

SECURITY SYSTEM

Field of the invention:

5 The field of the invention is security systems for monitoring the security of specific sites using security personnel. An example of an application of an embodiment of the system is a security system for a site or building.

10 Background to the invention:

It is known to have security personnel patrol a site to monitor site security. Security systems for remotely monitoring buildings or sites using security cameras are
15 also known. In such systems security cameras are typically fixed in strategic positions around a site, for example near doorways in a building, to record any activity in the area. In some cases images captured by the cameras are monitored by security personnel. However,
20 security cameras can only capture activity within view of the camera and for a large site many cameras may be required which represents a significant cost for installing and maintaining the system. Security cameras may also be subject to damage, faults, vandalism and
25 sabotage which can reduce the effectiveness of the security system. Further, security personnel are still required to monitor the captured images and respond to any incidents. Security personnel may also be required to patrol and monitor areas not covered by security cameras
30 and report their patrol route and any incidents. In a known system, proximity card readers are placed at a number of locations throughout the site. Security personnel use the readers to scan a proximity card, such

as a passive radio frequency identification (RFID) card,
to record their patrol through the locations. The data
from the proximity card readers can then be downloaded at
the end of a patrol to log the route taken and approximate
5 times when security personnel were present at different
locations. Proximity card readers can be subject to
damage and faults similar to video cameras. Further since
both video cameras and proximity card readers depend on an
electronic power supply, in circumstances such as power
10 failure or fire these systems may be inoperable unless
provided with independent emergency power.

There is a need for alternative systems for providing
security monitoring services.

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Summary of the invention:

According to one aspect of the present invention there is
provided a security monitoring system comprising:

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a security monitor; and

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at least one mobile communication terminal with a
camera for capturing digital images and adapted to
communicate with the security monitor via the
communication network, whereby in use security personnel
can capture an image of a location within a monitored site
and send a security monitoring message based on the image
to the security monitor, and

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wherein the security monitor is adapted to verify
whether a location for the mobile terminal established
based on the security monitoring message coincides with an
area proximate a location associated with the captured
digital image.

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In some embodiments the system further comprises a
plurality of security images, each security image unique

within the system and associated with a given location of a monitored site, whereby, in use, the security personnel captures a digital image of a security image at a location, and transmits a security monitoring message to the security monitor based on the captured security image.

The location of the mobile terminal can be established based on location data from transmission of the security monitoring message.

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In some embodiments the security monitoring message includes location data for the mobile terminal. The location data can indicate a location of the mobile terminal when the image was captured.

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In some embodiments the location data is communication network service data identifying a service area for the mobile terminal. The communication network service data can include servicing cell data. In this embodiment the location of the mobile terminal can be verified by comparing the servicing cell data with the given location associated with the security image.

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In some embodiments each security image contains coded data. In these embodiments the mobile communication device can be adapted to decode at least a portion of the coded data and transmit the security monitoring message based on the decoded data.

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In one embodiment the security image is a data matrix card.

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In some embodiments of the system the mobile terminal is adapted to recognise a security image in a captured image, and automatically send the security monitoring message to the security monitor. For example, the mobile terminal can be provided with a software application adapted to

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analyse a captured image to recognise a security image, and cause a security message to be sent in response to capturing a security image.

5 In an embodiment of the system two or more security images can be associated with a location and each security image includes coded data providing a different security instruction for each security image.

10 In an alternative embodiment of the system the mobile terminal further comprises global positioning system (GPS) location functionality and the mobile terminal is further adapted to include GPS location data in the security monitoring message.

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According to another aspect of the present invention there is provided a security monitoring method comprising the steps of:

20 capturing a digital image of a location in a monitored site by security personnel using a mobile communication terminal having a camera;

preparing a security monitoring message based on the captured image;

25 transmitting the security monitoring message to a security monitor via a communication network;

establishing a location for the mobile terminal based on the security monitoring message; and

30 verifying whether the location for the mobile terminal established coincides with an area proximate a location associated with the captured digital image.

The method can further comprise the step of providing one or more security images each unique within a security monitoring system and each associated with a given
35 location of a monitored site, whereby security personnel can capture an image of the security image at each location and transmit a security monitoring message to the

security monitor based on the captured security image.

According to another aspect of the present invention there is provided a mobile communication terminal for
5 communication via a mobile communication network and adapted for use in a security monitoring system, the mobile communication terminal comprising:

a camera adapted to capture digital images, whereby, in use, security personnel can capture a digital image of
10 a security image containing coded data and associated with a given location; and

an application program executable on the mobile communication terminal, the application program adapted to:

15 recognise a security image containing coded data in a captured image;

analyse the security image to decode at least a portion of the coded data;

prepare a security monitoring message based on the
20 decoded data; and

transmit a security monitoring message to a security controller via a communication network whereby the security controller can verify whether a mobile terminal location established based on the security monitoring
25 message coincides with a location within an area proximate the given location for the security image.

In one embodiment of the mobile communication terminal, the application is further adapted to include network
30 service area data including cell data as location data in the security monitoring message.

In an alternative embodiment, the mobile communication terminal further comprises as global positioning system
35 (GPS) module and the application program is further adapted record GPS location data when the digital image is captured, and including GPS location data in the security

monitoring message.

Brief description of the drawings:

- 5 An embodiment, incorporating all aspects of the invention,
will now be described by way of example only with
reference to the accompanying drawings in which:

10 Figure 1 illustrates an example of a security monitoring
system.

Figure 2 illustrates an example of a security image.

15 Figure 3 is a flowchart of an example of a security
monitoring process.

Detailed description:

20 One embodiment of a security monitoring system is
illustrated in Figure 1. The security monitoring system
100 includes a security monitor 110 adapted for
communication via a communication network 130 and at least
one mobile communication terminal 120.

25 Each mobile communication terminal 120, 122, 124, 126 has
a camera for capturing digital images and is adapted to
communicate with the security monitor 110 via the
communication network 130. For example a suitable mobile
communication terminal is a mobile phone with a digital
30 camera. Other devices such as network connected palmtop
computers or personal digital assistants (PDAs) with
cameras may also be suitable. The example described uses
a mobile phone with an integrated digital camera as this
is a device which can be conveniently carried and used by
35 security personnel and is a device likely to already be

carried by security personnel on patrol while using prior art security systems.

5 A mobile terminal 120 can be used by security personnel to capture a digital image of a location on the site. The mobile phone 120 can then be used to transmit a security monitoring message to the security monitor 110 via a communication network 130. The security monitor is adapted to establish a location for the mobile terminal 10 120 based on the security monitoring message and determine whether a location associated with the captured image. For example, the security monitoring message can include location data for the mobile terminal 120, or sending location data for the message may be obtained from the 15 communication network by the security monitor. For example the location data may identify the communication network cell 142 servicing the mobile terminal 120 which can be compared with the location identified from the security monitoring message to verify the location of the 20 mobile terminal and hence the security personnel.

The system illustrated in Figure 1 includes security images 111, 112, 113, 114, 115. Each security image 111-115 is unique within the system and is associated with a 25 given location of a monitored site. For example a security image 111-115 may be placed at each entrance to a building. A mobile terminal 120 can be used by security personnel to capture a digital image of a security image 111. The mobile phone 120 can then be used to transmit a 30 security monitoring message based on the security image 111 to the security monitor 110 via a communication network 130. The security monitoring message can include location data for the mobile terminal 120, for example the location data may identify the communication network cell 35 142 servicing the mobile terminal 120.

The security monitor 110 is adapted to verify whether or not the location data indicates a location within an area proximate the given location for the security image. For example, verifying whether the location of security image SI-1 111 is within the cell 142 servicing the mobile terminal 120 sending the security message. As each security image is unique within the system, a location can be associated with each security image, for example in a database or look up table stored in security monitor memory. The locations can also be mapped to data such as network service areas. When the security monitoring message is received, the security monitor can identify the security image the message is based on and look up the location for the security message, this location can then be compared with the location established for the mobile terminal. Where the established location coincides with the location of the security image then the security message is deemed valid and can be processed by the security monitor. However if the established location indicates a location other than the location of the security image, then the security monitor can indicate that the message is invalid and escalate security measures, for example raising an alarm assuming that the invalid message is due to a security breach or attempt to sabotage the security system.

The security monitor 110 can be a network connected server adapted to receive and analyse security monitoring messages. For example, a software application program can be executed on the server for analysing security message data, verifying the location data, and performing any necessary actions, such as raising an alarm. The security monitor may be adapted to operate automatically to perform actions such as raising alarms, contacting emergency services, or instructing actions of security personnel. Such automatic actions may be based on defined rules and security scenarios. Alternatively the security monitor

may be attended by a site supervisor or security overseer. In this embodiment the security monitor can be adapted to display security data based on security monitoring messages to the attendant, for example on a display, 5 whereby the attendant can take or instruct any action required. It should be appreciated that such a system may be adapted to take some actions or perform some analysis of security data automatically and bring information to the attention of the attendant for escalation and human 10 intervention if required.

The location data which is included in the security monitoring message can be network service area data. The locations of the security images can be mapped onto 15 communication network service areas and this mapping data used to verify whether the mobile terminal is in a service area which coincides with a security image location. For example, a mobile terminal 120 is used to capture a digital image of security image SI-1 111, when a security 20 monitoring message based on this security image is transmitted data identifying the servicing cell 142 can be included with the message. This data may be embedded in the message by a application running on the mobile phone or included automatically by the communication network 25 equipment, for example as part of a communication network message header. When the message is received by the security monitor this location data can be read from the message. The security image network mapping data is then looked up and compared with the location data.

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It should be appreciated that location data such as a servicing cell 142 or base station 132 may indicate a relatively large area, depending on the network coverage, and therefore not give a high degree of resolution for 35 verifying the location of a mobile terminal. It is therefore possible that in some embodiments the security monitor can only verify whether the mobile terminal is in

the general area of the security image. For example as illustrated in Figure 1, more than one security image SI-2 112, SI-4 114, SI-5 115 may be located within one cell 146. In this case the location data in a security monitoring message transmitted for security image SI-5 115 by mobile terminal 126 may be the same as location data in a security monitoring message transmitted by mobile terminal 124 for security image SI-2 112 if only the servicing cell 146 or base station 136 is identified in the location data. However, the security monitor will still be able to identify when there is a disparity between the location of the mobile terminal and the security image location and raise an appropriate alarm. For example if a security monitoring message for security image SI-5 115 includes location data identifying an incorrect cell 144.

In some embodiments additional information, such as cell sector data, transmission power or indication of whether a mobile terminal is in a handover zone 150, 152 may also be included with the location data to enable better correlation between the mobile terminal location data and the security image location. For example, a handover region can be included in the mapping data for the location of security image SI-2 112 such that an indication of the service area being either the cell 146 serviced by base station 136 or the cell 144 serviced by base station 134 would give a valid location correlation. Where a handover zone indication can be included in the location data, this may also be checked for a security message transmitted for security image SI-2 112 such that any security message for SI-2 112 sent to base station 136 without a handover zone 150 indication would be considered invalid. As SI-2 112 is located within cell 144 on the boundary of a handover zone with cell 146 it may be possible for a security message for SI-2 112 to be sent with location data indicating cell 144 and not in a

handover zone, depending on the actual location of the mobile terminal 124. It will be appreciated that it is necessary for the security monitor to include a tolerance based on the location data resolution to the verification
5 of the mobile terminal location.

Data such as transmission power may also be used to indicate a position with a cell relative to a base station, which may be mapped against the location of
10 security images. For example, security image SI-4 114 is located closer to the base station 136 than security image SI-5 115 in the same cell 146. It should therefore be appreciated that the signal transmission power required for a security monitoring message for SI-5 115 on the cell
15 boundary will be greater than that for SI-4 114 which is nearer the base station so transmission power data included with the location data may be used to distinguish between the service area for SI-4 114 and SI-5 115.

20 In alternative embodiments where the mobile terminal has accurate positioning capability, such as global positioning system (GPS) functionality, then the mobile terminal may be adapted to record location data, such as GPS coordinates, when the security image is photographed
25 and send these coordinates as location data. This data may then be used to verify the location of the mobile terminal. Communication network service area data may also be used in conjunction with GPS location data in some embodiments, for example in an embodiment where the site
30 is a multi level building and microcells are provided for each level GPS data may not provide the same level of location resolution as the microcell data. It should be appreciated that the location data used may vary depending on the site and communication network topography as well
35 as mobile terminal capabilities. It should be appreciated that the security monitoring system may also be modified based on changes to the communication network topography,

for example addition of further mobile communication network base stations within or proximate a site may require re-mapping of location verification tables based on alterations to cell boundaries etc within the communication network.

In some embodiments security images include coded data which can be decoded by the mobile terminal. For example the mobile terminal may be provided with a software application adapted to decode at least a portion of the coded data from a captured digital image of a security image. For example the security image may be a bar code, number code, a sequence of symbols or semaphore, which can be interpreted based on image and pattern matching by an application executed by the mobile terminal. The mobile terminal may be adapted to interpret all or only part the data coded into the image. For example part of the code may be instructions for preparing the security monitoring message and part of the coded data may be a warning to include in the security monitoring message, which may not be interpreted by the mobile terminal but simply included in the security monitoring message as message data, for interpretation by the security monitor.

An example of a security image in the form of a data matrix card is illustrated in Figure 2. The data matrix card comprises a sequence of light and shaded areas. In this embodiment each line of the matrix can be decoded by pattern matching the light and dark shaded areas. Alternatively the light and dark shading can indicate a bit sequence, where each light area of the matrix grid indicates a LOW data bit and each dark area indicates HIGH data bit. The mobile terminal may be adapted to extract the bit sequence from the captured digital image of the data matrix card and transmit this bit sequence as message data to the security monitor. Once the security message has been verified as a valid message based on the location

data, the security monitor can be adapted to then interpret the bit sequence and perform any necessary action. An advantage of decoding the image data by the mobile terminal and sending a security monitoring message
5 based on the decoded data is that the whole image does not need to be transmitted to the security monitor for interpretation. This reduces the amount of data required for each security monitoring message compared with sending image data, reducing transmission time and data which, in
10 turn, can reduce costs.

The message data can be matched against a sequence of rules such that the data is automatically analysed and appropriate actions taken. For example, a first part of
15 the code may indicate the location of the security image, based on the location it is identified whether the security image is located proximate an internal or external door of a building to determine which set of rules to apply. If the security image is for an external
20 door and includes door state information which indicating the door is open, then based on a rule an alarm may be triggered and a call to police, a building manager or a higher security authority may be made. In this case, where door state information is included, two data matrix
25 cards may be provided for the door and the security personnel trained to capture an image of one data matrix card when the door is open or unlocked and another when the door is locked. Mnemonic triggers such as colours or symbols or location of the data matrix cards may be used
30 to assist in the security personnel selecting the correct data matrix card to capture an image of. For example an OPEN coded card may be placed inside the door and a LOCKED data matrix card on the outside of the door, so the security personnel can only capture an image of the OPEN
35 card and cause an alarm to be raised if the door is not locked.

In an embodiment the mobile terminal is adapted to interpret the security image and perform actions based on rules. For example, an application in the mobile terminal may be programmed with a patrol route and an
5 identification code for each security image for the route. When a security image is captured and a security monitoring message sent, the mobile terminal may also be programmed to verify that the security images are being captured in correct sequence based on the patrol route
10 data. When a security image is captured the mobile terminal can read the identification code for the image and determine whether the code is the next expected code or not and in the case of an unexpected code alert the security personnel to the patrol route error. The patrol
15 route error may also be reported in the security monitoring message for tracking by the security monitor.

In an alternative embodiment an application on the mobile terminal can be adapted to decode the coded data and
20 transmit the security monitoring message based on the decoded data. For example, in a security image may include instructions for the type of location data to be transmitted with the security monitoring message. For example, coded into the security image may be an
25 instruction to send microcell data as well as GPS data where the security image is placed in a multi level building. Whereas without this instruction the mobile terminal would only include GPS data as location data in the security monitoring message.

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In an embodiment the mobile terminal is adapted to recognise whether or not a captured image is a security image and automatically send the security monitoring message to the security monitor. For example, an
35 application on the mobile terminal may be adapted to analyse any image captured to identify characteristics of a security image. For example, distinguish the pattern of

a data matrix card or bar code from a picture of a person and recognise the data matrix or bar code as a security image and continue analysing the security image. Automatically sending the security monitoring message means that only the taking of a photograph is required by the security personnel to send the message, this can be quick and convenient for the security personnel and can avoid omitting sending monitoring messages after capturing a security image. In another embodiment the security personnel may be asked a question to trigger sending of a security monitoring message, such as "Is this location all clear?" an answer of YES will cause the message to be sent with and all clear message in the message data and an answer of NO will cause sending of a security monitoring message with a security warning in the message data to trigger an alarm at the monitoring service.

In an embodiment two or more security images are associated with a location and each security image includes coded data providing a different security instruction for each security image. For example, a first security image can indicate everything is in order, a second security image can include an instruction that security backup is required and another security image can indicate a fire. The security person can capture an image of the appropriate security image and the security monitor will respond with the appropriate action when the message is received.

An example of a security monitoring process is illustrated in the flowchart of Figure 3 for a site provided with security images each associated with a given location. While on patrol at each location a security guard captures a digital image of a security image using a mobile communication terminal camera 310. Location data for the mobile terminal may also be recorded 315 when a photograph of a security image is taken. For example taking a

photograph may trigger recording GPS coordinates for the mobile terminal or recording service area data. In an embodiment where a security message is automatically sent, this step may be omitted and location data be based on a message sending location. However, where there may be a significant delay between the capture of a security image and sending a security message, location data may be recorded, such that location data relevant to the location of the security image can be sent even if the mobile terminal has changed location.

The captured image can be analysed 320 to recognise whether the captured image is a security image or not 325. Where a captured image is a security image, a security message is prepared 330 based on the captured security image. The security monitoring message includes location data for the mobile terminal and optionally coded data from the security image. The prepared security monitoring message is then transmitted 315 to a security monitor via a communication network. For example the message may be transmitted using known messaging technology such as a Short Message Service (SMS) or enhanced messaging service (EMS) message. Alternatively a data connection may be established via the communication network between the mobile terminal and the security monitor for transmission of the security monitoring message data.

The security monitor receives the security message 340 and reads the location data 350 included in the message and any other security message data 355 such as an all clear message or a warning. The security monitor uses the location data to verify the location of the mobile terminal 360. For example by comparing location data read from the message with security image location mapping to determine whether the location data for the mobile terminal indicates a location within an area proximate the given location for the security image 365. If the

location data is within an area mapped as proximate the security image location based on the location data, then the security message is deemed valid 370 and the security monitor will continue to process the message 375. For example, where a message is deemed valid the security monitor can continue to analyse any message data and perform an appropriate action, such as call for police if the security message data indicates a break in or vandalism. In some embodiments the security monitor may respond back to the security personnel with instructions or information. For example, in the case of vandalism the security monitor may request a photograph be taken of the damage and transmitted to the security monitor for insurance purposes or for forwarding to police. In another example, where the security personnel has sent a security message indicating a fire has broken out, a message may be returned to the security personnel indicating that the fire brigade has been called to attend. It should be appreciated that these instructions may be generated automatically by the security monitor in response to analysing the security monitoring message or alternatively may be controlled by a site supervisor attending the security monitor, based on the security data.

Where the location data included in the security monitoring message does not coincide with the location associated with the security image 365, for example if the location data indicates an incorrect network service area or is outside a tolerance range for GPS coordinates for the security image, then the security message is deemed invalid 380. This can trigger further action, for example an invalid message may cause an alarm to be raised 390.

In an alternative embodiment an invalid message may trigger further action, such as a check with a network operator to determine whether a network disturbance has

cause a temporary change in service areas which may require re-mapping for service areas to security image locations and a re-verification of the security monitoring message. The security monitor may be adapted to interact
5 with a communication network server to dynamically update location mapping in response to network service area changes to minimise falsely identifying security monitoring messages as invalid.

10 It should be appreciated that the security images do not require a power supply, for example the security images can simply be printed cards or tiles, and as the mobile communication network is independent of the site, the security monitoring system can be implemented quickly and
15 can be easily modified. Minimal infrastructure change is required for a site to install the monitoring system as security images are simply installed in relevant locations. For example, sticking a data matrix cards to doors or walls, and programming the locations for each
20 card in a look up table or database in the security monitor. Security personnel can then simply be supplied with mobile terminals adapted to send security monitoring messages to the security monitor in response to photographing a security image. The security system as an
25 advantage of being easily modified, simply be updating security images and location mapping, in response to any site changes or alterations in security procedures.

In the claims which follow and in the preceding
30 description, except where the context requires otherwise due to express language or necessary implication, the word "comprise" or variations such as "comprises" or "comprising" is used in an inclusive sense, i.e. to specify the presence of the stated features but not to
35 preclude the presence or addition of further features in various embodiments of the invention.

It is to be understood that, if any prior art publication
is referred to herein, such reference does not constitute
an admission that the publication forms a part of the
5 common general knowledge in the art, in any country.

Claims:

1. A security monitoring system comprising:
a security monitor; and
5 at least one mobile communication terminal with a camera for capturing a digital image of a location within a monitored site, said terminal being adapted to communicate with the security monitor via a communication network and to send a security monitoring
10 message based on the captured image to the security monitor and provided with location data indicative of a terminal location;
wherein the system is adapted to determine the location within the monitored site from the captured
15 image, and the security monitor is adapted to verify whether said terminal location coincides with the location determined from the captured image.
2. A security monitoring system as claimed in claim 1
20 further comprising a plurality of security images, each security image unique within the system and associated with a given location of a monitored site, whereby, in use, security personnel captures a digital image of a security image at a location, and transmits a security
25 monitoring message to the security monitor based on the captured security image.
3. A security monitoring system as claimed in claim 2
30 wherein the security monitoring message is provided with the location data during transmission of the security monitoring message to the security monitor.
4. A security monitoring system as claimed in claim 2
35 wherein the security monitoring message includes the location data for the mobile terminal.

5. A security monitoring system as claimed in claim 4 wherein the location data indicates a location of the mobile terminal when the image was captured.
- 5 6. A security monitoring system as claimed in claim 3, wherein the location data is communication network service data identifying a service area for the mobile terminal.
- 10 7. A security monitoring system as claimed in claim 6 wherein the communication network service data includes servicing cell data.
- 15 8. A security monitoring system as claimed in claim 7 wherein the location of the mobile terminal is verified by comparing the servicing cell data with the given location associated with the security image.
- 20 9. A security monitoring system as claimed in claim 2 wherein each security image contains coded data.
- 25 10. A security monitoring system as claimed in claim 9 wherein the mobile terminal is adapted to decode at least a portion of the coded data and transmit the security monitoring message based on the decoded data.
- 30 11. A security monitoring system as claimed in claim 9 wherein the security image is a data matrix card.
- 35 12. A security monitoring system as claimed in claim 2 wherein the mobile terminal is adapted to recognise a security image in a captured image, and automatically send the security monitoring message to the security monitor.
13. A security monitoring system as claimed in claim 12 wherein the mobile terminal is provided with a software

application adapted to analyse a captured image to recognise a security image, and cause a security message to be sent in response to capturing a security image.

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14.A security monitoring system as claimed in claim 9 wherein two or more security images are associated with a location and each security image includes coded data providing a different security instruction for each security image.

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15.A security monitoring system as claimed in claim 1 wherein the mobile terminal further comprises global positioning system (GPS) location functionality and the mobile terminal is further adapted to include GPS location data in the security monitoring message.

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16.A security monitoring method comprising the steps of:

capturing a digital image of a location within a monitored site using a mobile communication terminal having a camera;

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preparing a security monitoring message based on the captured image and provided with location data indicative of a terminal location of said terminal;

transmitting the security monitoring message to a security monitor via a communication network;

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determining the location within the monitored site from the captured image; and

the security monitor verifying whether the terminal location coincides with the location determined from the captured image.

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17.A security monitoring method as claimed in claim 16 further comprising the step of providing one or more security images each unique within a security monitoring system and each associated with a given location of a monitored site, whereby security

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personnel can capture an image of the security image at each location and transmit a security monitoring message to the security monitor based on the captured security image.

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18.A security monitoring method as claimed in claim 17 including providing the security monitoring message with the location data during transmission of the security monitoring message.

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19.A security monitoring method as claimed in claim 17 wherein the security monitoring message includes the location data for the mobile terminal.

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20.A security monitoring method as claimed in claim 19 wherein the location data indicates a location of the mobile terminal when the image was captured.

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21.A security monitoring method as claimed in claim 18, wherein the location data is communication network service data identifying a service area for the mobile terminal.

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22.A security monitoring method as claimed in claim 21 wherein the communication network service data includes servicing cell data.

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23.A security monitoring method as claimed in claim 22 wherein the location of the mobile terminal is verified by comparing the servicing cell data with the given location associated with the security image.

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24.A security monitoring method as claimed in claim 17, wherein each security image includes coded data and further comprising the step of decoding at least part of the coded data and preparing the security monitoring message based on the decoded data.

25.A security monitoring method as claimed in claim 24 wherein the security image is a data matrix card.

5 26.A security monitoring method as claimed in claim 17 wherein the mobile terminal is adapted to recognise a security image in a captured image and automatically send the security monitoring message to the security monitor.

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27.A security monitoring method as claimed in claim 17, wherein the mobile communication device further comprises global positioning system (GPS) functionality, the method further comprising the step
15 of recording GPS location data when the digital image is captured, and including GPS location data in the security monitoring message.

28.A mobile communication terminal for communication via a
20 mobile communication network and adapted for use in a security monitoring system, the mobile communication terminal comprising:

25 a camera adapted to capture digital images, whereby, in use, security personnel can capture a digital image of a security image containing coded data and associated with a given location; and

an application program executable on the mobile communication terminal, the application program adapted to:

30 recognise a security image containing coded data in a captured image;

analyse the security image to decode at least a portion of the coded data;

35 prepare a security monitoring message based on the decoded data; and

transmit the security monitoring message to a security controller via a communication network

whereby the security controller can verify whether the terminal location determined from location data with which the security monitoring message is provided coincides with a location within an area proximate the given location for the security image.

29. A mobile communication terminal as claimed in claim 28, wherein the application is further adapted to include network service area data including cell data as the location data in the security monitoring message.

30. A mobile communication terminal as claimed in claim 28, wherein the mobile communication device further comprises a global positioning system (GPS) module and the application program is further adapted to record GPS location data when the digital image is captured, and including GPS location data in the security monitoring message.