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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	60/975,985
Filing Date	September 28, 2007
First Named Inventor	Pelletier et al.
Art Unit	Not Yet Known
Examiner Name	Not Yet Known
Attorney Docket Number	ITC-2-1853.00.US

ENCLOSURES (Check all that apply)

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| ☐ Fee Transmittal Form
☐ Fee Attached
☐ Amendment/Reply
☐ After Final
☐ Affidavits/declaration(s)
☐ Extension of Time Request
☐ Express Abandonment Request
☐ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)
☐ Reply to Missing Parts/ Incomplete Application
☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53 | ☐ Drawing(s)
☐ Licensing-related Papers
☐ Petition
☐ Petition to Convert to a Provisional Application
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Volpe and Koenig, P.C.		
Signature			
Printed name	John C. Donch, Jr.		
Date	November 29, 2007	Reg. No.	43,593

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Typed or printed name	John C. Donch, Jr.	Date	November 29, 2007

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**POWER OF ATTORNEY OR
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Application Number	60/975,985
Filing Date	September 28, 2007
First Named Inventor	Pelletier et al.
Title	APPARATUS AND METHOD FOR TERMINATING ...
Art Unit	Not Yet Known
Examiner Name	Not Yet Known
Attorney Docket Number	ITC-2-1853.00.US

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Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

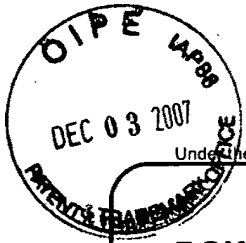
Name	Benoit Pelletier		
Signature			
Date	2007/11/14	Telephone	514 904 6279

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Name Rocco DiGirolamo

Signature *Rocco DiGirolamo*

Date 11/11/2007

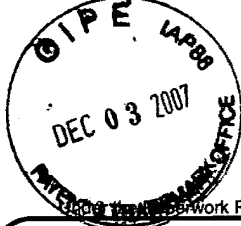
Telephone 514 904 6280

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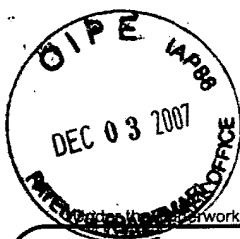
Name	Eldad Zeira		
Signature			
Date	Nov 27, 2007	Telephone	

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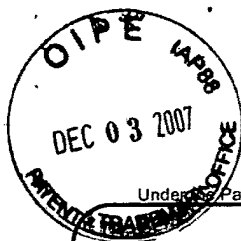
Name	Paul Marinier		
Signature			
Date	NOV 14 2007	Telephone	514 904 6253

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Name Christopher Cave

Signature

Date

NOV. 14, 2007

Telephone

5149046264

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Name	Vincent Roy		
Signature			
Date	02/14/08 2007	Telephone	514 904-6263

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
60/975,985	09/28/2007		200	ITC-2-1853.00.US		

CONFIRMATION NO. 2421

FILING RECEIPT

24374
VOLPE AND KOENIG, P.C.
DEPT. ICC
UNITED PLAZA, SUITE 1600
30 SOUTH 17TH STREET
PHILADELPHIA, PA19103

Date Mailed: 10/11/2007

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Benoit Pelletier, St-Laurent, CANADA;
Rocco DiGirolamo, Laval, CANADA;
Eldad Zeira, Huntington, NY;
Paul Marinier, Brossard, CANADA;
Christopher Cave, Verdun, CANADA;
Vincent Roy, Montreal, CANADA;

Power of Attorney: The patent practitioners associated with Customer Number 24374

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US60/975,985**

Projected Publication Date: None, application is not eligible for pre-grant publication

Non-Publication Request: No

Early Publication Request: No

Title

APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM
ACCESS CHANNEL MESSAGE PART

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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[0001] APPARATUS AND METHOD FOR TERMINATING TRANSMISSION
 OF A RANDOM ACCESS CHANNEL MESSAGE PART

[0002] FIELD OF INVENTION

[0003] The present invention is related to wireless communications.

[0004] BACKGROUND

[0005] In cellular wireless communications systems, access to radio resources is generally controlled by a network controller as opposed to a user device. When a wireless transmit/receive unit (WTRU) has data to transmit to the network, the WTRU typically needs to acquire radio resource access before transmitting its data payload. To achieve this in a third generation partnership project (3GPP) network, for example, the WTRU will normally gain an access to a random access channel (RACH). Access to the RACH is contentious and mechanisms to reduce the probability of collision, (i.e., when two or more WTRUs are accessing the RACH resource simultaneously), are known in the art.

[0006] The procedure for random access in 3GPP Release 7 standards includes a preamble phase with power ramp-up followed by channel acquisition information and message transmission. Because of the contentious nature of the RACH, and to avoid WTRUs holding the shared radio resource for a long time, only relatively short message payloads are transmitted on the RACH, leading to a relatively small data rate. The RACH is thus mostly used for the transmission of short control messages. Typically, WTRUs demanding larger data rates are configured by the network to use dedicated resources.

[0007] For data messages associated with non real-time data services, such as internet browsing, e-mail, etc., the traffic is bursty by nature and long periods of inactivity may exist between successive transmissions. For some applications requiring frequent transmission of keep-alive messages, for example, this may result in

an inefficient utilization of dedicated resources. In such cases, it may be advantageous for the network to use shared resources, such as the RACH, for data transmission instead. The difficulty, however, resides in the low data rate offered by the RACH. While the data rate provided by the RACH is sufficient for the transmission of short control messages, it is extremely inefficient for the transmission of data messages.

[0008] Recently, it has been proposed to use an enhanced dedicated channel (E-DCH) as a shared resource in the radio resource control (RRC) CELL_FACH state in universal terrestrial radio access (UTRA) to increase the data rate of the shared channel, i.e. an enhanced RACH (E-RACH). The inventors have recognized that in order to effectively use the E-DCH as a shared resource for E-RACH, it would be desirable to provide various mechanisms for termination of a E-RACH message part of E-DCH transmission phase in a 3GPP network with enhanced RACH.

[0009] SUMMARY

[0010] The present invention is related to methods and apparatus for terminating use of a shared resource, in particular, use of an enhanced random access channel (E-RACH), such as termination of a RACH message part in E-RACH messaging using an enhanced dedicated channel (E-DCH) as a shared resource. Preferably, after initiating a RACH transmission, a WTRU may terminate the transmission of the RACH message part when a predetermined triggering event occurs. The termination may be initiated based on a timer. Other alternatives that may be selectively combined include termination initiated either by a user or the network of a wireless communication system. In the context of a 3GPP system, after such a termination, the WTRU may clear all resources or transition to a CELL_DCH state.

[0011] BRIEF DESCRIPTION OF THE DRAWING

[0012] A more detailed understanding of the invention may be had from the following description of a preferred embodiment, given by way of example and to be understood in conjunction with the accompanying drawing wherein:

[0013] Figure 1 is a diagrammatic representation of enhanced RACH (E-RACH) transmission steps.

[0014] DETAILED DESCRIPTION OF EMBODIMENTS

[0015] When referred to hereafter, the terminology "WTRU" includes but is not limited to a user equipment (UE), a mobile station, a fixed or mobile subscriber unit, a pager, a cellular telephone, a personal digital assistant (PDA), a computer, or any other type of user device capable of operating in a wireless environment. When referred to hereafter, the terminology "base station" includes but is not limited to a Node-B, a site controller, an access point (AP), or any other type of interfacing device capable of operating in a wireless environment.

[0016] An enhanced dedicated channel (E-DCH) may be used as a shared resource in a radio resource control (RRC) CELL_FACH state in universal terrestrial radio access (UTRA) to increase the data rate of the shared channel, i.e. an enhanced RACH (E-RACH). As illustrated in Figure 1, a RACH access with E-DCH can comprise the following steps:

- (1) RACH preamble phase;
- (2) Initial resource assignment;
- (3) Collision detection and resolution;
- (4) E-RACH message part; and
- (5) Release of resources or transition to other state.

[0017] In order to effectively use the E-DCH as a shared resource for E-RACH, various mechanisms are provided as described below for termination of the E-RACH message part of E-DCH transmission phase in a 3GPP network with enhanced RACH.

[0018] The termination of an E-RACH message part can be divided into two aspects: first, triggers for the termination at the WTRU and second, the resulting actions at the WTRU and in the network corresponding to a particular trigger.

[0019] Triggers for E-RACH message part termination.

[0020] Generally, the triggers described below fall into three categories which

may be used alone or in combination with one another.

[0021] Timer-based Triggers.

[0022] An E-RACH message part may mimic a RACH transmission supported for 3GPP Rel 7 and earlier versions, where the RACH message duration is fixed at either 10 msec or 20 msec. As a result, the E-RACH message part may be active for a maximum number of frames or sub-frames. This number may be broadcast as part of system information, or be included as part of physical layer (L1) signaling, for example with the initial resource assignment or during the collision resolution phase shown in Figure 1. In addition, the duration may be linked to the access service class. Preferably, this type of trigger is used as a default which is overridden by other triggers to conserve the use of the E-DCH as a shared resource.

[0023] Additionally, a WTRU may keep track of the number of transmissions and retransmissions that it makes and use this as a trigger to stop the transmission of the E-RACH message part. For example, if the system is configured for repeat-automatic repeat request (ARQ) type of operation and transmission on consecutive transmission time intervals (TTIs), the WTRU may then be configured to terminate the transmission of the E-RACH message part after a selected number of retransmissions. That number may be hardcoded, broadcast as part of the system information, or signaled during the E-RACH allocation phase.

[0024] WTRU-initiated triggers.

[0025] In accordance with a second embodiment, the termination may be initiated by the WTRU, based on the status of its queue or buffer. A rule is preferably established for such a trigger, for example, the trigger rule may be:

(1)The WTRU has emptied its buffer;

(2) The WTRU has transmitted all protocol data units (PDUs) which were present when the E-RACH was initiated; or

(3) The buffer has passed a certain threshold level. This level may be an absolute value, or based on a relative measure using the initial queue size (that is the queue size when the E-RACH was initiated).

[0026] The last two options allow a level of fairness, by freeing the E-RACH resources for other WTRUs. For instance, the threshold levels may be set to allow the network to tradeoff fairness between WTRUs and transmission delay. These levels may be configured through system information or hard coded.

[0027] As collisions may occur as part of the physical random access channel (PRACH) and enhanced PRACH (E-PRACH), there is a need for triggers that allow a WTRU to detect such collisions and thus for at least one of the colliding WTRUs to release the E-PRACH resources. When a collision occurs, at least one of the WTRUs will most likely be unable to correctly transmit its messages to the Node-B. Such WTRU would receive negative acknowledgement (NACK) for radio frames following the preamble phase. An E-RACH message part termination message may be triggered by the WTRU if the number of contiguous NACKs and/or the number of contiguous failed hybrid automatic repeat request (HARQ) processes reaches a threshold that may be pre-determined or configured through system information.

[0028] Once the WTRU has triggered an E-RACH message part termination, the WTRU preferably transmits a signal to the network to inform it to release the radio resources. This signal may preferably take one of the following forms:

- (1) Special or reserved value of the scheduling information, (e.g., a scheduling information (SI) with a total E-DCH buffer status (TEBS) of 0);
- (2) Special combination of SI and happy bit;
- (3) New medium access control (MAC) signaling; A field may be added in the MAC-e header/trailer denoting a request to terminate transmission of the E-RACH message part. This may be signaled to the network via a reserved DDI combination.
- (4) New RRC message; or
- (5) New L1 message. (For example, an unused combination of enhanced transport format combination indicator (E-TFCI) may be reserved for requesting transmission of the E-RACH message part.

[0029] In addition, there may be physical layer procedures that may trigger termination of E-RACH message part transmission. This includes cell reselection and

measurements controlled by forward access channel (FACH) measurement occasions. For the former, the CELL UPDATE message may be used to notify the network that the E-RACH transmission in the previous cell has terminated. The E-RACH message part may either be continued in the target cell, or a new E-RACH transmission may be started, (i.e., begin a new E-RACH preamble phase). The latter is only a problem if the E-RACH message part transmission extends into the FACH measurement occasions, as the WTRU will not be able to receive any downlink transmissions while it is making measurements on other cells on other frequencies. The WTRU may decide to terminate the transmission of the E-RACH message part prior to the measurement occasion, and restart a new E-RACH (from the RACH preamble) when the measurements are completed. Alternatively, the WTRU may suspend all transmission during the measurement occasion. At the same time, the scheduler at the Node B may be aware of the measurement occasion and may also suspend any grant and/or ACK/NACK downlink transmission. Upon resuming normal operation, the network may optionally send a very conservative initial grant so that the power control loop may be re-established or it may wait for an indication from the WTRU (using a preamble power ramp or similar procedure).

[0030] Network-initiated Triggers.

[0031] In addition to or in lieu of user triggers, triggers generated by the network to terminate the transmission of the E-RACH message part can be provided. Network triggers may be established, for example, based on:

- (1) Lack of activity on the enhanced dedicated physical data channel (E-DPDCH)/enhanced dedicated physical control channel (E-DPCCH);
- (2) Status of WTRU scheduling requests; or
- (3) Detection of a collision after the initial power ramp-up and resource allocation.

[0032] As WTRU status example, the network may monitor received SI and/or happy bit status. If this information indicates low usage, the network may decide to terminate the current transmission of the E-RACH message part so that other WTRUs

may have an opportunity to access the resources. Alternatively, if this information indicates high usage and a continued need (say with the happy bit set to "unhappy"), the network may decide to transition the WTRU to the CELL_DCH state. These the above approaches may use timers and/or monitoring windows.

[0033] For network triggers, once the network determines the end of the E-RACH message part transmission, it signals it to the WTRU by one of the followings:

(1) Transmitting a special value of the E-AGCH, (e.g., 0 grant);
 (2) Sending an RRC message over the FACH or over the high speed downlink shared channel (HS-DSCH) (if the WTRU is configured for HS-DSCH in CELL_FACH); or

(3) Using some form of L1 signaling. This may include stopping the fractional dedicated physical channel (F-DPCH), sending a flag or combination of pre-determined fields on the high speed shared control channel (HS-SCCH) (if the WTRU is configured for HS-DSCH in CELL_FACH).

[0034] Actions upon E-RACH message part termination.

[0035] A number of options are possible upon termination of an E-RACH transmission. Example responses to triggers are provided below.

[0036] Clear all resources.

[0037] This is viewed as the simplest solution and would be appropriate for all triggering options described above. It may require that the WTRU and the network clear all resources that had been allocated for the E-RACH. For the WTRU, this includes resetting the MAC-es/e, flushing the HARQ buffers, stop monitoring the E-RACH downlink channels, (e.g., enhanced HARQ indicator channel (E-HICH), enhanced absolute grant channel (E-AGCH), enhanced relative grant channel (E-RGCH)).

[0038] Transition to CELL_DCH with re-allocation of E-RACH to E-DCH and allocation of high speed downlink packet access (HSDPA).

[0039] This option is suitable for a network initiated E-RACH message part termination. The network reconfigures the E-RACH into a regular E-DCH in

CELL_DCH state through RRC signaling. A typical procedure is described below:

(1) The Node-B sends a reconfiguration message to the WTRU via the FACH (or via the HS-DSCH if the WTRU is configured for HS-DSCH reception in CELL_FACH). This message may be a Radio Bearer Reconfiguration, Transport channel Reconfiguration, Physical Channel Reconfiguration, or the like;

(2) The WTRU releases the resources associated with the E-RACH (resetting the Mac es/e, flushing the soft buffer, stop listening to the downlink E-RACH messages, etc.);

(3) The WTRU applies the new high speed uplink packet access (HSUPA)/HSDPA configuration at the specified activation time;

(4) The WTRU confirms the operation success via an RRC message; and

(5) The Node-B releases its resources related to the E-RACH (alternatively, the Node-B may release its resources in step 1).

[0040] Transition to CELL_DCH keeping the E-RACH resources and HSDPA resource allocation.

[0041] This option is may be preferred for a network initiated E-RACH message part termination and assumes that the E-RACH resources allocated are dedicated to the WTRU and may be kept for CELL_DCH operations. This results in a seamless transition from CELL_FACH to CELL_DCH. In such a case, only the HSDPA needs to be configured (or reconfigured). A typical procedure to transfer the WTRU to CELL_DCH is as follows:

(1) The Node-B sends a reconfiguration message via RRC on the FACH (or on HS-DSCH if the WTRU is configured for HS-DSCH reception in CELL_FACH); This message may be a Radio Bearer Reconfiguration, Transport channel Reconfiguration, Physical Channel Reconfiguration, or the like;

(2) The WTRU applies the new HSDPA configuration at a given activation time; and

(3) The WTRU confirms the operation success via RRC message.

[0042] An intermediate transition is also possible, where the WTRU keeps only

part of its assigned E-DCH resources. For instance, the network may assign a new enhanced radio network temporary identity (E-RNTI). It should be understood that the above procedures encompass this case.

[0043] One advantage of the present invention over the prior art is that it defines triggers that may be used to terminate the E-RACH, as well as the possible WTRU and network actions as a result of this termination.

[0044] Although the features and elements are described in the preferred embodiments in particular combinations, each feature or element can be used alone without the other features and elements of the preferred embodiments or in various combinations with or without other features and elements of the present invention. The methods or flow charts provided in the present invention may be implemented in a computer program, software, or firmware tangibly embodied in a computer-readable storage medium for execution by a general purpose computer or a processor. Examples of computer-readable storage mediums include a read only memory (ROM), a random access memory (RAM), a register, cache memory, semiconductor memory devices, magnetic media such as internal hard disks and removable disks, magneto-optical media, and optical media such as CD-ROM disks, and digital versatile disks (DVDs).

[0045] Suitable processors include, by way of example, a general purpose processor, a special purpose processor, a conventional processor, a digital signal processor (DSP), a plurality of microprocessors, one or more microprocessors in association with a DSP core, a controller, a microcontroller, Application Specific Integrated Circuits (ASICs), Field Programmable Gate Arrays (FPGAs) circuits, any other type of integrated circuit (IC), and/or a state machine.

[0046] A processor in association with software may be used to implement a radio frequency transceiver for use in a wireless transmit receive unit (WTRU), user equipment (UE), terminal, base station, radio network controller (RNC), or any host computer. The WTRU may be used in conjunction with modules, implemented in hardware and/or software, such as a camera, a video camera module, a videophone, a speakerphone, a vibration device, a speaker, a microphone, a television transceiver, a

hands free headset, a keyboard, a Bluetooth® module, a frequency modulated (FM) radio unit, a liquid crystal display (LCD) display unit, an organic light-emitting diode (OLED) display unit, a digital music player, a media player, a video game player module, an Internet browser, and/or any wireless local area network (WLAN) module.

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CLAIMS

What is claimed is:

1. A method for terminating transmission of a random access channel (RACH) message, the method comprising:
a wireless transmit/receive unit (WTRU) initiating a transmission of a RACH message; and
the WTRU terminating the transmission of the RACH message when a predetermined triggering event occurs.
2. The method of claim 1 wherein duration of the RACH message is fixed.
3. The method of claim 2 wherein a maximum number of frames or sub-frames that the RACH message may be active is broadcast as part of system information.
4. The method of claim 2 wherein a maximum number of frames or sub-frames that the RACH message may be active is included as part of physical layer (L1) signaling.
5. The method as in any one of claims 2-4, wherein the duration is linked to an access service class.
6. The method as in any one of claims 1-5, wherein the WTRU keeps track of the number of transmissions and retransmissions of the message, and terminates the transmission of the RACH message when the number of transmissions and retransmissions exceed a predetermined value.
7. The method as in any one of claims 1-6, wherein the termination of the RACH transmission is initiated by the WTRU based on a buffer status.

8. The method of claim 7 wherein the WTRU initiates the termination when the WTRU has emptied the buffer.

9. The method as in any one of claims 7-8, wherein the WTRU initiates the termination when the WTRU has transmitted all protocol data units (PDUs) which were present when the RACH was initiated.

10. The method as in any one of claims 7-9, wherein the WTRU initiates the termination when the buffer has passed a certain threshold level.

11. The method of claim 10 wherein the level is an absolute value or a relative value.

12. The method as in any one of claims 1-11, further comprising:
the WTRU releasing resource for the RACH message when the WTRU detects that a collision occurs.

13. The method of claim 12 wherein the WTRU initiates the termination when the number of contiguous negative acknowledgements (NACKs) and/or the number of contiguous failed hybrid automatic repeat request (HARQ) processes reaches a threshold.

14. The method as in any one of claims 1-13, further comprising:
the WTRU sending a signal to a network to information the termination.

15. The method of claim 14 wherein the signal is a special value of scheduling information.

16. The method of claim 15 wherein the signal is scheduling information with a total enhanced dedicated channel (E-DCH) buffer status (TEBS) of zero (0).

17. The method of claim 14 wherein the signal is a special combination of scheduling information and a happy bit.

18. The method of claim 14 wherein the signal is medium access control (MAC) signaling.

19. The method of claim 14 wherein the signal is a radio resource control (RRC) message.

20. The method of claim 14 wherein the signal is a physical layer signal.

21. The method as in any one of claims 1-20, wherein the termination is initiated at cell reselection.

22. The method as in any one of claims 1-20, wherein the termination is initiated for measurements controlled by forward access channel (FACH) measurement occasions.

23. The method of claim 22 wherein the WTRU restarts a new RACH transmission when the measurements are completed.

24. The method of claim 22 wherein the WTRU suspends all RACH transmission during the measurements.

25. The method as in any one of claims 1-24, wherein the termination is initiated by the network.

26. The method of claim 25 wherein the termination is initiated when lack of activity on the enhanced dedicated physical data channel (E-DPDCH)/enhanced dedicated physical control channel (E-DPCCH) is detected.

27. The method of claim 25 wherein the termination is initiated based on a status of WTRU scheduling requests.

28. The method of claim 27 wherein the network monitors received scheduling information and happy bit status.

29. The method of claim 25 wherein the termination is initiated when a collision is detected after initial power ramp-up and resource allocation.

30. The method as in any one of claims 25-29 further comprising:
the network sending a signal to the WTRU to initiate the termination.

31. The method of claim 30 wherein the signal is a special value of an enhanced absolute grant channel (E-AGCH).

32. The method of claim 30 wherein the signal is a radio resource control (RRC) message over a forward access channel (FACH) or over a high speed downlink shared channel (HS-DSCH).

33. The method of claim 30 wherein the signal is a physical layer signaling.

34. The method as in any one of claims 1-33, further comprising:
the WTRU clearing all resources for the RACH.

35. The method as in any one of claims 1-34, further comprising:
the WTRU transitioning to a CELL_DCH state with re-allocation of RACH to dedicated channel (DCH) and allocation of high speed downlink packet access (HSDPA).
36. The method as in any one of claims 1-34, further comprising:
the WTRU transitioning to a CELL_DCH state keeping RACH resources and high speed downlink packet access (HSDPA) resource allocation.
37. The method as in any one of claims 1-36, wherein the RACH message is transmitted via an enhanced dedicated channel (E-DCH).
38. The method as in any one of claims 1-37, wherein the WTRU is in a CELL_FACH state.
39. A wireless transmit/receive unit (WTRU) configured to perform a method as in any one of claims 1-38.
40. A Node-B configured to perform a method as in any one of claims 1-38.
41. A wireless communication system configured to perform a method as in any one of claims 1-38.
42. An integrated circuit (IC) configured to perform a method as in any one of claims 1-38.

ABSTRACT

Methods and apparatus for terminating use of a shared resource, in particular, use of an enhanced random access channel (E-RACH), such as termination of a RACH message part in E-RACH messaging using an enhanced dedicated channel (E-DCH) as a shared resource. Preferably, after initiating a RACH transmission, a WTRU may terminate the transmission of the RACH message part when a predetermined triggering event occurs. The termination may be initiated based on a timer. Other alternatives that may be selectively combined include termination initiated either by a user or the network of a wireless communication system. In the context of a 3GPP system, after such a termination, the WTRU may clear all resources or transition to a CELL_DCH state.

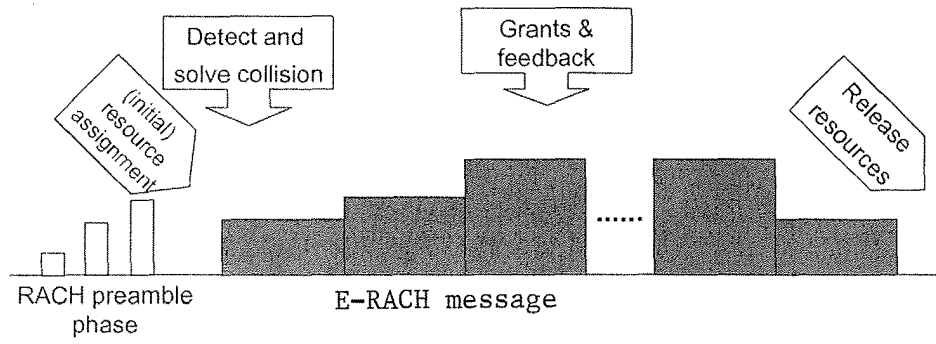


Figure 1

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ITC-2-1853.00.US
		Application Number	
Title of Invention	APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM ACCESS CHANNEL MESSAGE PART		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ITC-2-1853.00.US
		Application Number	
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Title of the Invention	APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM ACCESS CHANNEL MESSAGE PART		
Attorney Docket Number	ITC-2-1853.00.US	Small Entity Status Claimed ☐	
Application Type	Provisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	1	Suggested Figure for Publication (if any)	
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		Application Number	
Title of Invention	APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM ACCESS CHANNEL MESSAGE PART		

Domestic Priority Information:

This section allows for the applicant to claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c). Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status		Remove	
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This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

			Remove
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			☐ Yes ☒ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. **Add**

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1	Remove
If the Assignee is an Organization check here. ☒	
Organization Name	INTERDIGITAL PATENT HOLDINGS

Mailing Address Information:

Address 1	3411 Silverside Road, Concord Plaza		
Address 2	Suite 105, Hagley Building		
City	Wilmington	State/Province	DE
Country ⁱ	US	Postal Code	19810
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button. **Add**

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/C. Frederick Koenig III/	Date (YYYY-MM-DD)	2007-09-28
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ITC-2-1853.00.US		
		Application Number			
Title of Invention	APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM ACCESS CHANNEL MESSAGE PART				
First Name	C. Frederick	Last Name	Koenig III	Registration Number	29662

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM ACCESS CHANNEL MESSAGE PART		
First Named Inventor/Applicant Name:		Benoit Pelletier		
Filer:		Harry Vartanian/Lisa Sheffy		
Attorney Docket Number:		ITC-2-1853.00.US		
Filed as Large Entity				
Provisional Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Provisional application filing	1005	1	200	200
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt

EFS ID:	2256090
Application Number:	60975985
International Application Number:	
Confirmation Number:	2421
Title of Invention:	APPARATUS AND METHOD FOR TERMINATING TRANSMISSION OF A RANDOM ACCESS CHANNEL MESSAGE PART
First Named Inventor/Applicant Name:	Benoit Pelletier
Customer Number:	24374
Filer:	Harry Vartanian/Lisa Sheffy
Filer Authorized By:	Harry Vartanian
Attorney Docket Number:	ITC-2-1853.00.US
Receipt Date:	28-SEP-2007
Filing Date:	
Time Stamp:	15:17:44
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$200
RAM confirmation Number	3621
Deposit Account	090435
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		1853_00_US_Application_EFS.pdf	886967 9c131411da8690870a4d4a40e93c1b1de1fe3d25	yes	16
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	10	
	Claims		11	15	
	Abstract		16	16	
Warnings:					
Information:					
2	Drawings	1853_00_US_Drawings_EFS.pdf	42471 8de1ada6e91561bb90af94f5b9376f9d6975da35	no	1
Warnings:					
Information:					
3	Application Data Sheet	1853_00_US_ADS_Form_SB_14.pdf	1172639 122e2cb6950f2912cacafdf68dd1146982846a07b	no	6
Warnings:					
Information:					
4	Fee Worksheet (PTO-06)	fee-info.pdf	8177 38c9eaa2c3a65d85186e9c68649677138d0496c4	no	2
Warnings:					
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.