



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
24.06.2009 Bulletin 2009/26

(51) Int Cl.:
G08B 13/196 (2006.01)

(21) Application number: **08021800.1**

(22) Date of filing: **16.12.2008**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA MK RS

(72) Inventor: **van Schijndel, Joannes Petrus Marinus Cornelis**
2838 Meer (BE)

(74) Representative: **Griebing, Onno**
Octrooibureau Griebing BV,
Sportweg 10
5037 AC Tilburg (NL)

(30) Priority: **17.12.2007 NL 1034830**

(71) Applicant: **Internova Holding BVBA**
2838 Meerle (BE)

(54) **Surveillance system with camera**

(57) A guarding system (1) comprises a user unit (10) and a central reporting station (20).

The user unit comprises:

- a camera (11) connected to internet;
- a controller (12) capable of switching the camera ON and OFF;
- a telephone modem (15) controllable by the controller.

In response to detecting an event, the controller is adapted to have the modem (15) call a pay-number and to switch the camera ON.

The central reporting station comprises:

- a telephone unit (25) associated with the pay-number;
- a controller (22);
- a monitor (21).

The telephone unit is adapted to communicate to the controller information from which the controller can derive the IP-number of the camera.

The controller is adapted to make contact with the camera via internet on the basis of the IP-number thereof, to receive via internet the images provided by the camera, and to display these images on the monitor.

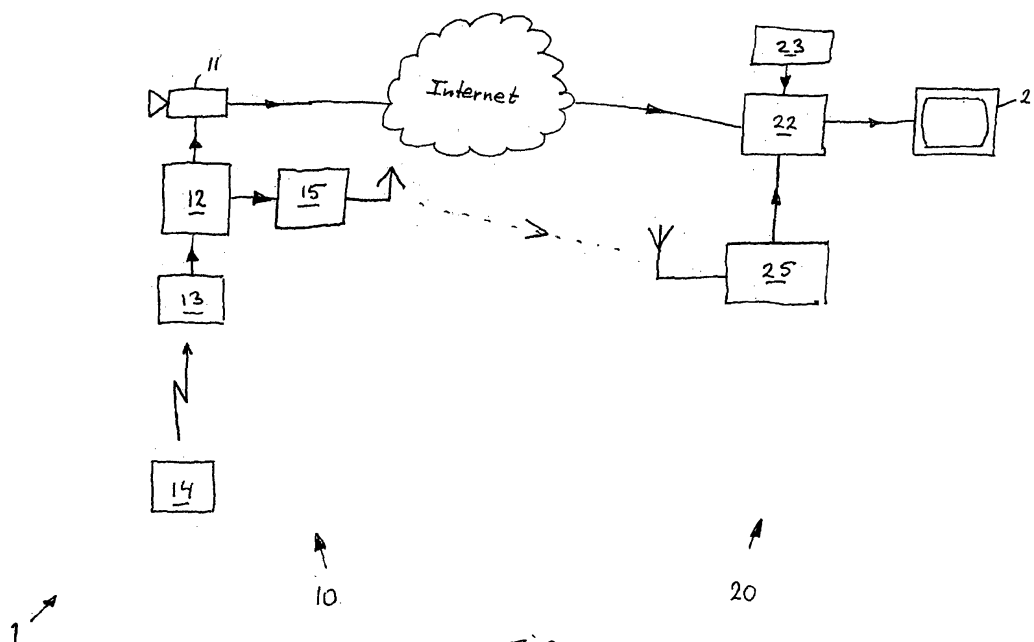


FIG.1

Description

[0001] The present invention relates in general to a guarding system provided with at least one camera, for instance a video camera, for obtaining moving images. Via a communication network, the camera is coupled to a remote central reporting station, where the camera images can be made visible on a screen, and thus can be viewed by an operator. Depending on what the operator sees, he can take action.

[0002] Several application situations are conceivable. For instance, the guarding system may be used for guarding buildings, in order to function as a burglar alarm. However, it is also possible that the system is used for guarding the wellbeing of persons who are in need of assistance, for instance babies or seniors.

[0003] In such a system, the camera may provide images to the central reporting station continuously, but this will usually be considered as an unacceptable breach of privacy, and furthermore takes up the capacity of the communication network and of the personnel of the central reporting station in an excessive manner. Therefore, it is preferred that the camera normally does not transmit any images, and only makes contact with the central reporting station in case of a trigger event being observed. An event which triggers the camera to seek contact with the central reporting station may for instance be an event detected by a sensor, for instance an movement sensor detecting a potential burglary. It is also possible that the camera is continuously on and functions independently as movement detector.

[0004] However, the present invention relates particularly to a social guarding system, which allows seniors to live independently longer. Normally, the camera is off. The user is equipped with a remote control having at least one control button, which will be indicated as "alarm" button. When the user actuates this alarm button, the camera is switched on and the connection with the central reporting station is made. The user actuates the alarm button when he needs assistance, for instance when he has fallen. The operator in the central reporting station sees on the image screen what is going on and takes action. Depending on what is going on, he may for instance warn the police, fire brigade, ambulance, doctor, neighbours, etc. It is also possible that the camera is equipped with loud speaker and microphone, so that the operator can speak to the user and can ask what the problem is.

[0005] In order to assure that the operator can see clear, real time moving images of good quality, a communication connection with high data capacity is needed. An ordinary telephone connection is not suited for this. A connection via internet, typically a DSL connection such as ADSL is suitable.

[0006] Of course, costs are associated with such guarding system. An owner or manager of such system must be able to recover those costs in order to assure continuity of the system.

[0007] One of the possibilities of an economically profitable exploitation involves an invoicing system on the basis of fixed subscription costs per month. In such case, a user always pays a fixed amount per month independent of the use of the system. In other words: a user never requesting assistance pays the same amount as a user requesting much assistance.

[0008] It is desirable to give a variable component, depending on the use, to the financial exploitation of the guarding system. Apart from once-only costs for purchase or fixed costs for rent and/or the subscription to the central station, there is a cost item which is only charged if the user requests assistance, and possibly proportional to the time duration of the contact with the central station.

[0009] If the communication from the camera to the central station would run through a telephone line, it would be relatively simple to charge the costs of the connection via the telephone bill. However, since the communication takes place through an ADSL connection, it is not possible to charge the connection costs in a simple manner. In that case, the central station would have to monitor the contact through the internet connection and should send a separate invoice for the contact, which involves high administrative costs.

[0010] The present invention aims to solve or at least reduce this problem.

[0011] These and other aspects, features and advantages of the present invention will be further clarified by the following description with reference to the drawings, in which same reference numerals indicate same or similar parts, and in which:

figure 1 is a block diagram schematically illustrating a system according to the present invention.

[0012] Figure 1 is a block diagram schematically illustrating a system 1 according to the present invention. The figure shows a user unit 10 and a central reporting station 20. The user unit 10 comprises a camera 11 associated with a controller 12 of which an input is coupled to a receiver 13, as well as a separate remote control 14, which can be worn by a user in the form of for instance a bracelet, necklace, etc. If the user wishes to request assistance, he actuates a button of the remote control 14, which generates an RF signal (or other suitable signal) that is received by the receiver 13. In response, the controller 12 switches on the camera 11.

[0013] According to the invention, the user unit 10 is adapted to first dial a pay-number via a telephone network, for instance a 0900-number. To this end, the user unit 10 is equipped with a modem 15, preferably a wireless modem, for instance a GPS modem. Through the modem 15 activated by the controller 12 and the telephone number selected, the user unit 10 makes contact with a telephone unit 25 of the system manager, which unit 25 is shown as part of the central reporting station 20 but may physically be separated therefrom. It requires

no further explanation that the user pays for the telephone contact with the pay-number, in otherwise usual manner, via his telephone bill. The system manager automatically receives a payment on the basis of contract.

[0014] The central reporting station 20 comprises a monitor 21 with a controller 22, for instance a PC. The controller 22 receives a message from the telephone unit 25 that a call has been received, and that message contains information indicating the telephone number of the user concerned. The controller 22 is provided with a memory 23 containing a database, which database contains a coupling between the telephone number of the user and the IP-number of the camera 11. On the basis of the information in the database, the controller 22 makes contact with the camera 11 and the images of the camera are shown on the monitor 21. Now, there is contact with the operator, via internet, as described in the above.

[0015] In stead of a database in the memory 23, it is also possible that the memory contains a formula allowing the controller to calculate the IP-number from the telephone number. As an alternative, it is possible that the user unit 10 communicates the IP-number in coded form to the telephone unit 25, or the subscriber number of the user, which the controller 22 in turn correlates to the IP-number.

[0016] It will be clear to a person skilled in the art that the invention is not limited to the exemplary embodiments discussed in the above, but that several variations and modifications are possible within the protective scope of the invention as defined in the attached claims. Features which are described only for a certain embodiment are also applicable in other described embodiments.

[0017] In the above, the present invention has been explained with reference to block diagrams, illustrating functional blocks of the device according to the present invention. It may be clear that one or more of these functional blocks may be implemented in hardware, wherein the function of such functional blocks is performed by individual hardware components, but it is also possible that one or more of these functional blocks are implemented in software, so that the function of such functional block is performed by one or more program lines of a computer program or by a programmable device such as a microprocessor, microcontroller, digital signal processor, etc.

Claims

1. Guarding system (1), comprising a user unit (10) and a central reporting station (20);
wherein the user unit (10) comprises:

- a camera (11) connected to internet;
- a controller (12) capable of switching the camera ON and OFF;
- a telephone modem (15) controllable by the

controller;

wherein the controller, in response to detecting an event, is adapted to have the modem (15) call a pay-number and to switch the camera ON;
wherein the central reporting station (20) comprises:

- a telephone unit (25) associated with the pay-number;
- a controller (22);
- a monitor (21);

wherein the telephone unit is adapted to communicate to the controller (22) information from which the controller (22) can derive the IP-number of the camera (11);

and wherein the controller (22) is adapted to make contact with the camera (11) via internet on the basis of the IP-number thereof, to receive the images provided by the camera (11) via internet and to display these images on the monitor (21).

2. Guarding system according to claim 1, wherein the controller (22) is provided with a memory (23) having stored therein data defining a relationship between the said information received from the telephone unit (25) and the IP-number of the camera (11).
3. Guarding system according to claim 2, wherein the memory (23) contains a data base.
4. Guarding system according to any of the previous claims, wherein the information provided to the controller (22) by the telephone unit (25) comprises the telephone number of the telephone modem (15).
5. Guarding system according to any of the previous claims, wherein the user unit (10) comprises a remote control (14) to be controlled by the user, and wherein the said event comprises the actuation of the remote control by the user.

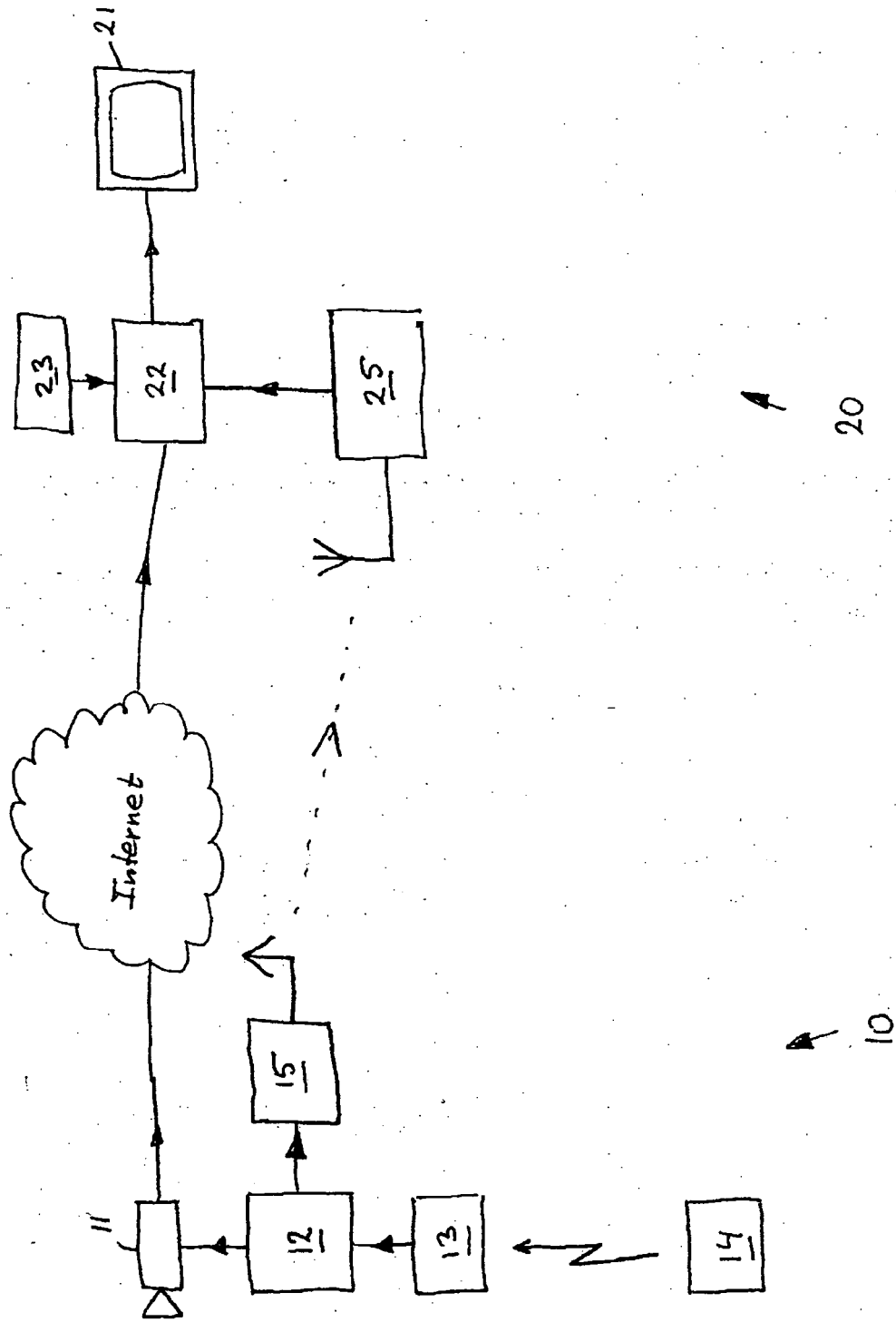


FIG.1