

[0045] The communicator 210 may communicate with at least one of various types of external apparatuses according to at least one of various types of communication methods. If a WOL function is turned on, the communicator 210 may receive a power-on command from an external apparatus (for example, a smart phone, etc.) using, for example, a LAN card via wireless and/or wired method during a standby mode.

[0046] The communicator 210 may include at least one of various communication chips such as a Wi-Fi chip, a Bluetooth chip, an NFC chip, and a wireless chip. The Wi-Fi chip, the Bluetooth chip and the NFC chip may perform communications according to a LAN method, a Wi-Fi method, a Bluetooth method, and an NFC method, respectively. The NFC chip represents a chip that operates according to an NFC method that uses, for example, a 13.56 MHz band among various RF-ID frequency bands such as 135 kHz, 13.56 MHz, 433 MHz, 860-960 MHz, 2.45 GHz, and so on. In the case of using the Wi-Fi chip or the Bluetooth chip, various connection information, such as SSID and a session key, may be transmitted/received for communication connection and then, various information may be transmitted/received. The wireless communication chip may be a chip that performs communication according to at least one of various communication standards such as IEEE, Zigbee, 3rd Generation (3G), 3rd Generation Partnership Project (3GPP), Long Term Evolution (LTE) and so on.

[0047] If a WOL function is turned on, standby power may be supplied to an element to provide the WOL function (for example, a LAN card) out of the communicator 210, and if the WOL function is not turned on, standby power may not be supplied to an element for providing the WOL function out of the communicator 210.

[0048] The image receiver 220 may receive various image contents from outside. The image receiver 220 may receive, for example, broadcast contents from an external broadcasting station, image contents from an external apparatus (for example, a DVD player, etc.), and VOD contents from an external server.

[0049] The image processor 230 processes image data obtained from the image receiver 220. The image processor 230 may perform various image processing operations with respect to image data, such as decoding, scaling, noise filtering, frame rate conversion, resolution conversion, etc.

[0050] The display 240 displays at least one of an image content received from the image receiver 220 and various UIs processed by the graphic processor 293. The display 240 may display a user menu to perform a setting with respect to the WOL function. In this case, for example, the user menu to perform a setting with respect to the WOL function may include an on item to turn on the WOL function, an off item to turn off the WOL function, and an auto item to determine whether the WOL is turned either on or off, for example, automatically according to the network setting state.

[0051] The storage 250 stores various modules to drive the display apparatus 200.

[0052] The storage 250 stores various modules to drive the electronic apparatus 200. For example, the storage 250 may store software including a base module, a sensing module, a communication module, a presentation module, a web browser module, and a service module. In this case, for example, the base module may be defined as a basic module that processes a signal transmitted from each hardware included in the display apparatus 200, and transmits the processed signal to an upper layer module. The sensing module

is a module that collects information from at least one of various sensors. The sensing module, may analyze and manage the collected information. The sensing module may include at least one of a face recognition module, a voice recognition module, a motion recognition module, and an NFC recognition module, and so on. The presentation module is a module to compose a display screen. The presentation module includes a multimedia module to reproduce and output multimedia contents, and a UI rendering module to process UI and graphics. The communication module is a module to perform communications with the outside. The service module is a module including at least one of various applications to provide at least one of various services. The storage 250 may store a WOL application module to perform a WOL function.

[0053] The storage 250 may include various program modules, but some of the various program modules may be omitted or changed, or new modules may be added according to the type and characteristics of the display apparatus 200. For example, if the display apparatus 200 is a tablet PC, the base module may include, for example, a location determination module to determine a GPS-based location, and the sensing module may include a sensing module to detect a user's operation.

[0054] The power supply unit 260 supplies power to at least one of various elements of the display apparatus 200 under the control of the controller 290. If a WOL function is turned on, the power supply unit 260 may supply standby power to the communicator 210 during a standby mode. However, if the WOL function is turned off, the power supply unit 260 may be switched to operate with operation power, and standby power may not be supplied to the communicator 210 during a standby mode.

[0055] The audio output unit 270 may output not only various audio data, but also at least one of various alarm sounds or voice messages that may be processed by an audio processor (not shown).

[0056] The input unit 280 receives at least one of various user manipulations to control the display apparatus 200. The input unit 280 may receive a user command to perform a setting with respect to a WOL function. The input unit 280 may be realized as at least one of various input apparatuses to receive a user manipulation, such as a remote controller, a voice input unit, a motion input unit, a pointing device, etc.

[0057] The controller 290 controls operations, e.g., the overall operations of the display apparatus 200 using various programs stored in the storage 250.

[0058] The controller 290, as illustrated in FIG. 2, includes a RAM 291, a ROM 292, a graphic processor 293, a main CPU 294, a first to nth interface 295-1~295-n, and a bus 296. The RAM 291, the ROM 292, the graphic processor 293, the main CPU 294, the first to the nth interface 295-1~295-n, etc. may be interconnected through the bus 296.

[0059] The ROM 292 stores a set of commands for system booting. If a turn-on command is input and thus, power is supplied, the main CPU 294 copies O/S stored in the storage 250 in the RAM 291 according to a command stored in the ROM 292, and boots a system by executing the O/S. When the booting is completed, the main CPU 294 copies various application programs stored in the storage 250 in the RAM 291, and executes the application programs copied in the RAM 291 to perform various operations.

[0060] The graphic processor 293 generates a screen including various objects such as an icon, an image, a text, etc.