

System and Method for Responding to a Page during a Communication Restriction

Field of the Application

The application relates generally to wireless
5 communication, and more particularly to responding to pages.

Background

A wireless network such as a UMTS (Universal
Mobile Telecommunications System) network implements access
class barring in order to control the communication load on
10 the network. The Access Class indicates the type of access
that is permitted by the wireless network. Typically, there
are 16 access classes available including 10 access classes
for normal operation and 6 access classes for other
operation such emergency communication or police
15 communication. Access class for normal operation is
typically pre-assigned in a random manner from a pool of 10
classes and stored on a SIM (Subscriber Identity Module) or
USIM (Universal Subscriber Identity Module).

To reduce a high communication load on the
20 network, the network may, for example, bar three access
classes of the 10 access classes for normal users. UMTS
wireless devices that have an RRC (Radio Resource Control)
connection with the network and belong to any of the three
barred access classes will not lose their RRC connection as
25 a result of the three access classes being barred. However,
each wireless device that are in the RRC idle mode, i.e.
does not have an RRC connection with the network, and
belongs to any of the three barred access classes will not
be able to establish an RRC connection. Normally, a UMTS
30 wireless device requests an RRC connection by sending an RRC
CONNECTION REQUEST to the network; however, according to the
3GPP (3rd Generation Partnership Project) specification

TS25.304, the wireless device is not allowed to send the RRC CONNECTION REQUEST when its access class has been barred. A wireless device uses an RRC connection with the network to access services provided by the network. Therefore, barring
5 the three access classes decreases the communication load on the network by preventing wireless devices from establishing RRC connections with the network. The three access classes may become unbarred at some later time when the communication load on the network has decreased or the
10 network decides to unbar such classes for whatever reasons (e.g. network may allow access classes that were barred and decide to bar new access classes to balance the load).

On an ongoing basis, the network transmits system information using broadcast messages of type 3 over a
15 broadcast channel. The system information includes information of access classes that are barred so that the wireless devices are aware of whether their access classes have been barred. Accordingly, each wireless device in RRC idle mode is aware of whether it is allowed to send an RRC
20 CONNECTION REQUEST to the network to establish an RRC connection.

When a wireless device that does not have an RRC connection and belongs to an access class that has been barred receives a page, the wireless device is not allowed
25 to respond to the page. While this reduces the communication load on the network, it can be a problem if the page is for an important mobile terminated call, such as a call-back from an emergency call centre. For example, a user may have initiated an emergency call, this being
30 allowed as long as the access class 10 is not barred. However, emergency call centre will not be able to call the user if the wireless device enters RRC idle mode after the emergency call ends.

WO-A-2004/072784 discloses a system for priority call back during access class restrictions in which if access class 10 is allowed, a wireless device can make a call and receive a call back from an emergency service
5 centre. This disclosure does not deal with responding to communications by a wireless device when communication restrictions are in place.

Summary

According to one broad aspect, the application
10 preferably provides a method in a wireless device, the wireless device operating within a wireless network, the method comprising: receiving a communication from the wireless network; determining whether a communication restriction has been imposed by the network to restrict
15 responding to the communication; and in the event of the communication restriction: a) determining whether the communication should be responded to notwithstanding a communication restriction; and b) responding to the communication notwithstanding the communication restriction
20 if so determined.

According to another broad aspect, the application preferably provides a wireless device comprising: a wireless access radio adapted to communicate with a wireless network; and a communication response function adapted to: determine
25 whether a communication restriction has been imposed by the network to restrict responding to the communication; and in the event of the communication restriction: a) determine whether the communication should be responded to notwithstanding a communication restriction; and b) respond
30 to the communication notwithstanding the communication restriction if so determined.

According to another broad aspect, the application preferably provides a method comprising: imposing a communication restriction to restrict a wireless device from responding to a communication; transmitting information for
5 the wireless device to determine whether a communication should be responded to notwithstanding the communication restriction; transmitting the communication.

In some embodiments, the message may be a system information message.

10 In some embodiments, the communication may comprise an importance indication; and determining whether the communication should be responded to notwithstanding a communication restriction is based on the importance indication and whether the communication is received within
15 the defined time period after transmitting the important communication.

In some embodiments, the method may further comprise: starting a timer after transmitting the important communication, the timer expiring after the defined time
20 period; wherein determining whether the communication is received within the defined time period comprises determining whether the timer is still running when the communication is received.

25 **Brief Description of the Drawings**

Embodiments will now be described with reference to the attached drawings in which:

Figure 1 is a schematic drawing of an example wireless communication system;

30 Figure 2 is a flowchart of an example method of responding to a page;

Figure 3 is a flowchart of an example method of determining whether a communication restriction has been imposed;

Figures 4 to 6 are flowcharts of example methods of determining whether the page should be responded to notwithstanding a communication restriction;

Figure 7 is a flowchart of another example method of responding to a page;

Figure 8 is a flowchart of an example method of starting a timer upon receipt of an alerting message;

Figure 9 is a flowchart of an example method of receiving and processing a response to the page;

Figure 10 is a flowchart of an example method of imposing a communication restriction;

Figures 11 is a flowchart of an example method of indicating whether the page should be responded to notwithstanding a communication restriction; and

Figure 12 is a flowchart of an example method of indicating a page should be responded to notwithstanding a communication restriction.

Detailed Description of Embodiments

Wireless Communication System

According to one broad aspect, the application provides a method in a wireless device, the wireless device operating within a wireless network, the method comprising: receiving a communication from the wireless network; determining whether a communication restriction has been imposed by the network to restrict responding to the communication; and in the event of the communication restriction: a) determining whether the communication should

be responded to notwithstanding a communication restriction; and b) responding to the communication notwithstanding the communication restriction if so determined.

According to another broad aspect, the application
5 provides a wireless device comprising: a wireless access
radio adapted to communicate with a wireless network; and a
communication response function adapted to: determine
whether a communication restriction has been imposed by the
network to restrict responding to the communication; and in
10 the event of the communication restriction: a) determine
whether the communication should be responded to
notwithstanding a communication restriction; and b) respond
to the communication notwithstanding the communication
restriction if so determined.

15 According to another broad aspect, the application
provides a method comprising: imposing a communication
restriction to restrict a wireless device from responding to
a communication; transmitting information useful for the
wireless device to determine whether a communication should
20 be responded to notwithstanding the communication
restriction; transmit the communication.

In some embodiments, the message is a system
information message.

In some embodiments, the communication comprises
25 an importance indication; and determining whether the
communication should be responded to notwithstanding a
communication restriction is based on the importance
indication and whether the communication is received within
the defined time period after transmitting the important
30 communication.

In some embodiments, the method further comprises:
starting a timer after transmitting the important
communication, the timer expiring after the defined time

period; wherein determining whether the communication is received within the defined time period comprises determining whether the timer is still running when the communication is received.

5 Referring now to Figure 1, shown is a schematic drawing of an example wireless communication system. The wireless communication system has a network 15 coupled to a wireless device 10 via a wireless connection 14, an emergency call center 19 via coupling 20, and other wireless
10 devices 17 via other wireless connections 18. The wireless device 10 has a processor 13 coupled to a wireless access radio 11 and a page response function 12. The wireless device 10 may have other components, but they are not shown for sake of simplicity. The other wireless devices 17 may
15 have similar components to that shown for the wireless device 10. The network 15 has a paging function 16 and may also have other components, but they are not shown for sake of simplicity. The wireless communication system may have other components, but they are not shown for sake of
20 simplicity.

 Note that while the figures and description refer to the transmission of a page with paging function 16 and responding thereto with page response function 12, more generally, some embodiments are applicable to the
25 transmission of a communication from the network and the response thereto during a communication restriction. In such embodiments, a communication function and communication response function would replace paging function 16 and paging response function 12 respectively.

30 In operation, the wireless device 10 is adapted to communicate with the network 15 over the wireless connection 14 using its wireless access radio 11. The communication may for example be with one of the other wireless devices 17

or the emergency call center 19. If the communication is initiated by another party, for example the emergency call center, then the network transmits a page to the wireless device 10 to initiate the communication. A response to the
5 page allows communication between the wireless device 10 and the other party to begin.

In some instances, the network 15 imposes a communication restriction that restricts the wireless device 10 from accessing the network, and this includes restricting
10 the wireless device 10 from responding to the page. The restriction may be imposed by the network for example to reduce or balance the communication load on the network. The restriction may for example be access class barring. While the network imposes access class barring to control
15 communication load on the network, it can be a problem if the page for a mobile terminated call is of high importance, such as a call-back from an emergency call center. Therefore, there is a need to allow the wireless device to establish a connection with the network so that it may
20 respond to important calls despite its access class being barred.

According to an aspect of the application, the page response function 12 implements functionality for the wireless device 10 to respond to the page notwithstanding
25 the communication restriction if the page has been determined to be of high importance. Therefore, important communication is enabled during the communication restriction while unimportant communication remains restricted. Further example details are provided with
30 reference to Figures 2 through 8. According to another aspect of the application, the paging function 16 implements functionality for the network 15 to receive and process a response to the page from the wireless device 10

notwithstanding the communication restriction. Further example details are provided with reference to Figures 9 through 12.

It is to be understood that references to communication as being important or of high importance does not necessarily mean that the communication is in fact an important communication. Instead, it refers to communication that has been determined to be important according to one or more criterion. While the one or more criterion is designed so as to accurately identify important communication from other communication, it may be possible that an unimportant communication is erroneously determined to be important. There are many possibilities for the one or more criterion. Examples are provided below.

In some implementations, the page response function 12 is software implemented and is executed on the processor 13. However, more generally, the page response function 12 may be implemented as software, hardware, firmware, or any appropriate combination thereof. While the page response function 12 is shown as part of the wireless device 10, more generally it may be implemented on one or more wireless devices of the wireless communication system. In some embodiments, all of the wireless devices of the wireless communication system have such a page response function.

In some implementations, paging function 16 is software implemented and is executed on a processor (not shown). However, more generally, the paging function 16 may be implemented as software, hardware, firmware, or any appropriate combination thereof. Although shown as a single component, more generally, the paging function 16 may have one or more components. The one or more components may be

distributed throughout the network 15 or located on a single network element. The one or more components may be integrated with other components of the network 15.

In some implementations, the network 15 is a UMTS
5 (Universal Mobile Telecommunications System) network.

However, more generally, the network 15 may be any appropriate network such as a UMTS network, a GSM network, or a CDMA network.

Methods of Responding to a Page

10 Referring now to Figure 2, shown is a flowchart of an example method of responding to a page. This method may be implemented in a wireless device, for example by the page response function 12 of the wireless device 10 shown in Figure 1. At step 2-1, the wireless device receives a page
15 from the wireless network. At step 2-2, the wireless device determines whether a communication restriction has been imposed by the network to restrict responding to the page. At step 2-3, in the event of the communication restriction, the wireless device determines whether the page is of high
20 importance and responds to the page notwithstanding the communication restriction if the page has been determined to be of high importance.

There are many ways that the wireless device can transmit the response to the page. In some implementations,
25 the wireless device establishes a connection to the network and transmits the response to the page over the connection. In specific implementations, the connection is an RRC (Radio Resource Control) connection and establishing the RRC connection involves transmitting an RRC CONNECTION REQUEST
30 message. Other implementations are possible.

There are many ways that the wireless device can determine if a communication restriction has been imposed by the network to restrict responding to the page. Referring

now to Figure 3, shown is a flowchart of an example method of determining whether a communication restriction has been imposed. This method may be implemented in a wireless device, for example by the page response function 12 of the wireless device 10 shown in Figure 1. At step 3-1, the wireless device receives a system information message having an indication of any access class that has been barred. Such messages are broadcast on an ongoing basis by the network over a predefined frequency. At step 3-2, the wireless device determines whether the system information message indicates the access class to which the wireless device belongs has been barred. If the wireless device belongs to an access class that has been barred and the wireless device is in an idle mode, then the wireless device is restricted from transmitting and receiving communications.

In some implementations, while the access class of the wireless device is barred the wireless device can transmit communications using another access class other than the access class to which the wireless device belongs. For example, in some implementations, the wireless device can transmit communications to an emergency call center using an emergency access class. Typically, the emergency access class is not barred so as to allow emergency communication as much as possible. Therefore, when the wireless device belongs to an access class that has been barred and the wireless device is in an idle mode, the wireless device can still make an emergency call using the emergency access class.

In some instances, the user of the wireless device calls the emergency call center, but for whatever reason the user is not able to complete their communication. For example, the wireless connection between the wireless device

and the wireless network may be poor and become inoperable during their conversation. Therefore, the call terminates prematurely. In such a scenario the operator at the emergency call center may attempt to call back the user of the wireless device. As another example, the user is not able to speak directly with an operator and instead leaves a voice message. In such a scenario, an operator may attempt to call back the user of the wireless device.

The call-back from the emergency call center is a mobile terminated call involving the network transmitting a page to the wireless device to setup the call. However, in some implementations, the page is transmitted using the access class to which the wireless device belongs and not the emergency access class. In some implementations call-back from the emergency call center is not indicated in the paging message. Accordingly, the wireless device is restricted in responding to the page. The wireless device is restricted regardless of whether the access class to which the wireless device belongs is barred before or after the initial call to the emergency call centre. This is an example of an important communication to which the wireless device might be permitted to respond using the methods described herein.

There are many ways that the wireless device can determine whether the page should be responded to notwithstanding a communication restriction. Referring now to Figures 4 to 6, shown are flowcharts of example methods of determining whether the page should be responded to notwithstanding a communication restriction. Any one or more of these methods may be implemented in a wireless device, for example by the page response function 12 of the wireless device 10 shown in Figure 1.

Referring first to Figure 4, at step 4-1 the wireless device receives the page from the wireless network with information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. At step 4-2, the wireless device determines whether the page should be responded to notwithstanding a communication restriction based on the information.

There are many possibilities for the information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. In some implementations, the information contains an importance indication if the page should be responded to notwithstanding a communication restriction. Accordingly, the wireless device can determine whether the page should be responded to notwithstanding a communication restriction based on the importance indication. In other implementations, the information contains timer information indicating how long after a previous important communication to consider subsequent communications important. The timing information can be used by the wireless device to infer that the page is related to the previous communication. Specific examples of this approach are detailed below.

There are many ways that the page can be provided with the information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. In a specific example, an importance indication is represented by a single bit within the page. Accordingly, the wireless device decodes the single bit to determine whether the page should be responded to notwithstanding a communication restriction. Other implementations are possible.

Referring now to Figure 5, shown is a flowchart of another example method of determining whether the page should be responded to notwithstanding a communication restriction. At step 5-1 the wireless device receives a message from the wireless network with information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. The message having the information is separate and distinct from the page. At step 5-2, the wireless device determines whether the page should be responded to notwithstanding a communication restriction is based on the information.

There are many possibilities for the message. In some implementations, the message is a system information message that conveys common information to all the wireless devices. Other implementations are possible.

There are many ways that the message can be provided with the information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. In a specific example, timing information is represented by a plurality of bits within the message. The information can be conveyed by the wireless network, for example in a system information message. Accordingly, the wireless device decodes the plurality of bits to determine the timing information. Other implementations are possible.

Referring now to Figure 6, shown is a flowchart of yet another example method of determining whether the page should be responded to notwithstanding a communication restriction. At step 6-1 the wireless device transmits an important communication to the network before receiving the page. At step 6-2, the wireless device determines whether the page should be responded to notwithstanding a

communication restriction based on whether the page is received within a defined time period after transmitting the important communication.

There are many possibilities for the important communication. The important communication may for example be communication with an emergency call center. Other possibilities exist. In some embodiments, the wireless device maintains a record of emergency numbers such as 911 and compare the number called against the maintained record to determine if the communication is important.

There are many possibilities for the defined time period. In some implementations, the defined time period is designed as appropriate so that the wireless device may reasonably infer that the page is in response to the important communication. In some implementations, the defined time period is dynamic. In other implementations, the defined time period is static. In specific implementations when a network-defined time period is not available, the defined time period can be predefined on the mobile device e.g. 60 seconds. Other implementations are possible.

There are many ways to determine whether the page is received within the defined time period after transmitting the important communication. In some implementations, a timer is started after completing the important communication such that the timer expires upon the defined time period. If the timer is running, then there has been important communication in the past defined time period. If the timer is not running, then there has not been important communication in the past defined time period. It is to be understood that the use of a timer in this manner is a very specific implementation for example purposes only. Other implementations with or without the

use of a timer are possible. Examples have been provided above in which the wireless device receives timing information from the network.

Referring now to Figure 7, shown is a flowchart of another example method of responding to a page. This method may be implemented in a wireless device, for example by the page response function 12 of the wireless device 10 shown in Figure 1. It is to be understood that the example method is very specific for example purposes only.

10 If at step 7-1 the wireless device receives a page, then at steps 7-2 through 7-4 the wireless device determines whether to discard the page at step 7-5 or respond to the page at step 7-6. If at step 7-2 the wireless device's access class is not barred, then at step 15 7-6 the wireless device responds to the page. Otherwise, at step 7-3 the wireless device determines whether there is an importance indication in the page. If there is an importance indication indicating that the page is important, then at step 7-6 the wireless device responds to the page. 20 Otherwise, at step 7-4 the wireless device determines if a timer, T_{ecb} (timer for emergency call backer), is running. The timer T_{ecb} is started after completion of important communication and expires after a defined time period. Therefore, if T_{ecb} is still running, then the page has been 25 received within the defined time period after the important communication. If T_{ecb} is running, then at step 7-6 the wireless device responds to the page. Otherwise, the wireless device discards the page at step 7-5. This allows the mobile device to respond to callers outside of the 30 emergency call centre in an emergency situation.

There are many ways that the timer T_{ecb} can be started. Referring now to Figure 8, shown is a flowchart of an example method of starting the timer upon receipt of an

alerting message. This method may be implemented in a wireless device, for example by the page response function 12 of the wireless device 10 shown in Figure 1. It is to be understood that the example method is very specific for
5 example purposes only.

At step 8-1, the wireless device stops the timer T_{ecb} if it is running. T_{ecb} is started after the most recent emergency call being made. The timer will already be running when processing a current emergency call if the user
10 calls two emergency call numbers in a short period. At step 8-2, the wireless device places an emergency call, for example to an emergency call centre. As previously described, there may be situations in which the emergency call ends prematurely. At step 8-3, an ALERTING message may
15 be received that indicates that the receiving side (e.g. the emergency call centre) has received a call setup request and is ringing the caller. More generally, any form of acknowledgement from the network that enables the device to determine that network was made aware of emergency
20 call/attempt is contemplated, for example as RRC connection setup in response to RRC connection request with establishment cause = "Emergency Call". If at step 8-4 the wireless device receives an ALERTING message, then the timer T_{ecb} is to be started. The timer T_{ecb} is started with an
25 initial value that depends on whether a value is received in a system information message. If at step 8-4 the wireless device receives a value for the timer T_{ecb} , then at step 8-5 the timer T_{ecb} is started with the value specified in the system information message. In this manner, the network has
30 provided timing information for the wireless device to determine a time window during which a received page can be responded to notwithstanding whether there is a communication restriction to restrict responding to the

page. However, if the value for the timer T_{ecb} is not received in a system information message, then at step 8-6 the wireless device starts the timer T_{ecb} with a default value. The default value may for example be 60 seconds. In 5 this manner, the wireless device determines a default time window during which a received page can be responded to notwithstanding whether there is a communication restriction to restrict responding to the page.

10 Methods of Paging

Referring now to Figure 9, shown is a flowchart of an example method a network participating in allowing a wireless device to respond to a page notwithstanding a communication restriction. This method may be implemented 15 in a network, for example by the paging function 16 of the network 15 shown in Figure 1. At step 9-1, the network imposes a communication restriction to restrict the wireless device from responding to the page. Alternatively, the communication restriction can be imposed before the page is 20 transmitted or at the same time the page is transmitted. At step 9-2, the network transmits a page to the wireless device with information useful for the wireless device to determine whether the page should be responded to notwithstanding the communication restriction. There are 25 many ways that the network can impose a communication restriction to restrict the wireless device from responding to the page for the communication restriction. Referring now to Figure 10, shown is a flowchart of an example method of imposing a communication restriction. This method may be 30 implemented in a network, for example by the paging function 16 of the network 15 shown in Figure 1. At step 10-1, the network bars an access class to which the wireless device belongs while the wireless device is in an idle mode. The

wireless device may or may not be in the idle mode when the access class to which the wireless device belongs is initially barred. However, once the wireless device is the idle mode while its access class is being barred, then the
5 wireless device's ability to establish a connection with the network is restricted. Therefore, the wireless device is restricted from responding to the page.

Restricting the wireless device's ability to respond to the page reduces the communication load on the
10 network. However, if the page should be responded to notwithstanding a communication restriction, then the wireless device is able to respond to the page. In some implementations, the network transmits information to the wireless device that is useful for the wireless device to
15 determine whether the page should be responded to notwithstanding a communication restriction. In other implementations, the network does not transmit such information to the wireless device. Accordingly, the wireless device determines whether the page should be
20 responded to notwithstanding a communication restriction without the information from the network. In some implementations, the network transmits such information in certain circumstances while not transmitting the information in other circumstances. Such circumstances could be for
25 example whether the network has such information available.

There are many ways that the network can provide the wireless device with the information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction.
30 Referring now to Figure 11, shown is a flowchart of an example method of providing information useful for the wireless device to determine whether a page should be

responded to notwithstanding a communication restriction. This method may be implemented in a network, for example by the paging function 16 of the network 15 shown in Figure 1.

Referring first to Figure 11, at step 11-1, the
5 network imposes a communication restriction to restrict the wireless device from responding to the page. Alternatively, the communication restriction can be imposed before the page is transmitted or at the same time the page is transmitted. At step 11-2 the network transmits a message to the wireless
10 device with information useful for the wireless device to determine if a subsequent page should be responded to notwithstanding a communication restriction. The message may for example be a system information message. There are many ways that the message can be provided with the
15 information useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. Examples have been provided above and are therefore not repeated.

There are many possibilities for the information
20 useful for the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. In some implementations, if the network determines that the page should be responded to notwithstanding a communication restriction, then the
25 information contains an importance indication indicating that the page should be responded to notwithstanding a communication restriction. In other implementations, the information contains timing information indicating a time period following a previous import communication within
30 which communications from the wireless device are to be permitted. Therefore, if the wireless device has recently transmitted important communication, then the timing

information will indicate this and the wireless device may infer that the page is related to the important communication. Other implementations are possible.

There are many ways that the network can determine if the page should be responded to notwithstanding a communication restriction. In some implementations, if the page is to establish a call-back from an emergency call center, then the network determines that the page should be responded to notwithstanding a communication restriction. However, if the page is to establish some other normal mobile terminated call, then the network determines that the page is not of high importance. Other implementations are possible.

Referring now to Figure 12, shown is a flowchart of an example method of indicating that a page should be responded to notwithstanding a communication restriction. This method may be implemented in a network, for example by the paging function 16 of the network 15 shown in Figure 1. It is to be understood that the example method is very specific for example purposes only.

If at step 12-1 the network receives a mobile terminated call, then at step 12-2 the network determines whether the mobile terminated call is a call from an emergency call center. If the network determines that the mobile terminated call is a call from an emergency call center, then at step 12-3 the network indicates a page should be responded to notwithstanding a communication restriction in a paging message using an importance indication before initiating paging in respect of the mobile terminated call at step 12-4. The importance indication allows the wireless device to determine whether the page should be responded to notwithstanding a communication restriction. However, if the network does not determine

that the mobile terminated call is a call from an emergency call center, then at step 12-4 the network initiates paging to the wireless device without an importance indication.

Numerous modifications and variations of the
5 present application are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the application may be practised otherwise than as specifically described herein.

Claims:

1. A method in a wireless device, the wireless device operating within a wireless network, the method comprising:

transmitting (6-1) a first communication to the
5 wireless network, the first communication being important as determined by one or more criteria;

receiving (2-1) a second communication from the wireless network;

determining (2-2) whether a communication
10 restriction has been imposed by the wireless network to restrict responding to the second communication; and

in the event of the communication restriction:

determining (2-3, 6-2) whether to respond to the second communication notwithstanding the communication
15 restriction based on whether the second communication was received within a defined time period after transmitting the first communication; and

responding to the second communication notwithstanding the communication restriction if so
20 determined.

2. The method of claim 1, wherein:

the first communication comprises communication to an emergency call center; and/or

the second communication is a page.

25 3. The method of any one of the preceding claims, further comprising:

starting a timer after transmitting the first communication, the timer expiring after the defined time period;

wherein determining whether the second
5 communication was received within the defined time period after transmitting the first communication comprises determining whether the timer is still running when the second communication is received.

4. The method of any one of the preceding claims,
10 further comprising:

receiving a system information message indicating the defined time period; or

if the defined time period is not indicated by the wireless network, using a predefined static value for the
15 defined time period.

5. The method of any one of the preceding claims, wherein determining (2-2) whether the communication restriction has been imposed comprises:

determining (7-2) whether the wireless device
20 belongs to an access class that has been barred and whether the wireless device is in an idle mode.

6. The method of claim 5, wherein determining (7-2) whether the wireless device belongs to an access class that has been barred comprises:

25 receiving (3-1) a system information message comprising an indication of any access class that has been barred; and

determining (3-2) whether the system information message indicates the access class to which the wireless device belongs has been barred.

7. The method of any one of the preceding claims,
5 wherein responding to the second communication notwithstanding the communication restriction comprises:

establishing a connection to the wireless network;
and

transmitting a response to the second
10 communication over the connection.

8. The method of claim 7, wherein:

the connection is an RRC (Radio Resource Control) connection; and

establishing the RRC connection comprises
15 transmitting an RRC CONNECTION REQUEST message.

9. The method of any one of the preceding claims,
wherein:

receiving (2-1, 4-1) the second communication
comprises receiving information for the wireless device to
20 determine whether to respond to the second communication notwithstanding the communication restriction; and

determining (2-3, 4-2) whether to respond to the second communication notwithstanding the communication restriction is further based on the information.

25 10. The method of claim 9, wherein:

the information for the wireless device comprises an importance indication; and

determining (2-3, 4-2) whether to respond to the second communication notwithstanding the communication restriction is based on the importance indication.

11. The method of claim 9, wherein:

5 the information comprises timer information indicating how long after the first communication that subsequent communication should be considered important; and

determining (2-3, 4-2) whether to respond to the second communication notwithstanding the communication
10 restriction is based on the timer information.

12. The method of any one of claims 1 to 8, further comprising:

receiving (5-1) a message from the wireless network, the message comprising information for the wireless
15 device to determine whether to respond to the second communication notwithstanding the communication restriction;

wherein determining (2-3, 5-2) whether to respond to the second communication notwithstanding the communication restriction is further based on the
20 information.

13. The method of any one of the preceding claims, wherein determining (2-2) whether the communication restriction has been imposed by the wireless network to restrict responding to the second communication comprises:

25 determining (7-2) if the second communication was received using an access class that was barred by the wireless network.

14. A computer readable medium (12) having computer executable instructions stored thereon for execution on a processor (13) so as to cause a computing device (10) to implement the method of any one of the preceding claims.

5 15. A wireless device (10) configured to implement the method of any one of claims 1 to 13.

16. A method comprising:

imposing (9-1) a communication restriction to restrict a wireless device from responding to communication;

10 receiving (12-1) a first communication;

determining (12-2) whether the first communication is important based on one or more criteria;

if the first communication is important as determined by one or more criteria, transmitting (9-2, 12-3)
15 information for the wireless device to determine whether to respond to a second communication notwithstanding the communication restriction; and

transmitting (9-2, 12-4) the second communication.

17. The method of claim 16, wherein transmitting (9-2,
20 12-3) information for the wireless device to determine whether to respond to the second communication notwithstanding the communication restriction comprises transmitting (9-2) the information as part of the second communication.

25 18. The method of claim 16, wherein transmitting (9-2, 12-3) information for the wireless device to determine whether to respond to the second communication notwithstanding the communication restriction comprises

transmitting (11-2) the information as part of message distinct from the communication.

19. The method of any one of claims 16 to 18, wherein the information comprises an importance indication.

5 20. The method of any one of claims 16 to 18, wherein the information comprises timing information indicating how long after the first communication the wireless device is allowed to respond to the second communication.

21. The method of any of claims 16 to 20, wherein
10 imposing the communication restriction to restrict the wireless device from responding to communication comprises:

barring an access class;

wherein transmitting the second communication
comprises transmitting the second communication using the
15 access class that was barred.

22. A network (15) configured to implement the method of any one of claims 16 to 21.

23. A computer readable medium (16) having computer executable instructions stored thereon for execution on a
20 processor so as to cause a computing device to implement the method of any one of claims 16 to 21.