**ABSTRACT**

A TV phone is provided, which includes a TV module; an MRFU for demodulating an incoming call received through a forward channel, and modulating and transmitting a signal on a reverse channel; a TV control section for supplying a tuning signal to the TV module; an MSP for establishing a phone or TV mode; and a display unit for displaying synchronized signals on an image viewing screen. In a TV mode, the TV phone receives an incoming call, stops the TV module; switches off and on output of an audio signal of the selected TV broadcasting channel; displays a character message on the TV viewing screen; or superimposes a graphic image over the image on the TV viewing screen.
START

ANY INCOMING CALL MESSAGE RECEIVED?

YES

DETECT INCOMING CALL ALARM MODES

FIRST INCOMING CALL MODE?

NO

SECOND INCOMING CALL MODE?

NO

TEXT MODE?

NO

INTERRUPT TV SCREEN, OUTPUT GRAPHIC IMAGES

NO

RESPONSE TO INCOMING CALL?

NO

RETURN TO TV MODE

YES

TRANSMIT RESPONSE MESSAGE THROUGH REVERSE CHANNEL

PHONE MODE

FIG. 2
FIG. 3A

FIG. 3B

YOU'RE WANTED ON THE PHONE.
PORTABLE PHONE AND METHOD FOR PROVIDING INCOMING MESSAGE NOTIFICATIONS DURING VIDEO OPERATIONS THEREOF

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a hand-held portable cellular telephone, and more particularly to an integrated combined television (TV) and portable cellular phone (hereinafter referred to as “TV phone”).

2. Description of the Related Art

In recent years, rapid and widespread use of portable cellular telephones as an ordinary personal communication appliance has driven the desire of users toward development of the portable phone with a variety of additional functions besides making simple conversation. For example, portable phones are being developed with a calculating function, a biorhythm checking function, and other functions, including the capability of transmitting/receiving television images as well as a video camera image. The term “TV phone” herein refers to a wireless portable cellular phone, which allows for watching a television (TV) broadcast program through a displaying unit in the portable phone in addition to the capability of cordless telephone conversation.

In order to receive TV broadcasts, a portable phone should be equipped with two radio frequency units. The reason for this is that a frequency bandwidth necessary for transmitting/receiving telephony messages (i.e., audio and data) for the portable phone is different from that for a TV broadcast. The operational status of the portable TV phone is classified into a phone mode, a waiting mode, and a TV mode. The TV mode is also used both as a waiting mode and an image-receiving mode.

Because the TV phone should allow a user to watch and hear images and audio of a television broadcast program received in the TV mode through the display unit, i.e., a Thin Film Transistor (TFT) Liquid Crystal Display (LCD), and the speaker or earphone of the TV phone, it cannot use the method employed by a general portable phone to inform a user of an incoming call or an incoming character message, while in the TV mode state.

SUMMARY OF THE INVENTION

Therefore, an object of the present invention is to provide a portable TV phone designed to selectively allow for transmission or reception of an audio signal, as well as reception of a TV program.

It is another object of the present invention to provide a portable TV phone which effectively informs a user, i.e., a called party, of the reception of any incoming call related message when the user receives the incoming call related message from a called party.

It is another object of the present invention to provide a portable TV phone, which automatically activates preset incoming call alarm modes when the operational mode of the TV phone is switched from the phone mode to the TV mode.

In accordance with an embodiment of the present invention, these and other objects are accomplished by providing a TV phone in which a television and a portable cellular phone are integrally combined. The TV phone includes a TV module for receiving and demodulating a desired TV channel signal among radio-frequency electromagnetic signals received, in response to an input of a tuning signal, when the TV module operates by supply of a power supply voltage, to generate a composite video signal, a composite synchronizing signal and a composite audio signal; a Mobile Station Radio Frequency Unit (hereinafter, referred to as “MRFU”) for demodulating a signal indicative of an incoming call received through a forward channel, for forming an audio conversion channel among the received radio-frequency electromagnetic signals to output the demodulated signal, and for modulating and transmitting a signal on a reverse channel; and a TV control section for supplying the tuning signal corresponding to a channel selection command signal to the TV module, the TV control
section synchronizing On Screen Display (OSD) data such as a font, a graphic etc., corresponding to display control data and display data such as an icon, with the composite synchronizing signal to output the synchronized signal as a video signal; a Mobile Station Processor, (hereinafter, referred to as “MSP”) for establishing a phone mode/TV mode in response to an input command, generating a channel select channel command signal stored in a predetermined memory area by setting the TV mode, supplying the display control data to the TV control section according to a preset incoming call alarm mode when receiving an incoming signal from the MRFU or interrupting a power supply voltage supplied to the TV module, and processing audio data outputted from the MRFU to output the processed audio data signal while supplying audio data to the MRFU; and a display unit for synchronizing the composite video signal and graphic video signal outputted from the TV module and the TV control section with the composite synchronizing signal and displaying the synchronized composite video signal and graphic video signal on a image viewing screen.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The foregoing and other objects, features, and advantages of the present invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings in which:

[0016] FIG. 1 is a block diagram illustrating the construction of a TV phone according to an embodiment of the present invention;

[0017] FIG. 2 is a flowchart illustrating the process of displaying an incoming call message of the TV phone according to an embodiment of the present invention; and

[0018] FIGS. 3A and 3B are schematic views illustrating a state in which the incoming call message is displayed on a screen of a display unit of the TV phone according to an embodiment of the present invention.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0019] Reference will now be made in greater detail to various embodiments of the present invention. In the following description of the present invention, only portions necessary for understanding the operation of the present invention are set forth, and a detailed description of known functions and configurations incorporated herein will be omitted when it may obscure the subject matter of the present invention.

[0020] FIG. 1 is a block diagram illustrating the inner construction of a TV phone according to an embodiment of the present invention.

[0021] In FIG. 1, reference numeral 18 designates the MRFU, reference numeral 20 designates the MSP, and reference numeral 30 designates a keypad of the portable phone module. These components are incorporated in circuits applied to conventional portable digital cellular phones, such as CDMA type portable cellular phone, to implement the preferred embodiment of the present invention. The constructions and operations of the above components will be apparently understood by reference to the following detailed description.

[0022] Also, reference numeral 14 designates a radio frequency switch (RF SW), reference numeral 16 designates the TV module, reference numeral 22 designates the TV control section, reference numeral 24 designates an LCD driver (LCDD), and reference numeral 26 designates the TFT-LCD. Since generally the TFT-LCD cannot receive a composite video signal and display an image by itself, the LCDD separates the brightness signal, color signal, and synchronizing signal from the composite video signal, makes an R/G/B signal, and then outputs them in synchronization with the synchronizing signal.

[0023] The RF SW 14 has a circuit for switching an antenna 12 connected to a common terminal COM to both a first port P1 and a second port P2 or only to the second port P2.

[0024] That is, the RF SW 14 includes a first port P1 connected to the TV module 16 and a second port P2 connected to the MRFU 18. The RF SW 14 connects the second port P2 to the antenna 12 in response to an input of a control signal IDLE in a logic "low" state, or connects the first port P1 and the second port P2 to the antenna 12 in response to an input of a control signal IDLE in a logic "high" state. The RF SW 14 is provided with a circuit for not allowing a radio frequency signal inputted to the second port P2 to be applied to the first port P1.

[0025] The TV module 16 operates by an input of a power supply voltage Vcc supplied upon the “turning on” of a switch 31. The TV module 16 includes a tuner 32 for selecting only the TV channel signal corresponding to the input of a tuning signal CH-S among signals outputted from the first port P1 to down-convert the TV channel signal to an intermediate frequency signal IF, and a demodulator 36 for demodulating the intermediate frequency signal IF and outputted from the tuner 32 to output a composite video signal CV, a composite synchronizing signal CSYNC and an audio signal A/C2. The tuner 32 includes a Phase-Locked Loop (PLL) 34 for generating an associated tuning frequency in response to an input of the tuning signal CH-S, determining whether or not a phase is locked to the generated tuning signal, and outputting a receiving state signal RSS corresponding to a receiving field strength of the TV channel signal received.

[0026] The TV control section 22 includes a flash memory (FRAM) 38 for storing program data for controlling the TV module 16, font data and graphic data, such as an icon; a video memory (VRAM) 40 for storing text data and graphic data under control of the OSD in order to output the data as display images; a display control section 42 for inputting and analyzing data in response to an input of an Interrupt signal INT, accessing the flash memory 38 and outputting the tuning signal TS, the text data and the graphic data corresponding to the analysis of the data from the flash memory 38, and controlling the tuning operation according to the receiving state signal RSS outputted from the TV module 16; an OSD processor 44 disposed between the MSP 20 and the display control section 42, for interfacing data therebetween and synchronizing the display related data outputted from the display control section 42 with a vertical synchronizing (VS) signal and horizontal synchronizing (HS) signal outputted from the LCD 24 to output the synchronized display related data as display images through the video memory 40. The display control section 42 has an 8 bit-microprocessor unit MPU of one chip and a universal synchronous/asynchronous receiver/transmitter (UART) for communication of data included therein. Further, the OSD processor 44 includes a timing generator for generating a composite synchronizing signal, and a latch register for temporarily storing data, etc. The composite synchronizing
signal is used when displaying the OSD data associated with the phone mode on the TFT-LCD 26 in a state in which the TV module is disabled.

[0027] First of all, suppose that the operational mode of the TV phone, as shown in FIG. 1, is set to the TV mode and one among the first, second and third incoming alarm modes is set as the alarm mode for an incoming call on the TV phone. For example, suppose that at least one among three incoming call alarm modes is set as the incoming call alarm mode. As stated above, the first incoming call alarm mode interrupts the power supply of the TV and switches the operational mode from the TV mode to the phone mode; the second incoming call alarm mode switches the TV audio outputted from the TV module; and the third incoming call alarm mode displays an incoming call character message or a preset graphic at a specific region on the TV image displaying screen. The incoming call alarm mode is set by using the keypad 30 as shown in FIG. 1. For example, the first incoming call alarm mode is a phone mode, the second incoming call alarm mode is a bell mode, and the third incoming call alarm mode is a mute or lamp mode, and these incoming call alarm modes are set by using the keypad.

[0028] As shown in FIG. 1, a radio-frequency, electromagnetic signal is received by an antenna 12, which converts the radio-frequency, electromagnetic signal into an electrical signal, which is supplied to a common terminal COM of an RFSW 14. The RFSW 14 allows the common terminal COM to be connected to both the first port P1 and the second port P2 or to be connected only to the second port P2 based on the logic level of a control signal outputted from the MSP 20. For example, when the operational mode of the TV phone is set to the TV mode, the MSP 20 enables the power supply control signal TVCTL to “turn on” switch 31 and makes the control signal IDLE become a logic “high” state. By this operation, when switch 31 is turned on, the TV module 16 is supplied with a power supply voltage Vcc so that it is in an operable state.

[0029] In such a state, the MSP 20 supplies the OSD processor 44 in the TV control section 22 with a channel selection command signal CHS. The user may select a channel by inputting from the keypad 30. The OSD processor 44 stores the channel selection command signal CHS inputted from the MSP 20 in a latch register 46 and generates an interrupt signal INT. In response to activation of the interrupt signal INT, the display control section 42 reads out data stored in the latch register 46 and analyzes if the interrupt signal INT is a command or general data. Determining whether a specific address bit or data bit transmitted from the MSP 20 is set performs this analysis. Meanwhile, the display control section 42 outputs a response signal ACK in response to the interrupt signal INT in order to release the interrupt of the OSD processor 44. By release of this interrupt, the OSD processor 44 sets the state of its latch register 46 to a free state.

[0030] By this operation, if the display control section 42 determines that data inputted from the OSD processor 44 is the channel selection command signal CHS, it accesses the flash memory 38 and outputs a tuning signal TS, which corresponds to the channel selection command signal CHS, from the flash memory 38 for application to the PLL 34 of the tuner 32 disposed in the TV module 16.

[0031] The PLL 34 in the TV module 16 oscillates a tuning frequency corresponding to the tuning signal for application to the TV tuner 32, which down-converts the corresponding TV channel signal among the radio-frequency electromagnetic signals outputted from the first port P1 of the RFSW 14 to an intermediate frequency signal IF for application to the demodulator 36.

[0032] The demodulator 36 connected to the tuner 32 is adapted to demodulate the intermediate frequency signal IF to output a composite video signal CV, a composite synchronizing signal CSYNC, and audio signal A02 of the corresponding channel. The audio signal A02 outputted from the demodulator 36 is reproduced either through an earphone (not shown) or a speaker (not shown), which is turned on by switch 33. At this time, the PLL 34 of the tuner 32 monitors that an oscillating frequency of a voltage controlled oscillator VCO is locked, and measures the receiving field strength of the selected channel to supply the receiving state signal RSS corresponding to the measured field strength to the display control section 42. The display control section 42 allows for an automatic channel search by using the voltage level of the receiving state signal RSS.

[0033] Meanwhile, the LCD 24 allows an NTSC decoder included therein to separate the analog composite video signal CV into a color signal of R, G, and B, and synchronizes the separated color signal of R, G, and B with the composite synchronizing signal CSYNC for application to the TFT-LCD 26, which displays the synchronized color signal on a screen thereof. Also, the LCD 24 synchronizes and separates the input composite synchronizing signal CSYNC to output a vertical synchronizing signal VS and a horizontal synchronizing signal HS. Therefore, when the operational mode of the TV phone is set to the TV mode, TV images are displayed on the screen of the TFT-LCD 26 while an audio signal A02 is outputted under the control of the MSP 20.

[0034] Meanwhile, the MRUFU 18 coupled to the antenna 12 through port P2 or RFSW 14 receives a radio-frequency, electromagnetic signal of a transmitting/receiving frequency bandwidth for a portable phone, converts an analog signal into a digital signal or converts a digital signal into an analog signal, and amplifies the converted signal to transmit it through the antenna 12. The MRUFU 18 can be easily constructed by combining an RF unit and a baseband analog (BBA) circuit of a conventional portable phone. For example, the MRUFU 18 can be embodied by combining a CDMA type radio transceiver unit, a chip of “BBA2.X (Q5312CDMA)” manufactured by QUALCOMM Co. as a BBA circuit for converting an analog signal into a CDMA type digital data and vice versa, and an RF unit. The RFSW 14 allows the common terminal COM to be connected to the second port P2 under the control of the MSP 20 as described above when the operational mode of the MRUFU 18 is set either in wait mode or transmitting/receiving mode.

[0035] The MSP 20 coupled to the MRUFU 18 analyzes commands supplied from the keypad 30 and generates control signals corresponding to the commands. Further, the MSP 20 performs or controls data signal processing operations such as demodulating, de-interleaving, decoding, and vocoding of the digital signal inputted thereto from the MRUFU 18 so that it outputs the received forward channel data while outputting coded audio data as reverse channel data. A codec 28 coupled to the MSP 20 converts the forward channel coded audio data to an analog audio signal to output the converted audio signal (A01) through a speaker or earphone, or codes an analog audio signal inputted thereto.
from a microphone (AIN) to supply the coded audio signal as an audio signal of a reverse channel to the MSP 20.

[0036] In addition, the MSP 30 informs a user watching a TV program of an incoming call by controlling the incoming call modes as shown in FIG. 3A and 3B through analysis of the incoming call alarm modes set in an inner memory if the received forward channel data message is a message associated with an incoming call. The MSP 30 may selectively use “MSM2300” of a one-chip type supplied from QUALCOMM Co. in U.S.A. and one of chips for executing the same function as that of the “MSM2300” chip.

[0037] FIG. 2 is a flowchart illustrating the process of indicating an incoming call message on a TV phone according to an embodiment of the present invention, in which a user is informed of an incoming call state upon the reception of an incoming call message while in the TV mode. A program for the flowchart is stored in a memory block of the MSP 30 as shown in FIG. 1.

[0038] A call alarm operation in TV mode upon the occurrence of an incoming call will be described in detail hereinafter with reference to FIGS. 2, 3A, and 3B.

[0039] Referring now to FIG. 2, in TV mode where a user watches the TV program of a desired channel on the TV phone, the MSP 20 monitors an output of the MRBFU 18 at predetermined time intervals to determine at step 102 whether or not any incoming call has been received. If it is determined at step 102 that no incoming call has been received, the MSP 20 continues to operate in TV mode.

[0040] On the other hand, if it is determined at step 102 that the MRBFU 18 has received incoming call or message, the program proceeds to step 104 at which the MSP 30 detects the incoming call alarm modes set in the memory therein. The incoming call alarm modes herein means the above-mentioned first, second and third incoming call alarm modes. The MSP 20 determines at steps 106, 110 and 114 of FIG. 2 whether or not the present incoming call mode is any one of the first to third incoming call modes. If it is determined at step 106 that the present incoming call mode is the first incoming call mode (i.e., a bell mode), the program proceeds to step 108, where the MSP 20 disables the power supply control signal TVCTL supplied to the switch 31 so that it interrupts the power supply voltage supplied to the TV module 16, and turns the control signal IDLE supplied to the RFSW 14 to the logic “low” state, which allows the antenna 12 to be disconnected from the first port PI of the RFSW 14. In this call alarm mode, a telephone bell is driven by the incoming call. And then, if it is determined at step 120 that the user wishes to respond to the incoming call, the program proceeds to step 122 in which the MSP 20 transmits a response message through a reverse channel.

[0041] If it is determined at step 110 that the present incoming call alarm mode is the second incoming call alarm mode (i.e., a vibration mode), the program proceeds to step 112 at which the MSP 20 switches the switch 33 connected to an audio output mode of the demodulator 36 at predetermined intervals to switch an output of a TV audio signal. For example, the audio output could be turned on and then off every half second. Therefore, when an incoming call mode is set to the second incoming call mode, an audio signal is intermittently cut off while the TV image continues to be outputted, thereby audibly informing the user viewing the TV program of an incoming call state.

[0042] If it is determined at steps 106 and 110 that the present incoming call mode is not set to the first or second incoming call mode, the program proceeds and the MSP 20 decides that it is in the third incoming call alarm mode. Within the third incoming call alarm mode, there are two different modes of display: text and graphic image.

[0043] FIGS. 3A and 3B illustrate schematically examples of displaying an incoming call message on a viewing screen of a display unit of the TV phone according to an embodiment of the present invention. FIG. 3A illustrates a character message, signifying an incoming call, displayed on a specific region of a viewing screen of the display unit, for example, at the lower end portion. FIG. 3B illustrates a preset graphic image including an image character message of “you’re wanted on the phone” displayed on the entire portion of the viewing screen thereof.

[0044] At step 114, the MSP 20 determines whether or not the present incoming call mode is set to the text mode. The text mode displays an incoming call message at the lower end portion of the viewing screen like the oblique line shown in FIG. 3A. If it is determined at step 114 that the third incoming call alarm mode is set to text mode, the program proceeds to step 116 where the MSP 20 supplies the OSD processor 44 with a control signal signifying a text. In response, the OSD processor 44 generates the interrupt signal INT for application to the display control section 42. The display control section 42 analyzes the control signal signifying a text stored in the latch register 46 of the OSD processor 44 and accesses the flash memory 38 to allow the flash memory 38 to output text data corresponding to the text signifying control signal for application to the OSD processor 44. The processor 44 stores the text data inputted thereto from the display control section 42 in the video memory 40. Also, the OSD processor 44 synchronizes the text data stored in the video memory 40 with the composite synchronizing signal CSYNC to output the synchronized text signal as a video signal of RGB at the lower end portion of a horizontal line. The LCDD 24, which is coupled to the OSD processor 44, supplies the video signal of RGB outputted from the OSD processor 44 to the TFT-LCD 26, which displays the video signal at the lower end portion of a image viewing screen as shown in FIG. 3A.

[0045] It should be noted that the display control section 42 and the OSD processor 44 controls the text data so that they can be displayed at the lower end portion of a field or a frame as described above. In addition, it is preferable that the text data is an image character message of “you’re wanted on the phone”. The oblique line portion as shown in FIG. 3A is a region on which any message notifying the viewer of an incoming call is displayed, and the remaining portion, except the oblique line portion, is a region on which the TV image is displayed.

[0046] If, on the other hand, it is determined at step 114 that the third incoming call alarm mode is not set to the text mode, the program proceeds to step 118 where the MSP 20 transmits a graphic data displaying command to the display control section 42 through the OSD processor 44. The display control section 42 accesses the flash memory 38 and directs the flash memory 38 to output the graphic data for displaying an incoming call graphic to the OSD processor 44, which stores the inputted graphic data in the video memory 40. The OSD processor 44 synchronizes the graphic data stored in the video memory 40 with the composite synchronizing signal CSYNC to output the synchronized
signal as a video signal of RGB at the lower end portion of a horizontal line. The LCDD 24, which is coupled to the OSD processor 44, supplies the video signal of RGB outputted from the OSD processor 44 to the TFT-LCD 26, which displays the TV image with the graphic data superimposed on top. The image viewing screen with the superimposed graphic data is as shown in FIG. 3B.

Accordingly, it can be seen that if the incoming call alarm mode is set to the third incoming call mode, either a character message signifying the incoming call or images signifying there is an incoming call, such as the combination of the telephone graphic and the character message of “you’re wanted on the phone”, is displayed either at the lower end portion of the image viewing screen or the entire portion of the image viewing screen, thereby informing a user of an incoming call state, even while the TV audio sound is continually reproduced and outputted.

At subsequent step 120, the MSP 20 determines whether or not the user responds to the incoming call. This can be implemented by detecting if a signal corresponding to the input of the SEND key on the keypad 30 is generated. For a flip type portable phone, the user’s response to the incoming call can be detected through the opening of the flip of the portable phone. If it is determined at step 120 that the user responds to the incoming call, the program proceeds to step 122 where the MSP 20 transmits an incoming call response message through the MRFU 16 to a base station in order to enter the phone mode. On the other hand, if is determined at step 120 that the user does not respond to the incoming call, the operation mode of the TV phone remains in TV mode.

As apparent from the above description, the TV phone of the present invention provides many advantages. When in TV mode, a user can be informed of an incoming call by stopping the operation of a TV module; switching off and on output of an audio signal of the selected TV broadcasting channel; displaying a character message at the lower end portion of the TV viewing screen; or superimposing a graphic image over the image on the TV viewing screen, thereby accurately informing the user that a call has been received and allowing the user to rapidly answer the phone.

While the present invention has been particularly shown and described with reference to certain embodiments thereof, it will be understood by those of ordinary skill in the art that various changes in form and details may be made therein without departing from the spirit and scope of the present invention as defined by the following claims and their equivalents.

What is claimed is:

1. An apparatus comprising:
   a display;
   communication circuitry to establish a communication connection with an external electronic device; and
   a processor adapted to:
   present multimedia content via the display;
   receive, while the multimedia content is presented via the display, a specified event incoming from the external electronic device via the communication connection established using the communication circuitry; and
   pause presenting the multimedia content at least temporarily based at least in part on receiving the specified event.

2. The apparatus of claim 1, wherein the processor is further adapted to:
   receive at least one portion of the multimedia content from another external electronic device as at least part of a streaming service.

3. The apparatus of claim 1, further comprising:
   a memory,
   wherein the processor is further adapted to:
   present, via the display, at least one portion of the multimedia content stored in the memory as at least part of presenting the multimedia content.

4. The apparatus of claim 1, further comprising:
   a speaker,
   wherein the processor is further adapted to:
   output, via the speaker, an audio signal corresponding to the specified event based at least in part on receiving the specified event.

5. The apparatus of claim 1, further comprising:
   a speaker,
   wherein the processor is further adapted to:
   present a notification corresponding to the specified event via the display or the speaker.

6. The apparatus of claim 5, wherein the processor is further adapted to:
   present an icon, an image, a text, a flashing, or a vibration of the apparatus, as at least part of the notification.

7. The apparatus of claim 1, wherein the processor is further adapted to:
   receive a user input with respect to the specified event within a specified period of time after the specified event is received; and
   perform a specified function corresponding to the specified event based at least in part on receiving the user input with respect to the specified event.

8. The apparatus of claim 7, wherein the processor is further adapted to:
   refrain from performing the specified function based at least in part on a determination that no user input with respect to the specified event is received within the specified period of time.

9. The apparatus of claim 7, wherein the processor is further adapted to:
   maintain pausing presenting the multimedia content while the specified function is performed.

10. The apparatus of claim 1, wherein the processor is adapted to:
   identify a call event, a short message event, a multimedia message event, or an alarm event, as at least part of the specified event.

11. An apparatus comprising:
   a display;
   communication circuitry to establish a communication connection with an external electronic device; and
   a processor adapted to:
   present multimedia content via the display;
   receive, while the multimedia content is presented via the display, a specified event incoming from the external electronic device via the communication connection established using the communication circuitry; and
   pause outputting an audio signal corresponding to the multimedia content at least temporarily based at least in part on receiving the specified event.
12. The apparatus of claim 11, further comprising:
a speaker,
wherein the processor is further adapted to:
output, via the speaker, another audio signal corre-
sponding to the specified event based at least in part
on receiving the specified event.
13. The apparatus of claim 11, wherein the multimedia
content includes a video signal and the audio signal, and
wherein the processor is further adapted to:
maintain, via the display, displaying at least one portion
of the video signal based at least in part on receiving
the specified event.
14. The apparatus of claim 11, further comprising:
a speaker,
wherein the processor is further adapted to:
present a notification corresponding to the specified
event via the display or the speaker.
15. The apparatus of claim 11, wherein the processor is
further adapted to:
determine whether a user of the apparatus responds to the
specified event within a specified period of time after
the specified event is received; and
resume outputting the audio signal based at least in part on
a determination that the user did not respond to the
specified event within the specified period of time.
16. The apparatus of claim 15, wherein the processor is
further adapted to:
maintain pausing outputting the audio signal based at least
in part on a determination that the user responded to the
specified event within the specified period of time.
17. An apparatus comprising:
communication circuitry to establish a communication
connection with an external electronic device; and
a processor adapted to:
present multimedia content using a first user interface
displayed via the display;
receive, while the multimedia content is presented
using the first user interface, a specified event incom-
ing from the external electronic device via the com-
unication connection established using the com-
munication circuitry; and
present a second user interface via the display with
respect to the specified event based at least in part on
receiving the specified event, where presenting of the
second user interface hides at least one portion of the
first user interface from display.
18. The apparatus of claim 17, further comprising:
a speaker,
wherein the processor is further adapted to:
automatically pause the presenting of the multimedia
content at least temporarily or automatically pause
outputting an audio signal corresponding to the multi-
media content at least temporarily, based at least in
part on receiving the specified event; and
output another audio signal corresponding to the speci-
fied event via the speaker.
19. The apparatus of claim 17, wherein the processor is
further adapted to:
receive a user input with respect to the specified event
within a specified period of time after the specified
event is received; and
present a third user interface different from the first user
interface and the second user interface based at least in
part on receiving the user input with respect to the
specified event within a specified period of time after
the specified event is received.
20. The apparatus of claim 17, wherein the processor is
further adapted to:
determine whether a user of the apparatus responds to the
specified event within a specified period of time after
the specified event is received; and
present the first user interface, including the previously-
hidden at least one portion, based at least in part on a
determination that the user has not responded to the
specified event within the specified period of time.

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