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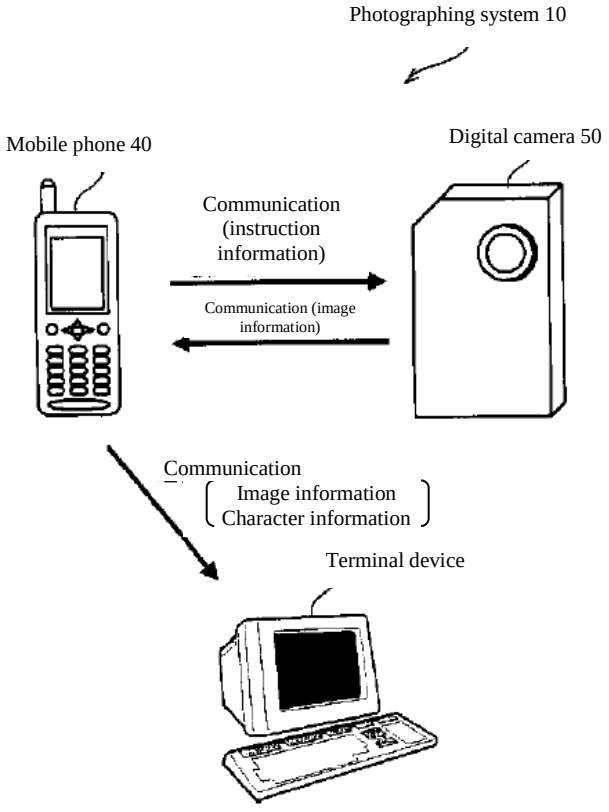
(54) (TITLE OF THE INVENTION) PHOTOGRAPHING SYSTEM, PHOTOGRAPHING METHOD, CAMERA, RECORDING MEDIUM, AND PROGRAM

(57) (ABSTRACT)
(PROBLEM) To obtain a photographing system, a photographing method, a camera, a recording medium and a program that allows a photographer him/herself to reliably take a self-portrait and accurately grasp the photographing timing.
(MEANS FOR SOLVING) A digital camera 50 acquires image information showing an object image, sequentially transmits the acquired image information to a mobile phone 40, and stores the acquired image information in a built-in storage means, upon receiving the release instruction information, which is the information for instructing the storage of the acquired image information. Furthermore, the mobile phone 40 receives the image information sent by the digital camera 50, displays the image shown by the received image information, and transmits the release instruction information to the digital camera 50 when a predetermined key is operated. Moreover, the digital camera 50 transmits to the mobile phone 40 the image information stored in the storage means, and in response to this, the mobile phone 40 transfers to a terminal device the image information received from the digital camera 50 together with the character information.



(Scope of Patent Claims)
(Claim 1) A photographing system, comprising
a camera equipped with an image information acquisition means for obtaining image information showing an object image, an image information transmission means for sequentially transmitting the image information obtained by the image information acquisition means, an instruction information receiving means for receiving release instruction information, which is the information for instructing the storage of the image information obtained by the image information acquisition means, and a storage means for storing the image information obtained by the image information acquisition means when the instruction information receiving means receives the release instruction information; and
an information terminal device provided with an image information receiving means for receiving the image information transmitted by the image information transmission means, a display means for displaying an image shown by the image information received by the image information receiving means, an operation means operated when the release instruction information is transmitted, and an instruction information transmission means for transmitting the release instruction information when the operation means is operated.
(Claim 2) The photographing system as recited in Claim 1, wherein the camera is built-in with the instruction information receiving means and the image information transmission means, and
the information terminal device is built-in with the instruction information transmission means and the image information receiving means.
(Claim 3) The photographing system as recited in Claim 1 or 2, wherein the image information transmission means transmits the stored image information stored in the storage means, wherein
the camera is further provided with an erasing means for deleting the stored image information transmitted by the image information transmission means from the storage means, and
the information terminal device is further provided with a transfer means for transferring to a predetermined transfer destination the stored image information received by the image information receiving means.
(Claim 4) The photographing system as recited in Claim 3, wherein the transfer means transmits to a transfer destination the character information on the stored image information when transferring to a predetermined transfer destination the stored image information received by the image information receiving means.
(Claim 5) A photographing method, wherein a camera obtains image information showing an object image, sequentially transmits the obtained image information, and stores in a storage means the image information obtained upon receiving the release instruction information, which is the information for instructing the storage of the obtained image information; and
an information terminal device receives the image information transmitted by the camera, displays an image shown by the received image information, and transmits the release instruction information when an operation means operated during the transmission of the release instruction information is operated.
(Claim 6) The photographing method as recited in Claim 5, wherein the camera transmits the stored image information stored in the storage means and subsequently deletes the transmitted stored image information from the storage means, and
the information terminal device transfers the stored image information received to a predetermined transfer destination.
(Claim 7) The photographing method as recited in Claim 6, wherein the information terminal device transfers to a predetermined transfer destination the character information on the stored image information when transferring the received stored image information to the transfer destination.
(Claim 8) A camera, comprising:
an image information acquisition means for obtaining image information showing an object image,
an image information transmission means for sequentially transmitting the image information obtained by the image information acquisition means,
an instruction information receiving means for receiving release instruction information, which is the information for instructing the storage of the image information obtained by the image information acquisition means, and
a storage means for storing the image information obtained by the image information acquisition means when the instruction information receiving means receives the release instruction information.
(Claim 9) The camera as recited in Claim 8, wherein the image information transmission means transmits the stored image information stored in the storage means, and
the camera is further provided with an erasing means for deleting from the storage means the stored image information transmitted by the image information transmission means.
(Claim 10) A recording medium, capable of being read by a computer in which a program that controls the operation of a camera is installed, wherein the program comprises
an image information transmission step of sequentially transmitting image information showing an object image,
an instruction information receiving step of receiving release instruction information, which is the information for instructing the storage of the image information, and
a storage step of storing the image information in a storage means when the release instruction information is received in the instruction information receiving step.
(Claim 11) The recording medium capable of being read by a computer as recited in Claim 10, wherein the medium is recorded with the program that further includes
a stored image transmission step of transmitting the stored image information stored in the storage means, and
a deletion step of deleting from the storage means the stored image information transmitted in the stored image transmission step.
(Claim 12) A program, for controlling the operation of a camera, wherein the program comprising:
an image information transmission step of sequentially transmitting the image information showing an object image, an instruction information receiving step of receiving the release instruction information, which is the information for instructing the storage of the image information, and
a storage step of storing the image information in a storage means upon receiving the release instruction information in the instruction information receiving step.
(Claim 13) The program as recited in Claim 12, wherein the program further includes a stored image transmission step of

transmitting the stored image information stored in the storage means, and

a deletion step of deleting from the storage means the stored image information transmitted in the stored image transmission step.

(Detailed Description of the Invention)

(0001)

(Technical Field to which the Invention belongs) The present invention pertains to a photographing system, a photographing method, a camera, a recording medium, and a program; in particular, the present invention pertains to a photographing system, a photographing method, a camera, a recording medium, and a program with which a photographer can simply and reliably captures a self-portrait.

(0002)

(Description of the Prior Art) When self-timer photographing is performed using a camera so that the photographer him/herself is included as an object, the following conventional method has been adopted: a photographer looks into a finder of the camera fixedly installed, assumes the position where he/she will stand in a photographing area, presses a release switch (the so-called shutter), moves to the standing position, and waits for the shutter to release.

(0003)

(Problem to be Solved by the Invention) However, with this method, the actual standing position of the photographer at the time of photographing may deviate from the assumed standing position, which in this case, may cause a problem that a portion of the body of the photographer may be cut-off from the print obtained by photographing. Furthermore, with this method, a shutter may be released while the photographer is moving to the standing position, causing a problem of the photographer being excluded in the print obtained by photographing. Furthermore, this method also poses a problem that the timing (the photographing timing) at which a shutter will release is difficult to grasp.

(0004) The present invention was made in order to solve the problems described above, and the objective of the present invention is to provide a photographing system, a photographing method, a camera, a recording medium, and a program that allows the photographer him/herself to take a self-portrait reliably and to grasp the photographing timing correctly.

(0005)

(Means for Solving the Problems) To achieve the objective described above, the photographing system as recited in Claim 1 comprises a camera equipped with an image information acquisition means for obtaining image information showing an object image, an image information transmission means for sequentially transmitting image information obtained by the image information acquisition means, an instruction information receiving means for receiving release instruction information, which is the information for instructing the storage of the image information obtained by the image information acquisition means, and a storage means for storing the image information obtained by the image information acquisition means when the instruction information receiving means receives the release instruction information; and an information terminal device provided with an image information receiving means for receiving the image information transmitted by the image information transmission means, a display means for displaying an image shown by the image information received by the image information receiving means, an operation means for performing an operation when the release instruction information is transmitted, and an instruction information transmission means for transmitting the release instruction information when the operation means is operated.

(0006) According to the photographing system as recited in Claim 1, a camera allows the image information acquisition means to obtain the image information showing an object image, and the image information transmission means to sequentially transmit the obtained image information.

(0007) On the other hand, in the invention as recited in Claim 1, the information terminal device allows the image information receiving means to receive the image information transmitted by the image information transmission means, and the display means to display the image shown by the received image information.

(0008) In this way, it is possible to confirm the object image shown by the image information obtained by the camera, by referring to the display means equipped in the information terminal device even at the position away from the camera.

(0009) The image information described above also includes motion picture information, in addition to still picture information. Transmission and reception of the image information by the image information transmission means and the image information receiving means include transmission and reception by a cable, in addition to wireless transmission and reception such as transmission and reception by radio waves and infrared rays. The display means includes all types of displays including a CRT display, a liquid crystal display, a plasma display, an organic EL (Electro Luminescence) display, and the like.

(0010) On the other hand, the information terminal device of the present invention is equipped with an operation means operated upon the transmission of the release instruction information, which is the information for instructing the storage of the image information obtained by the image information acquisition means, wherein the release instruction information is transmitted by the instruction information transmission means when the operation means is operated.

(0011) And in the camera of the present invention, when the release instruction information is received by the instruction information receiving means, the image information obtained by the image information acquisition means is stored in the storage means.

(0012) Namely, the release instruction information is the information for instructing the timing of photographing with the camera of the present invention, and in the present invention, the information terminal device is provided with a function for transmitting the release instruction information; therefore, it is possible to perform photographing with a camera even at a position away from the camera, by operating the operation means included in the information terminal device. Therefore, since the timing to operate the operation means serves as the photographing timing, a photographer can grasp the photographing timing correctly.

(0013) A switch, a button, and the like, are included in the operation means. Furthermore, the storage means includes memory elements such as RAM (Random Access Memory), EEPROM (Electrically Erasable and Programmable Read Only Memory), flash EEPROM, and the like;

portable storage media such as SmartMedia (registered trademark), CompactFlash (registered trademark), ATA (AT Attachment) card, floppy disks, CD-R (Compact Disc-Recordable), CD-RW (Compact Disc-ReWritable), and magneto-optical discs, and the like; and fixed recording media, such as hard disks, and the like.

(0014) Thus, according to the photographing system as recited in Claim 1, a camera acquires the image information showing an object image, sequentially transmits the acquired image information, and stores in a storage means the image information obtained upon receiving the release instruction information, which is the information for instructing the storage of the obtained image information; and an information terminal device receives the image information transmitted by the camera, displays the image shown by the received image information, and transmits the release instruction information when the operation means operated at the time of transmitting the release instruction information is operated; therefore, a self-portrait of a photographer him/herself can be reliably captured, and the photographing timing can be grasped correctly.

(0015) Existing devices having a display function and a communication function including mobile phones and notebook-type personal computers, and PDAs (Personal Data Assistants), or existing devices that allow built-in electronic boards or IC chips having a display function and a communication function added can be applied as the information terminal device of the present invention; existing cameras having a communication function or existing cameras that allow built-in electronic board or IC chips, that can be added with a communication function can be applied as the camera of the present invention. Thus, this system can be built at low cost by applying existing devices as the information terminal device and the camera of the present invention.

(0016) Furthermore, as in the case of the photographing system as recited in Claim 2, in the invention as recited in Claim 1, the camera preferably has the built-in instruction information receiving means and the image information transmission means, and the information terminal device has the built-in instruction information transmission means and the image information receiving means. In this way, it is possible to configure the camera and the information terminal device according to the present invention to be small in size and to build a user-friendly system.

(0017) In the invention as recited in Claim 1 or 2, the photographing system as recited in Claim 3 is a system wherein the image information transmission means transmits the stored image information stored in the storage means, the camera is further provided with an erasing means for deleting the stored image information transmitted by the image information transmission means from the storage means, and the information terminal device is further provided with a transfer means for transferring to a predetermined transfer destination the stored image information received by the image information receiving means.

(0018) According to the photographing system as recited in Claim 3, with the camera, the stored image information stored in the storage means is transmitted by the image information transmission means, and the transmitted stored image information is deleted from a storage means by the erasing means. In the present invention, with information terminal device, the stored image information received by the image information receiving means is transferred to a predetermined transfer destination by a transfer means.

(0019) Thus, according to the photographing system as recited in Claim 3, it is possible to produce the same effect as that in the invention as recited in Claim 1 or 2. Furthermore, with the camera, the stored image information stored in the storage means is transmitted, and the transmitted stored image information is deleted from a storage means; while with the information terminal device, the stored image information received is transferred to a predetermined transfer destination; therefore, the available storage capacity of the storage means can be increased.

(0020) In the invention as recited in Claim 3, the photographing system as recited in Claim 4 is where the transfer means transmits to the transfer destination the character information on the stored image information upon transferring to a predetermined transfer destination the stored image information received by the image information receiving means.

(0021) According to the photographing system as recited in Claim 4, with the information terminal device, a transfer means transmits to the transfer destination the character information on the stored image information upon transferring to a predetermined transfer destination the stored image information received by the image information receiving means.

(0022) Thus, according to the photographing system as recited in Claim 4, it is possible to produce the same effect as that in the invention as recited in Claim 3. Furthermore, with the information terminal device, the character information on the stored image information is transmitted to the transfer destination upon transferring the received stored image information to a predetermined transfer destination; therefore, the matters pertaining to the stored image information can be presented at the transfer destination.

(0023) On the other hand, to achieve the objective described above, the photographing method as recited in Claim 5 is wherein a camera obtains image information showing an object image, sequentially transmits the obtained image information, and stores in a storage means the image information obtained when release instruction information, which is the information for instructing the storage of the obtained image information is received; and an information terminal device receives the image information transmitted by the camera, displays an image shown by the received image information, and transmits the release instruction information upon the operation of an operation means operated during the transmission of the release instruction information.

(0024) Therefore, according to the photographing method as recited in Claim 5, similar effects as those in the invention as recited in Claim 1 are achieved; therefore, as in the invention as recited in Claim 1, the photographer him/herself can take a self-portrait reliably, and the photographing timing can be grasped correctly.

(0025) In the invention as recited in Claim 5, the photographing method as recited in Claim 6 is where the camera transmits the stored image information stored in the storage means and subsequently delete the transmitted stored image information from the storage means, and the information terminal device transfers the stored image information received to a predetermined transfer destination.

(0026) Therefore, according to the photographing method as recited in Claim 6, the same effect as that in the invention as recited in Claim 5 can be achieved, and the effect similar to that in the invention as recited in Claim 3 can also be achieved; therefore, the available storage capacity of a storage means can be increased in a similar manner as that in the invention as recited in Claim 3.

(0027) Furthermore, in the invention as recited in Claim 6, the photographing method as recited in Claim 7 is where the information terminal device transmits to a transfer destination the character information on the stored image information upon transmitting the received stored image information to a predetermined transfer destination.

(0028) Therefore, since according to the photographing method as recited in Claim 7, the same effect as that of the invention as recited in Claim 6 can be achieved, and a similar effect as that in the invention as recited in Claim 4 can also be achieved, where the matters pertaining to the stored image information can be presented to the transfer destination as in the case in the invention as recited in Claim 4.

(0029) On the other hand, to achieve the objective described above, the camera as recited in Claim 8 comprises an image information acquisition means for obtaining image information showing an object image, an image information transmission means for sequentially transmitting the image information obtained by the image information acquisition means, an instruction information receiving means for receiving the release instruction information, which is the information for instructing the storage of the image information obtained by the image information acquisition means, and a storage means for storing the image information obtained by the image information acquisition means when the instruction information receiving means receives the release instruction information.

(0030) According to the camera as recited in Claim 8, the image information showing an object image is obtained by an image information acquisition means, and the obtained image information is sequentially transmitted by the image information transmission means.

(0031) Therefore, by receiving the image information transmitted by the image information transmission means and displaying the image by the received image information, the object image shown by the image information obtained with the camera can be checked by referring to the display also at the position away from the camera.

(0032) The image information described above also includes motion picture information in addition to still picture information. Transmission of the image information by the image information transmission means includes a transmission by a cable, in addition to wireless transmission, such as transmission by radio waves and infrared rays.

(0033) On the other hand, with the camera of the present invention, when the release instruction information, which is the information for instructing the storage of the image information obtained by the image information acquisition means, is received by the instruction information receiving means, the image information obtained by the image information acquisition means is stored in the storage means.

(0034) That is, the release instruction information is the information for instructing the timing of photographing with the camera of the present invention. Therefore, it is possible to photograph a picture with a camera also at the position away from the camera, by transmitting the release instruction information at the timing one wishes to take a photograph with the camera of the present invention. Therefore, since the timing in which the release instruction information is transmitted serves as the photographing timing, the photographer can grasp the photographing timing correctly.

(0035) The storage means includes storage elements, such as RAM, EEPROM, flash EEPROM, and the like; portable recording media, such as smart media, CompactFlash, an ATA card, floppy disk, CD-R, CD-RW, magneto-optical disc, and the like; and fixed recording media, such as hard disk, and the like.

(0036) Thus, according to the camera as recited in Claim 8, the image information showing an object image is obtained, the obtained image information is sequentially transmitted, and when the release instruction information, which is the information for instructing the storage of the obtained image information, is received, the image information obtained is stored in the storage means; therefore, the photographer him/herself can take a self-portrait reliably, and the photographing timing can be grasped correctly.

(0037) In the invention as recited in Claim 8, the camera as recited in Claim 9 transmits the stored image information stored in the storage means by the image information transmission means, and is further provided with an erasing means for deleting the stored image information transmitted by the image information transmission means from the storage means.

(0038) According to the camera as recited in Claim 9, the stored image information stored in the storage means is transmitted by the image information transmission means, and the transmitted stored image information is deleted from the storage means by the erasing means.

(0039) Thus, according to the camera as recited in Claim 9, the same effect as that in the invention as recited in Claim 8 can be achieved, the stored image information stored in the storage means is transmitted, and the transmitted stored image information is deleted from the storage means; therefore, the available storage capacity in a storage means can be increased.

(0040) On the other hand, the recording media readable by a computer as recited in Claim 10 and Claim 11 are recording media for recording a program having the same effect as those in the invention as recited in Claim 8 and Claim 9 with respect to a camera, and the same effects as those in the invention as recited in Claim 8 and Claim 9 can be achieved by running the program recorded on these recording media. The recording medium includes all media readable by computers, such as storage elements, such as RAM, EEPROM, flash EEPROM, and the like; portable recording media, such as smart media, CompactFlash, ATA card, floppy disk, CD-R, CD-RW, magneto-optical disc, and the like; and fixed recording media, such as a hard disk, and the like.

(0041) Furthermore, the programs as recited in Claim 12 and Claim 13 are programs configured to have the same effect as those in the invention as recited in Claim 8 and Claim 9

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