabling, by the communicator, the amplifier, and supplying power from a power supply of the communicator to the amplifier.

## BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be more fully understood and appreciated from the following detailed description, taken in conjunction with the drawings in which:

FIG. **1** is a simplified block diagram of a notebook computer and cell phone assembly, in accordance with an embodiment of the present invention;

FIG. **2** is a simplified flowchart of a method for operation of a notebook computer and cell phone assembly, in accordance with an embodiment of the present invention;

FIG. **3** is a simplified diagram of a circuit for activating a speaker of a notebook computer regardless of the power mode of the computer, in accordance with an embodiment of the present invention; and

FIG. **4** is a simplified flowchart of the logic of the circuit of FIG. **3** for enabling and powering a speaker amplifier, in accordance with a first embodiment of the present invention;

FIG. **5** is a simplified flowchart of the logic of the circuit of FIG. **3** for enabling and powering a speaker amplifier, in accordance with a second embodiment of the present invention;

FIG. **6** is a simplified flowchart of the logic of the circuit of FIG. **3** for enabling and powering a speaker amplifier, in accordance with a third embodiment of the present invention; and

FIG. **7** is a simplified diagram of a circuit for activating an LED of a notebook regardless of the power mode of the computer, in accordance with an embodiment of the present invention.

## DETAILED DESCRIPTION

Aspects of the present invention relate to a notebook computer and cell phone assembly. The cell phone is used in conjunction with the computer for telecommunication applications, including inter alia Skype, Instant Messenger and video conferencing. In addition the cell phone detaches from the computer for use as a standalone handset in private quiet conversation.

When the cell phone is attached to the notebook computer, incoming calls to the cell phone are detected by the computer, and the computer activates an indicator to notify a user of the call. The indicator may be inter alia a blinking LED or such other visual indicator, or a ringing speaker or such other audio indicator, or both. Activation of the indicator occurs whether the computer is in normal power mode, standby mode, hibernate mode, sleep mode, or turned off.

Reference is made to FIG. **1**, which is a simplified block diagram of a notebook computer and cell phone assembly, in accordance with an embodiment of the present invention. Shown in FIG. **1** is a notebook computer **100** with a pouch **110** for inserting a cellular communicator **200**, a connector **120** for connecting to a corresponding communicator connector **220**, a controller **130**, an amplifier **140** with a speaker **150** for an audio system of the computer, a visual indicator **160** such as an LED indicator, and a battery **170**. Communicator **200** includes an antenna **210** for signal reception and transmission, and a modem **230** for communicating over a wireless network **300**. Modem **230** is generally both a modem and a controller for communicator **200**.

Notebook computer **100** includes conventional memory units for storing programs and data, input devices including inter alia a mouse and keyboard, and an output display device (not shown). The memory units and the device drivers for the mouse, keyboard and display are coupled communicatively with controller **130** using a conventional data bus. It will be appreciated, however, from the description hereinbelow, that the present invention may also be implemented with computing devices other than notebook computers, provided that such devices include processing means, program and data storage means, and input and display means that inter-communicate. The present invention may be implemented within a standalone computer or within one or more networked computers.

In an embodiment of the present invention, pouch **110** is sufficiently deep so that communicator **200** is encased within notebook computer **100** when fully inserted in pouch **110**. Pouch **110** includes a push-pop mechanism to eject communicator **200** for detachment from notebook computer **100**. In order not to interfere with signal reception of communicator **200**, the housing of notebook computer **100** is manufactured using non-intrusive material that does not interfere with reception, at least for portions of the housing surrounding antenna **210**, such as the portions designated as **180** in FIG. **1**.

In accordance with an embodiment of the present invention, notebook computer **100** is operative to detect an incoming call for communicator **200**, and to activate an indicator, such as blinking of visual indicator **160**, to notify a user of the incoming call. Alternatively or additionally, the indicator may be ringing of speaker **150**. Communicator **200** is able to receive the incoming call whether it is attached to or detached from notebook computer **100**.

A feature of this embodiment of the present invention is the capability of activating the indicator, regardless of whether notebook computer **100** is in normal power mode, standby mode, hibernate mode, sleep mode, or turned off. As such, communicator **200** is operative to receive incoming calls and to notify the user of the calls, regardless of the power saving mode of notebook computer **100**. According to one embodiment of the present invention, such operation is accomplished by using battery **170** as a power source, when communicator **200** is attached to notebook computer **100**, regardless of the power mode of notebook computer **100**.

Generally today, notebook computers, including those that run Windows XP and Vista, have power saving modes, such as "standby mode", "hibernate mode" and "sleep mode". Standby mode shuts down all but the essential components of notebook computer **100**. When in standby mode, the monitor of notebook computer **100** is blank and notebook computer **100** is unusable.

However, notebook computer **100** quickly comes out of standby mode, in a matter of a few seconds, when a button is pressed. For some computers, any button on the keyboard may be pressed to bring the computer back from standby mode to normal operation. For other computers, the power button must be pressed to bring the computer back to normal operation. When notebook computer **100** transitions from standby mode to normal operation, notebook computer **100** is in the same condition that it was prior to entering standby mode.

While in standby mode, notebook computer **100** consumes a small amount of power. If battery **170** were to fail while notebook computer **100** is in standby mode, all unsaved data is lost.

Hibernate mode saves a snapshot of the state of notebook computer **100**, and then shuts the computer completely off. Currently unsaved data is saved, as during a normal shut down. When notebook computer **100** is turned back on, it appears the same as it did before entering hibernate mode.

Notebook computer **100** comes slowly out of hibernate mode, often lasting several minutes, since it was completely shut down. While in hibernate mode, notebook computer **100** consumes no power.

Sleep mode puts notebook computer **100** into standby mode, and subsequently into hibernate mode if one or both of the following events occur:

i. battery **170** becomes critically low;

ii. a pre-specified user configurable time delay is reached.

In accordance with one embodiment of the present invention, irrespective of its power mode, notebook computer **100** is powered by battery **170** when communicator **200** is attached to notebook computer **100**. Optionally, visual indicator **160** and amplifier **140** are also powered when communicator **200** is attached to notebook computer **100**, irrespective of the power mode of notebook computer **100**.

Reference is made to FIG. **2**, which is a simplified flowchart of a method for operation of a notebook computer and cell phone assembly, in accordance with an embodiment of the present invention. The flowchart of FIG. **2** is divided into two columns, the left column indicating steps performed by a notebook computer and the right column indicating steps performed by a cellular communicator that attaches to and detaches from the notebook computer.

At step **1010**, while the communicator is attached to the notebook computer, the notebook computer detects an incoming call intended for the cell phone. Step **1010** is performed when the notebook computer is in normal power mode or power saving mode. At step **1020** the notebook computer activates an indicator, such as a blinking LED or a ringing speaker, notifying the user of the incoming call. At step **1030**, the communicator receives the incoming call, whether the communicator is attached to the notebook computer or detached from the notebook computer.

Reference is made to FIG. **3**, which is a simplified diagram of a circuit for activating speaker **150** of notebook computer **100** regardless of the power mode of computer **100**, in accordance with an embodiment of the present invention. The circuit shown in FIG. **3** enables speaker **150** to operate in conjunction with communicator **200** when computer **100** is in normal power mode, or in a power saving mode such as standby mode, hibernate mode, sleep mode, or turned off.

Shown in FIG. **3** is amplifier **140** and speaker **150** of notebook computer **100**. Computer **100** and communicator **200** are each able to transmit input to amplifier **140**. Also shown in FIG. **3** is an enable line, via which computer **100** and communicator **200** can each enable or disable amplifier **140**. In accordance with an embodiment of the present invention, when communicator **200** is attached to computer **100**, amplifier **140** is automatically enabled.

When communicator **200** is detached from computer **100**, then amplifier **140** is powered by battery **170** whenever computer **100** enables amplifier **140**. Typically, computer **100** enables amplifier **140** when operating in normal power mode, and computer **100** disables amplifier **140** when operating in power saving mode.

Regarding the source of the power supplied to amplifier **140** when communicator **200** is attached to computer **100**, one of three alternative embodiments may be used in accordance with the present invention. In the first embodiment, amplifier **140** is powered from battery **170** whenever amplifier **140** is enabled.

In the second embodiment, amplifier **140**, when enabled, is powered from battery **170** when computer **100** is operating in normal power mode, and is powered from a power supply of communicator **200** when computer **100** is operating in standby mode, in hibernate mode, in sleep mode, turned off or in such other power saving mode.

In the third embodiment, amplifier **140** is powered from the power supply of communicator **200** whenever amplifier **140** is enabled.

Reference is made to FIG. **4**, which is a simplified flowchart of the logic of the circuit of FIG. **3** for enabling and powering amplifier **140**, in accordance with the first embodiment of the present invention. As shown in FIG. **4**, at step **1105** a determination is made as to whether or not communicator **200** is attached to or detached from computer **100**. If communicator is attached to computer **100**, then at step **1110** a further determination is made as to whether computer **100** is operating in a normal power mode, or in a power saving mode. If computer **100** is operating in a normal power mode, then at step **1115** amplifier **140** is enabled by computer **100**, and at step **1120** power is supplied to amplifier **140** from battery **170**. Otherwise, if computer **100** is operating in a power saving mode, then at step **1125** amplifier **140** is enabled by communicator **200**, and at step **1130** power is supplied to amplifier **140** from battery **170**.

If communicator **200** is detached from computer **100**, as determined at step **1105**, then at step **1135** a further determination is made as to whether computer **100** is operating in a normal power mode, or in a power saving mode. If computer **100** is operating in a normal power mode then at step **1140** amplifier **140** is enabled by computer **100**, and at step **1145** power is supplied to amplifier **140** from battery **170**. Otherwise, if computer **100** is operating in a power saving mode, then at step **1170** amplifier **140** is disabled by computer **100**.

Reference is made to FIG. **5**, which is a simplified flowchart of the logic of the circuit of FIG. **3** for enabling and powering amplifier **140**, in accordance with a second embodiment of the present invention. The steps of FIG. **5** are similar to the corresponding steps in FIG. **4**, except for step **1230**. In the case where communicator **200** is attached to computer **100** and computer **100** is operating in a power saving mode, then a power supply of communicator **200** supplies power to amplifier **140**.

Reference is made to FIG. **6**, which is a simplified flowchart of the logic of the circuit of FIG. **3** for enabling and powering amplifier **140**, in accordance with a third embodiment of the present invention. The steps of FIG. **6** are similar to the corresponding steps in FIG. **5**, except for step **1320**. In the case where communicator **200** is attached to computer **100**, amplifier **140** is always powered by the power supply of communicator **200**, regardless of whether computer **100** is operating in normal or power saving mode.

Reference is made to FIG. **7**, which is a simplified diagram of a circuit for activating an LED of a notebook regardless of the power mode of the computer, in accordance with an embodiment of the present invention. The circuit shown in FIG. **7** enables LED **160** to operate in conjunction with communicator **200** when computer **100** is in a normal power mode, or in a power saving mode such as standby mode, hibernate mode sleep mode, or turned off.

Shown in FIG. **7** is indicator **160** of computer **100**. Computer **100** and communicator **200** are each able to light indicator **160**. Also shown in FIG. **7** is an enable line, via which computer **100** and communicator **200** can each enable or disable indicator **160**. When communicator **200** is attached to computer **100**, indicator **160** is automatically enabled.

When communicator **200** is detached from computer **100**, then indicator **160** is powered by battery **170** whenever computer **100** enables indicator **160**. Typically, computer **100** enables indicator **160** when operating in normal power mode, and computer **100** disables indicator **160** when operating in power saving mode.

Regarding the source of the power supplied to indicator **160** when communicator **200** is attached to computer **100**, the same three alternative embodiments described hereinabove with reference to the system of FIG. **3** for enabling and powering amplifier **140**, may be used with the system of FIG. **7** for enabling and powering indicator **160**. These embodiments correspond to the flowcharts of FIGS. **4-6**.

Since indicator **160** generally requires only a small amount of power for its operation, the embodiment of FIG. **6** may be more practical for powering indicator **160** when communicator **200** is attached to computer **100**.

In the foregoing specification, the invention has been described with reference to specific exemplary embodiments thereof. It will, however, be evident that various modifications and changes may be made to the specific exemplary embodiments without departing from the broader spirit and scope of the invention as set forth in the appended claims. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense.

What is claimed is:

**1**. A communication system comprising,

a computer comprising:

a controller operable to transition between a plurality of power modes, including a normal power mode and at least one power saving mode;

an internal amplifier that is enabled or disabled by said controller and that is enabled by a modem of a cellular communicator that is attached to the computer, to receive audio data from said controller when said controller is the normal power mode, and to receive audio data from the modem of the cellular communicator when said controller is in a power saving mode; and

a battery to supply power to said amplifier and to said controller when it is in normal power mode; and

a cellular communicator attached to said computer, comprising:

a modem to communicate over a wireless network, to enable said amplifier when said controller is in a power saving mode, and to transmit audio data to said amplifier; and

a power supply of the cellular communicator to supply power to said amplifier.

**2**. The communication system of claim **1** wherein said computer battery supplies power to said amplifier whenever said amplifier is enabled.

**3**. The communication system of claim **1** wherein said cellular communicator is attachable to and detachable from said computer, and wherein said modem automatically enables said amplifier when said cellular communicator is attached to said computer.

**4**. The communication system of claim **3** wherein said cellular communicator power supply supplies power to said amplifier when said cellular communicator is attached to said computer and said controller is in a power saving mode.

**5**. The communication system of claim **3** wherein said communicator power supply supplies power to said amplifier whenever said cellular communicator is attached to said computer.

**6**. The communication system of claim **1** wherein said computer further comprises a light emitting diode (LED) indicator, wherein said controller enables and disables said LED indicator, wherein said computer battery supplies power to said LED indicator, and wherein said modem enables said LED indicator.

**7**. The communication system of claim **6** wherein said computer battery supplies power to said LED indicator whenever said LED indicator is enabled.

**8**. The communication system of claim **6** wherein said cellular communicator is attachable to and detachable from said computer, and wherein said modem automatically enables said LED indicator when said cellular communicator is attached to said computer.

**9**. The communication system of claim **8** wherein said cellular communicator power supply supplies power to said LED indicator when said cellular communicator is attached to said computer and said controller is in a power saving mode.

**10**. The communication system of claim **8** wherein said communicator power supply supplies power to said LED indicator whenever said cellular communicator is attached to said computer.

**11**. A method comprising:

enabling and powering an internal amplifier of a computer when a cellular communicator is attached to the computer, comprising:

supplying power from a battery of the computer to the amplifier;

when the computer is operating in a normal power mode, then;

enabling, by the computer, the amplifier; and

transmitting, by the computer, audio data to the amplifier;

when the computer is operating in a power saving mode, then:

enabling, by the cellular communicator that is attached to the computer, the amplifier; and

transmitting, by the communicator, audio data to the amplifier.

**12**. A method comprising:

enabling and powering an internal amplifier of a computer when a cellular communicator is attached to the computer, comprising:

when the computer is operating in a normal power mode, then:

enabling, by the computer, the amplifier; transmitting, by the computer, audio data to the amplifier; and

supplying power from a battery of the computer to the amplifier; and

when the computer is operating in a power saving mode, then:

enabling, by the cellular communicator that is attached to the computer, the amplifier;

transmitting, by the cellular communicator, audio data to the amplifier; and

supplying power from a power supply of the cellular communicator to the amplifier.

**13**. A method comprising:

enabling and powering an internal amplifier of a computer when a cellular communicator is attached to the computer, comprising:

supplying power from a power supply of the cellular communicator to the amplifier;

when the computer is operating in a normal power mode, then:

enabling, by the computer, the amplifier; and

transmitting, by the computer, audio data to the amplifier;

when the computer is operating in a power saving mode, then:

enabling, by the cellular communicator that is attached to the computer, the amplifier; and

transmitting, by the cellular communicator, audio data to the amplifier.

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