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18 February 2005 (18.02.2005) KR
- (71) Applicant and
(72) Inventor: **JEONG, Kwang Jong** [KR/KR]; 2-504,
Hanshin Apts., 750-1, Yongjeoung-ri, Jingeon-eup,
Namyangju-si, Gyeonggi 472-835 (KR).

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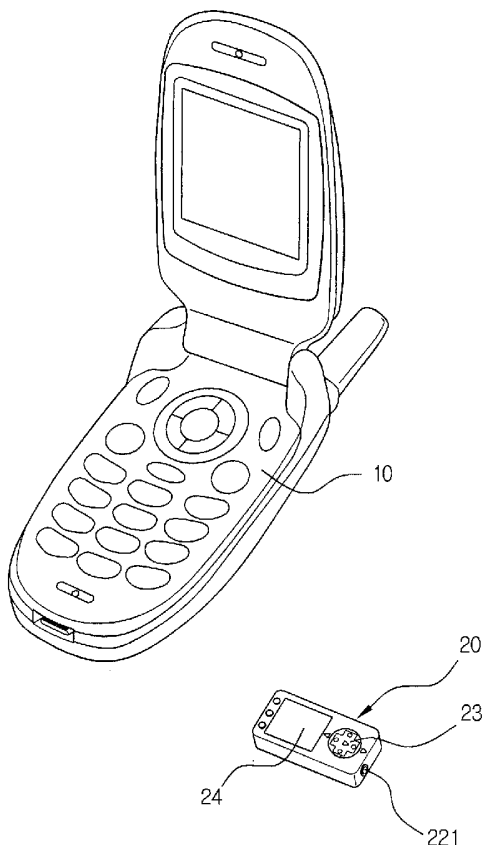
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- (74) Agent: **AN, Choon Ho**; An Choon Ho Law Patent Office, 2F, World Bldg., 1007-3, Sinjeong 4-dong, Yangcheon-gu, Seoul 158-860 (KR).
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(54) Title: REMOTE CONTROL SYSTEM FOR MOBILE PHONES



(57) Abstract: The present invention relates to a remote control system for mobile phones, wherein various functions of the mobile phones are controlled by the remote controller in a wired or wireless manner, whereby listening of MP3 music, reception of various motion pictures provided through the mobile phones, and the transmit/receive operation of the mobile phones, which are various functions of the mobile phones, can be easily controlled through the remote controller. According to the present invention, the remote control system for mobile phones includes a mobile phone (10) having a main controller (11) that controls a variety of functions and sound signals of the mobile phone (10), and a main transceiver (12) that transmits and receives a signal to and from the main controller (11); and a remote controller (20) having a sub transceiver (22) that transmits and receives a signal to and from the main transceiver (12) of the mobile phone, a sub controller (21) that transmits or receives the transmit and receive signals of the sub transceiver (22) and controls the transmit and receive signals, and a keypad unit (23) for inputting various setting data.

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Description

REMOTE CONTROL SYSTEM FOR MOBILE PHONES

Technical Field

- [1] The present invention relates to a remote controller, and more particularly, to a remote control system for mobile phones, wherein various functions of the mobile phone are controlled by the remote controller in a wired or wireless manner, whereby listening of MP3 music, reception of various motion pictures provided through the mobile phone, and the transmit/receive operation of the mobile phone, which are various functions of the mobile phone, can be easily controlled through the remote control system.

Background Art

- [2] Generally, a mobile phone allows a user to communicate with common wired telephone subscribers or other mobile communication telephones through a base station, while randomly moving within a mobile communication service coverage. Recently, state-of-the-art mobile phones having improved performance have increasingly emerged on the market.
- [3] Furthermore, a mobile phone allows a user to view a variety of characters and image information through a liquid crystal display. Recently, the mobile phone is adapted to allow a user to view motion pictures taken by a camera embedded therein, motion pictures downloaded through the Internet, and motion pictures received through public waves such as TV.
- [4] If a user carries a mobile phone with it being contained in a pocket, a bag, etc., and listens to MP3 music or makes a phone call, he or she is used to suffer from an inconvenience of having to take out the mobile phone from the pocket, bag, etc.
- [5] In addition, in the case where a user sees a movie and broadcasting such as TV, which has a long broadcasting time, through the mobile phone, he or she has to take the mobile phone with his hands for a long time, or has to have the mobile phone fixed at a predetermined location. In this case, however, the user has to manipulate corresponding key buttons of the mobile phone if he wants to change motion pictures or a channel. This can make users bothering.

Disclosure of Invention

Technical Problem

- [6] Accordingly, the present invention has been made in view of the above problems occurring in the prior art, and it is an object of the present invention to provide a remote control system for mobile phones, wherein various functions of the mobile phones are controlled by the remote controller in a wired or wireless manner, whereby

listening of MP3 music, reception of various motion pictures provided through the mobile phone, and the transmit/receive operation of the mobile phone, which are various functions of the mobile phone, can be easily controlled through the remote control system.

Technical Solution

- [7] According to the present invention, there is provided a remote control system for mobile phones, including a mobile phone having a main controller that controls a variety of functions and sound signals of the mobile phone, and a main transceiver that transmits and receives a signal to and from the main controller; and a remote controller having a sub transceiver that transmits and receives a signal to and from the main transceiver of the mobile phone, a sub controller that transmits or receives the transmit and receive signals of the sub transceiver and controls the transmit and receive signals, and a keypad unit for inputting various setting data.

Advantageous Effects

- [8] According to the present invention, the operation of a mobile phone can be controlled in a wire or wireless remote controller. Thus, a variety of functions of mobile phones, such as listening of MP3 music, reception of various motion pictures, and the transmit/reception operation, can be very easily operated using the remote control system. Accordingly, there is an advantage in that convenience in use can be increased maximally.

Brief Description of the Drawings

- [9] Further objects and advantages of the invention can be more fully understood from the following detailed description taken in conjunction with the accompanying drawings in which:
- [10] FIG. 1 is a perspective view illustrating an embodiment of the present invention;
- [11] FIG. 2 is a plan view showing a remote controller according to the present invention;
- [12] FIG. 3 is a block diagram illustrating an embodiment of the present invention;
- [13] FIG. 4 is a perspective view illustrating a wired remote controller according to another embodiment of the present invention; and
- [14] FIG. 5 is a perspective view illustrating a state where the remote controller is inserted into a reception groove of the mobile phone according to the present invention.

Mode for the Invention

- [15] The present invention will now be described in detail in connection with preferred embodiments with reference to the accompanying drawings.
- [16] Referring to FIGS. 1 to 5, a remote control system of the present invention includes

a mobile phone 10 having additional modules, and a remote controller 20 that controls the mobile phone 10.

[17] The mobile phone 10 includes a main controller 11 that controls respective functions of the mobile phone 10, and a main transceiver 12 that transmits a signal input from the main controller 11 to the remote controller 20, or receives a signal output from the remote controller 20.

[18] The remote controller 20 includes a sub transceiver 22 that transmits a signal to the mobile phone 10 or receives a signal from the mobile phone 10, a sub controller 21 that processes a signal received from the sub transceiver 22 and outputs a signal to be transmitted to the mobile phone 10, and a keypad unit 23 that inputs data for controlling various functions of the mobile phone 10.

[19] The remote controller 20 can further include a liquid crystal display unit 24 for displaying the operating state of the mobile phone 10 and the operating state of the remote controller 20.

[20] The sub transceiver 22 includes a connector 221 for connecting an earphone and a microphone, and a connector 222 for a mobile phone, which is connected to the mobile phone 10 in a wired manner. Thus, the sub transceiver 22 can be connected to the mobile phone 10 in a wired manner and can be thus used as a wired remote controller.

[21] Furthermore, the main transceiver 12 and the sub transceiver 22 are configured to transmit and receive data signals between the mobile phone 10 and the remote controller 20 by means of a frequency transmit/receive method using a predetermined frequency band and an optical transmit/receive method using infrared rays.

[22] Meanwhile, a reception groove 14 is formed in the case of the mobile phone 10. The reception groove 14 is adapted to receive the remote controller 20. At this time, if the remote controller 20 is inserted in the reception groove 14 and then maintained, it is possible to carry the mobile phone 10 without the need to additionally carry the remote controller 20.

[23] The operation of the present invention constructed above will be below described.

[24] That is, when listening to MP3 music, and seeing motion pictures and broadcasting, such as TV, through the mobile phone 10 using the remote controller for mobile phone according to the present invention, MP3 music is selected, a motion picture or a TV channel is selected, and the volume of the sound is controlled through the keypad unit 23 of the remote controller 20. The contents input by the keypad unit 23 are input to the sub controller 21, and a data signal processed by the sub controller 21 are then sent to the sub transceiver 22.

[25] The sub transceiver 22 converts the data signal received from the sub controller 21 into a frequency signal or an optical signal, and transmits the converted signal to the mobile phone 10.

- [26] Meanwhile, the main transceiver 12 of the mobile phone 10 receives a wireless signal output from the sub transceiver 22 of the remote controller 20. The main transceiver 12 converts the received signal into a data signal and sends the converted signal to the main controller 11.
- [27] The main controller 11 processes the data signal received from the main transceiver 12. Therefore, a user can listen to MP3 music or see a motion picture or TV through the mobile phone 10 according to the data signal.
- [28] Meanwhile, if the main controller 11 converts the operating state of the mobile phone 10 into a data signal and sends the converted signal to the main transceiver 12, the main transceiver 12 converts the data signal into a frequency signal or an optical signal and sends the converted signal to the remote controller 20.
- [29] The sub transceiver 12 of the remote controller 20 receives the frequency signal or the optical signal from the mobile phone 10, converts the received signal into a data signal, and sends the converted signal to the sub controller 21. The sub controller 21 processes the data signal received from the sub transceiver 12, and displays the operating state of the mobile phone 10 on the liquid crystal display unit 24.
- [30] As such, the mobile phone 10 is operated in a wireless manner. Further, the connector 221 for earphone and microphone and the connector 222 for mobile phone are formed in the sub transceiver 22 of the remote controller 20. Terminals of the earphone and microphone are inserted into the connector 221 for earphone and microphone, and a connector for earphone and microphone of the mobile phone 10 or an I/O data connector is connected to the connector 222 for mobile phones. Thus, the mobile phone 10 can be used as the wired remote controller 20.
- [31] Meanwhile, when the remote controller 20 is not used, it can be carried with it being inserted into the reception groove 14 formed in the case of the mobile phone 10. Accordingly, there is an advantage in that the remote controller 20 can be carried together with the mobile phone 10 without the need to additionally carry the remote controller 20. Thus, the remote controller 20 can be very easily carried, and there is no danger of missing the remote controller 20.

Industrial Applicability

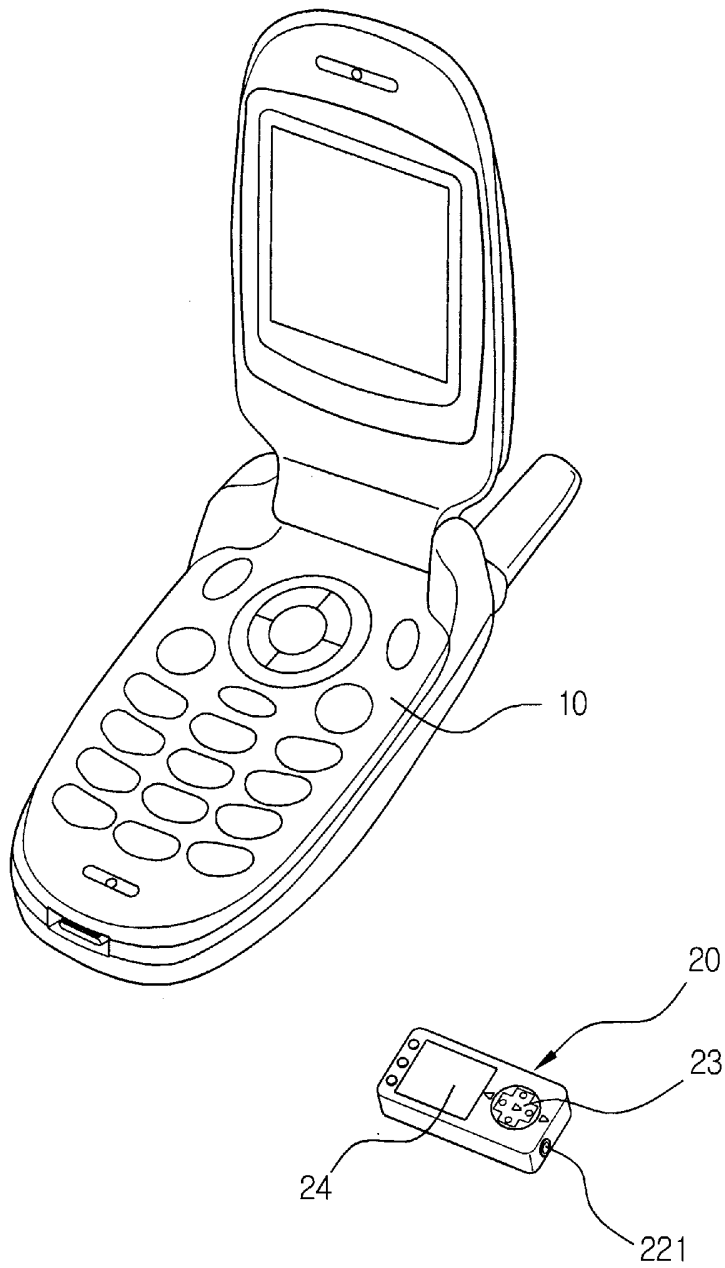
- [32] As described above, according to the present invention, the operation of a mobile phone can be controlled in a wire or wireless remote controller. Thus, a variety of functions of mobile phones, such as listening of MP3 music, reception of various motion pictures, and the transmit/reception operation, can be very easily operated using the remote control system. Accordingly, there is an advantage in that convenience in use can be increased maximally.
- [33] While the present invention has been described with reference to the particular il-

illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or modify the embodiments without departing from the scope and spirit of the present invention.

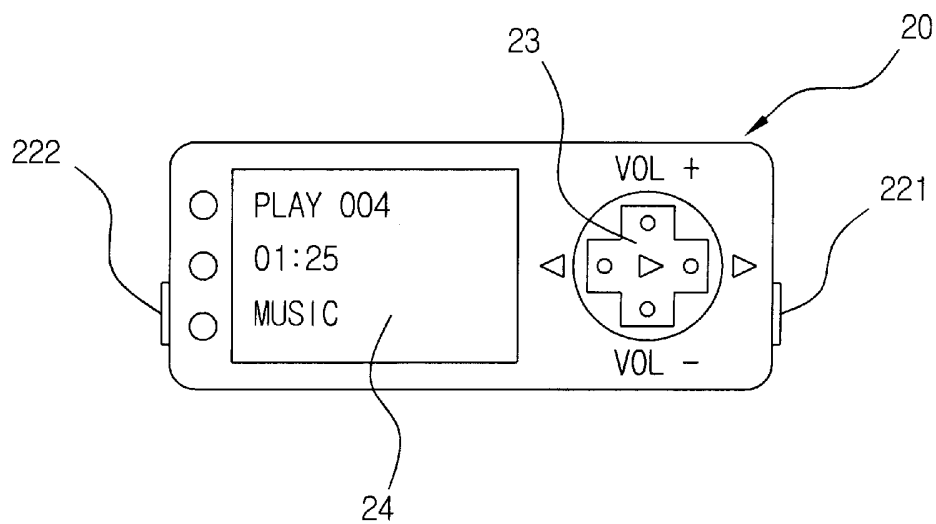
Claims

- [1] A remote control system for mobile phones, comprising:
a mobile phone (10) having a main controller (11) that controls a variety of functions and sound signals of the mobile phone (10), and a main transceiver (12) that transmits and receives a signal to and from the main controller (11); and a remote controller (20) having a sub transceiver (22) that transmits and receives a signal to and from the main transceiver (12) of the mobile phone, a sub controller (21) that transmits or receives the transmit and receive signals of the sub transceiver (22) and controls the transmit and receive signals, and a keypad unit (23) for inputting various setting data.
- [2] The remote control system for mobile phones as claimed in claim 1, wherein the remote controller (20) further includes a liquid crystal display unit (24) that displays the operating state of the mobile phone (10) and the operating state of the remote controller (20).
- [3] The remote control system for mobile phones as claimed in claim 1 or 2, wherein a reception groove 14 is formed in the case of the mobile phone (10), so that the remote controller (20) is inserted into the reception groove (14).

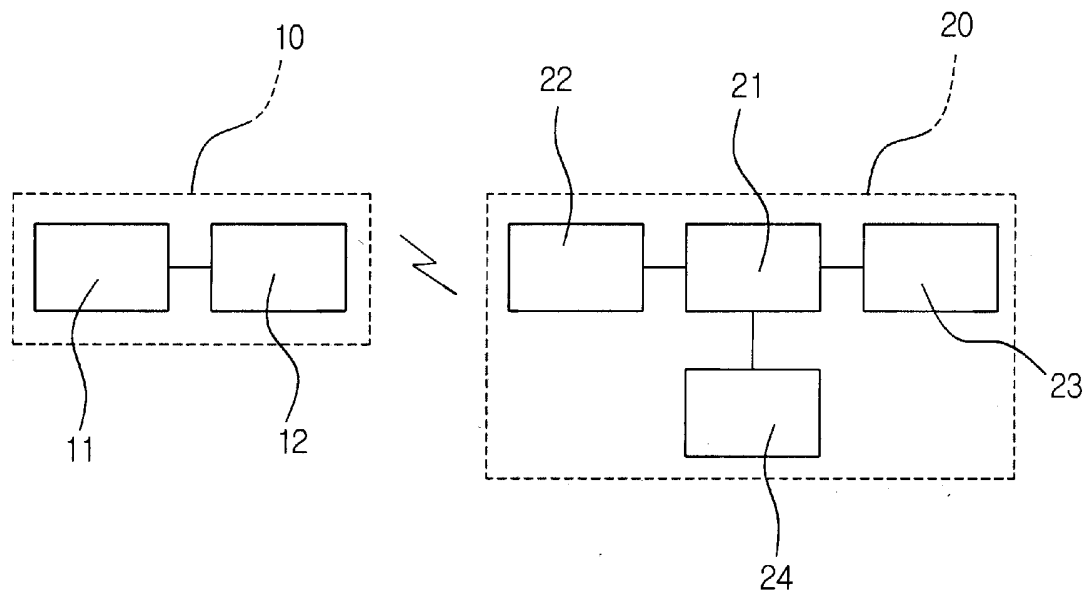
[Fig. 1]



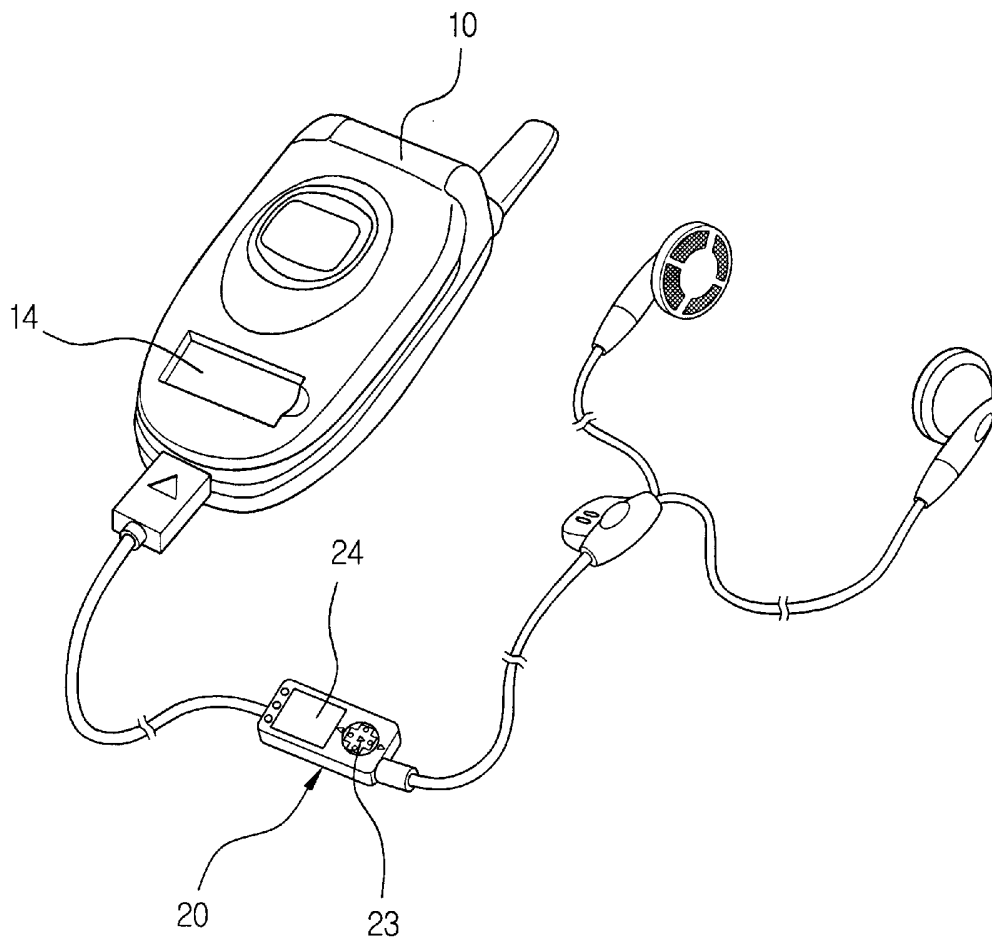
[Fig. 2]



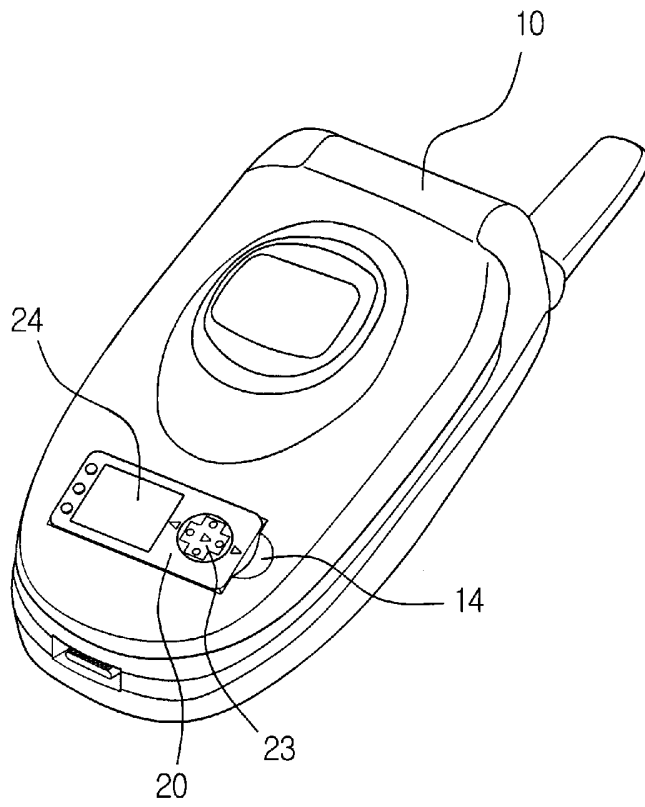
[Fig. 3]



[Fig. 4]



[Fig. 5]



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Patents and applications for inventions since 1975
Korean Utility models and applications for Utility models since 1975
Japanese Utility models and application for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT


Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 2003-076041 A (REIGN COM., LTD.) 26.09.2003. see the whole documents	1-3
X	KR 2004-003848 A (SSAMSUNG ELECTRO-MECHANICS CO., LTD.) 13.01.2004 see the whole documents	1-3
X	JP 2002-016675 A (TOKINCORP) 18.01.2002. see the whole documents	1-3

Further documents are listed in the continuation of Box C. See patent family annex.

<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
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 Korean Intellectual Property Office
 920 Dunsan-dong, Seo-gu, Daejeon 302-701,
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2005/001751

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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