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APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
60/982,528			



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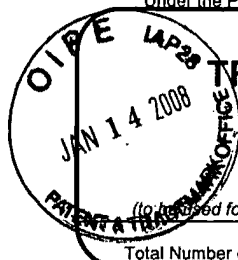
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Total Number of Pages in This Submission

Application Number	60/982,528
Filing Date	October 25, 2007
First Named Inventor	Pani et al.
Art Unit	Not Yet Known
Examiner Name	Not Yet Known
Attorney Docket Number	ITC-2-1891.00.US

ENCLOSURES (Check all that apply)

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Volpe and Koenig, P.C.		
Signature			
Printed name	Matthew I. Cohen		
Date	January 10, 2008	Reg. No.	48,133

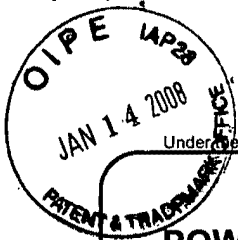
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Application Number	60/982,528
Filing Date	October 25, 2007
First Named Inventor	Pani et al.
Title	METHOD TO MANAGE AND SETUP MAC-efes...
Art Unit	Not Yet Known
Examiner Name	Not Yet Known
Attorney Docket Number	ITC-2-1891.00.US

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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	Diana Pani
Signature	
Date	12/12/2007
Telephone	514 904 6299

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Examiner Name	Not Yet Known
Attorney Docket Number	ITC-2-1891.00.US

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Name Rocco DiGirolamo

Signature *Rocco DiGirolamo*

Date 20/12/2007

Telephone 514-904-6280

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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 Christopher Cave

Signature

Date

Telephone

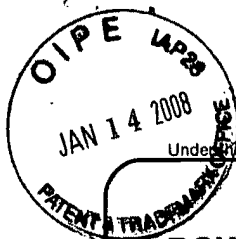
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
60/982,528	10/25/2007		210	ITC-2-1891.00.US		

CONFIRMATION NO. 1431

24374

VOLPE AND KOENIG, P.C.
DEPT. ICC
UNITED PLAZA, SUITE 1600
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

FILING RECEIPT



Date Mailed: 12/04/2007

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Applicant(s)

Diana Pani, Montreal, CANADA;
Rocco DiGirolamo, Laval, CANADA;
Christopher Cave, Verdun, CANADA;
Paul Marinier, Brossard, 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 **US 60/982,528**

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

Non-Publication Request: No

Early Publication Request: No

Title

METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE

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[0001] METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN
CELL-FACH STATE

[0002] FIELD OF INVENTION

[0003] The present invention is related to wireless communication systems. More particularly, a method and apparatus are disclosed for managing enhanced dedicated channel (E-DCH) resources while a wireless transmit receive unit (WTRU) is in Cell_FACH state.

[0004] BACKGROUND

[0005] An enhanced uplink mechanism was introduced as part of the set of features for Release 6 of the Third Generation Partnership Project (3GPP) standards. As part of Release 6, two new functional entities were introduced in the Medium Access Control (MAC), the MAC-e residing in the Node B and the MAC-es residing in the Radio Network Controller (RNC). The MAC-e entity in the Node B is responsible for de-multiplexing a MAC-e Protocol Data Unit (PDU) into a MAC-es PDU and forwarding it to the correct MAC-d flow. The MAC-es is responsible for forwarding the MAC-es PDU to the right reordering entity, combining the data from the different Node Bs within the WTRU's active set, reordering data, and disassembly into a MAC-d service data unit (SDU). For each WTRU there is a MAC-es entity in the RNC and one MAC-e entity in the Node B.

[0006] As part of ongoing evolution of the WCDMA standard in Release 8, a new work item was established to incorporate E-DCH concepts for WTRUs in CELL_FACH. In Release 7 and earlier, the only uplink mechanism for CELL_FACH WTRUs was the random access channel (RACH). The RACH transport mechanism is based on a slotted-Aloha approach with an acquisition indication. Before sending a message, a WTRU tries to acquire the channel by sending a short preamble, made up of a randomly selected signature sequence, in a randomly selected access slot. The WTRU then

listens/waits for an acquisition indication from the UMTS Terrestrial Radio Access Network (UTRAN). If no indication arrives, it ramps up its power and tries again, sending a randomly selected signature sequence in a selected access slot. If an acquisition indication is received, the WTRU has effectively acquired the channel, and can transmit its message. The initial preamble transmit power is established based on an open loop power control technique; whereas the ramp-up mechanism is used to further fine-tune the WTRU transmit power. The message is transmitted at a fixed power offset from the last preamble, and is of fixed size. Macro-diversity is not employed and the WTRU has no concept of active set. The new work item attempts to increase the uplink user plane and control plane throughput by assigning dedicated E-DCH resources after the initial WTRU power ramp up, effectively resulting in an Enhanced RACH.

[0007] With the introduction of E-DCH in CELL_FACH, the WTRUs and the network preferably will set up the E-DCH MAC resources and properly manage them. Due to the nature of the E-DCH operation in CELL_FACH a number of issues arise with the E-DCH MAC resources. One of the issues regards defining how and when to set up the MAC-e/es entities. More specifically, whether the MAC-e and/or MAC-es are common entities or dedicated entities should be defined. In addition, extra Iub signaling between the Node B and RNC should be defined.

[0008] Also, due to the possibility that the WTRU may not keep the E-DCH resources for a long time in CELL_FACH and that continuous traffic is not sent, methods to deal with the Transmission Sequence Numbers (TSN) in the MAC in the WTRU and network side should be addressed. Additionally, methods on how to manage the MAC-e/es entities should be defined.

[0009] SUMMARY

[0010] A method and apparatus are disclosed to manage the MAC-e and MAC-es resources and respective variables for E-DCH users in the enhanced CELL_FACH.

[0011]	DETAILED DESCRIPTION
--------	----------------------

[0012] When referred to hereafter, the terminology "wireless transmit/receive unit (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.

[0013] MAC-e/es entity setup procedures

[0014] When the WTRU makes initial RACH access attempt, the MAC-e and MAC-es entities may or may not be already set up.

[0015] The MAC-es and MAC-e entity are setup as soon as the WTRU enters CELL_FACH and both the WTRU and network support E-DCH in CELL_FACH. Optionally, an enhanced radio network temporary identifier (E-RNTI) is assigned to the WTRU. One dedicated MAC-es entity and/or MAC-e is maintained per WTRU throughout the connection of the WTRU in the given state, independent of E-DCH resources.

[0016] Alternatively, the MAC-es and MAC-e entity is only created when the WTRU attempts RACH access. The MAC-es entity and the MAC-e entity can be setup when the RACH preamble is received or when the resources are assigned or only after the WTRU has successfully completed first transmission without collision.

[0017] The WTRU identity is not known until the first transmission of the WTRU after reception of the acquisition indicator channel (AICH). Therefore, preferably the MAC-es is setup for the WTRU at the time the WTRU-id is read from the header. A new Iub signaling procedure is required to indicate to the radio network control (RNC) to setup the MAC-es entity for given WTRU.

[0018] A common MAC-es entity is always setup in the RNC and a common MAC-e entity is always setup in the Node B for each enhanced dedicated channel (E-

DCH) resource set that could be assigned to the WTRU upon RACH access procedure. The MAC-e and MAC-es are like common entities that are used for one WTRU at a time (i.e. for the WTRU that got the RACH access). The MAC-e/es entities can be used just for the initial traffic of the WTRU or they can be used throughout the time the WTRU is using the E-DCH resource set that corresponds to that MAC-e/es entity.

[0019] A common MAC-e and/or MAC-es entity is setup for WTRUs that do not have a U-RNTI and/or E-RNTI. These entities may be used for the case the WTRU attempts RACH access while being in idle mode (i.e. to send RRC CONNECTION REQUEST) and/or after performing cell reselection procedures.

[0020] Alternatively, a common MAC-e entity is always setup in the Node B for each E-DCH resource set. The MAC-e is setup as a common transport channel resource and traffic is sent to the RNC via a common Iub frame flow. One MAC-es is created per WTRU and is maintained at least for the duration of the WTRU being in CELL_FACH. Since the MAC-e is a common entity for any WTRU using the set of resources, a method to identify the WTRU identity over the Iub/Iur frame protocol is required. The MAC-e may be set up as part of the common transport channel setup procedure and to create a common E-DCH Iub frame protocol flow.

[0021] Common transport channel setup and Iub/Iur protocol

[0022] When common MAC-e and/or MAC-es resources are setup for a given connection they preferably are setup as part of the common transport channel setup procedure between the RNC and Node B. The concepts described are applicable to the embodiments where a common MAC-e and a common MAC-es entity is created per E-DCH resource set and also for the case where only a common MAC-e entity is created and dedicated MAC-es entities per WTRU are present.

[0023] The Iub frame protocol and optionally the Iur frame protocol may include the WTRU-id in one of the fields. This would allow the RNC to know which MAC-es entity, or which WTRU, the data shall be forwarded to. The WTRU-id indicated may be one or a combination of the following:

[0024] a. E-RNTI

[0025] b. U-RNTI

[0026] c. C-RNTI

[0027] d. S-RNTI

[0028] Alternatively, when both common MAC-e and MAC-es are created, the WTRU-id can be included in the MAC-es header such that the RNC would know which WTRU the data belongs to at the time it is decoding the MAC-es PDU. This does not require the Iub frame to carry the WTRU-id information.

[0029] Since the MAC-e PDU may have a WTRU-id included in the header only for the initial transmission for contention resolution purposes, it is proposed that the first transmission is used from the MAC-e to get an indication on how to forward the consecutive data to the RNC.

[0030] The Node B may store the WTRU-id from the first transmission and uses this information to indicate the WTRU-id over the common Iub frame protocol for every subsequent transmission. When the WTRU releases the set of E-DCH resources the Node B erases the WTRU-id, or when another RACH access is performed and a different WTRU-id is decoded, the Node B changes the stored information.

[0031] Alternatively, the Node B may use the first transmission to know to which WTRU the data belongs, and sets a semi-dedicated flow to the RNC for the duration of the WTRU's connection to the E-DCH resources. This creates a temporary connection flow between the common MAC-e and the dedicated MAC-es. This may be setup via Iub signaling, that indicate to the RNC to initiate the setup a flow between the common MAC-e and MAC-es entity corresponding to the WTRU. By using this method the WTRU-id does not have to be specified in the Iub frame protocol. The WTRU-id is always present in the MAC-e header of every transmission and the information is forwarded to the RNC via the Iu frame protocol.

[0032] Terminating the MAC-es in the Node B

[0033] Alternatively, since the E-DCH resources are negotiated between the Node B and WTRU without the involvement of the RNC, the functionalities related to the E-DCH, such as MAC-es, may be moved to the Node B. Due to macro diversity not being supported in enhanced RACH, the MAC-es can be terminated in the Node B without causing any problems. For this embodiment, the logical channel flows can be setup between the MAC-es and the RLC entities. Alternatively, a common transport channel flow can be established and the WTRU-id and the Linearization channel (LCH)-ID can be indicated over the Iub and/or Iur frame protocol.

[0034] Managing the TSN numbering

[0035] The transmission sequence number (TSN) is a variable maintained and incremented in the MAC-es in the WTRU and it is used for reordering and macro diversity combining purposes (for CELL_DCH) in the RNC. Due to the nature of the E-DCH transmission in the UL in CELL_FACH and the fact that the WTRU might set up and release E-DCH resources more frequently, methods to deal with the TSN numbering are described.

[0036] A dedicated MAC-es entity may be created and maintained in both the WTRU and the RNC when the WTRU is in CELL_FACH. The MAC-es entity is not released even if the WTRU is not transmitting anything and if it has no E-DCH resource allocated.

[0037] In order to avoid keeping in memory for a long time the last used TSN number (i.e. CURRENT_TSN in the WTRU) in both the WTRU and the network, TSN numbers may be reset to the initial value upon the release of the E-DCH resource set being used by the WTRU. The release of the E-DCH resources may take place due to the expiration of timer which expires at the same time in both the WTRU and network. As soon as the timer expires and the resources are released the WTRU resets the TSN and optionally performs a full MAC-e/es reset procedure. Alternatively, the release of the resources may be ordered via the network in which case, upon reception of the

message the WTRU and network resets the TSN to its initial value. Alternatively, the release of the resources may be done upon an expiration of a traffic inactivity timer. If the release of resources or timer expiry is only known by the Node B, additional Iub signaling is required to notify the MAC-es entity in the RNC to reset the TSN or the whole entity.

[0038] The TSN number may be reset upon the expiration of an inactivity timer. An inactivity timer is started in both the WTRU and the network as soon a MAC-e PDU is transmitted and received, respectively. If the timer expires, the WTRU and RNC set the TSN to its initial value. Optionally, a full MAC-e/es reset may be performed.

[0039] Alternatively, the TSN number may not reset. The last values used are stored in memory and continuously incremented for every new transmission, regardless of the E-DCH resource set being used or the time in which the transmission is taking place.

[0040] Alternatively, the TSN number may be set to its initial value and optionally a full MAC-e/es reset may take place when a cell reselection occurs. The reset of the TSN or the MAC-e/es may always occur as soon as the WTRU performs cell reselection. Alternatively, it may only occur when a serving radio network subsystem (SRNS) relocation occurs. This may be signaled by the RNC via an explicit MAC-e/es reset indicator or the WTRU implicitly detects that a SRNS relocation has occurred due to the presence or the change of the new U-RNTI.

[0041] Alternatively, the MAC-e and MAC-es entities in the network may be setup per E-DCH resource set instead of per WTRU. In such embodiment it is proposed that the WTRU and RNC reset the TSN and/or reset the MAC-e/es entity every time the resources are released. This will be required by the RNC since the next transmission will correspond to a different WTRU, which is not aware of the TSN variable numbers in the RNC. This could lead to an incorrect reordering operation and possible discard of data.

[0042] The method and apparatus disclosed herein can also be applicable to other states such as CELL_PCH/URA_PCH where E-DCH transmission is allowed.

[0043] Although the features and elements are described in the embodiments in particular combinations, each feature or element can be used alone without the other features and elements of the embodiments or in various combinations with or without other features and elements. The methods or flow charts provided 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).

[0044] 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.

[0045] 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.

CLAIMS

What is claimed is:

1. A method of managing resources in a wireless transmit receive unit (WTRU), the method comprising setting up a medium access control (MAC)-es and MAC-e entity when the WTRU makes a random access channel (RACH) access attempt.
2. The method as in claim 1 wherein the MAC-es and MAC-e entity are setup as the WTRU enters CELL_FACH state.
3. The method as in claim 1 or 2 wherein the WTRU and a network support an enhanced dedicated channel (E-DCH) in CELL_FACH state.
4. The method as in any one of the preceding claims further comprising assigning a radio network temporary identifier (E-RNTI) to the WTRU.
5. The method as in any one preceding claim further comprising maintaining a dedicated MAC-es entity or MAC-e entity per WTRU throughout a connection of the WTRU in a given state, wherein the connection is independent of E-DCH resources.
6. The method as in any one preceding claim further comprising setting up the MAC-es entity and the MAC-e entity:
 - when the RACH preamble is received;
 - when resources are assigned; or
 - after the WTRU has successfully completed a first transmission without collision.

7. The method as in any one preceding claim wherein a WTRU identity is unknown until the first transmission of the WTRU after reception of an acquisition indicator channel (AICH).

8. The method as in any one preceding claim further comprising setting up a MAC-es for the WTRU when a WTRU-id is read from a MAC header.

9. The method as in any one preceding claim further comprising indicating to a radio network control (RNC) to setup the MAC-es entity for a given WTRU via Iub signaling.

10. The method as in any one preceding claim wherein a common MAC-es entity is always setup in the RNC for each E-DCH resource set.

11. The method as in any one preceding claim wherein a common MAC-e entity is always setup in the Node B for each E-DCH resource set.

12. The method as in any one preceding claim wherein the MAC-e/es entities are used for WTRU initial traffic only.

13. The method as in any one preceding claim wherein the MAC-e/es entities are used throughout the time the WTRU is using the E-DCH resource set that corresponds to that MAC-e/es entity.

14. The method as in any one preceding claim further comprising setting up a common MAC-e entity and MAC-es entity for a WTRU without a U-RNTI or an E-RNTI.

15. The method as in claim 14 wherein the entities are used for a WTRU whereby the WTRU attempts to access a RACH while the WTRU is in idle mode, or after the WTRU performs cell reselection procedures.

16. The method as in any one of claims 1-13 wherein a common MAC-e entity is setup in the Node B for each E-DCH resource set.

17. The method as in claim 16 wherein the MAC-e is setup as a common transport channel resource and traffic is sent to the RNC via a common Iub frame flow.

18. The method as in claim 16 or 17 further comprising creating one MAC-es per WTRU and maintaining the MAC-es for the duration of the WTRU being in CELL_FACH.

19. The method as in any preceding claim further comprising setting up common MAC-e and/or MAC-es resources as part of a common transport channel setup procedure between the RNC and Node B.

20. The method as in any preceding claim wherein an Iub frame protocol and an Iur frame protocol comprise a WTRU-id in a field.

21. The method as in claim 20 wherein the WTRU-id comprises an E-RNTI, a U-RNTI, a C-RNTI or an S-RNTI.

22. The method as in claim 20 further comprising, when the common MAC-e and MAC-es are created, including the WTRU-id in the MAC-es header.

23. The method as in claim 22 further comprising using the first transmission from the MAC-e as an indication of a method of forwarding consecutive data to the RNC.

24. The method as in claim 22 or 23 further comprising the Node B storing the WTRU-id from the first transmission and using the first transmission to indicate the WTRU-id over a common Iub frame protocol for a subsequent transmission.

25. The method as in any one of claims 22-24 further comprising, when the WTRU releases the set of E-DCH resources, the Node B erasing the WTRU-id.

26. The method as in any one of claims 22-25 further comprising, when a RACH access is performed and a different WTRU-id is decoded, the Node B changing stored information.

27. The method as in any one of claims 22-25 further comprising the Node B using a first transmission to indicate a WTRU, and setting a semi-dedicated flow to the RNC for the duration of the WTRU's connection to the E-DCH resources.

28. The method as in any one of claims 22-27 further comprising creating a temporary connection flow between the common MAC-e and the dedicated MAC-es.

29. The method as in claim 28 further comprising setting up the temporary connection flow via Iub signaling that indicate to the RNC to initiate a flow between the common MAC-e and MAC-es entity corresponding to the WTRU.

30. The method as in any preceding claim further comprising moving MAC-es functions to the Node B.

31. The method as in any preceding claim further comprising terminating the MAC-es at the Node B.

32. The method as in claim 31 further comprising setting up a logical channel flow between the MAC-es and the RLC entities.

33. The method as in claim 31 further comprising establishing a common transport channel the WTRU-id and the LCH-ID can be indicated over the Iub and/or Iur frame protocol.

34. The method as in claim 33 further comprising creating a dedicated MAC-es entity in both the WTRU and the RNC when the WTRU is in CELL_FACH.

35. A method as in any preceding claim further comprising resetting a transmission sequence number (TSN) to an initial value TSN upon the release of the E-DCH resource used by the WTRU.

36. A method as in any preceding claim further comprising releasing an E-DCH resource based on an expiration of a timer.

37. The method as in claim 36 wherein the timer expires simultaneously for the WTRU and network.

38. The method as in claim 36 or 37 further comprising the WTRU resetting the TSN as the timer expires and the resources are released the WTRU.

39. The method as in any one of claims 36-38 further comprising resetting the TSN and performing a full MAC-e/es reset procedure.

40. The method as in any one of claims 36-38 further comprising the Node B ordering a release of resources and the WTRU and the Node B resetting the TSN to an initial value.

41. The method as in any one of claims 36-38 further comprising releasing resources based upon an expiration of a traffic inactivity timer and the Node B signaling via Iub to notify the MAC-es entity in the RNC to reset the TSN.

42. The method as in claim 41 further comprising starting the inactivity timer in both the WTRU and the Node B when a MAC-e PDU is transmitted by the WTRU.

43. The method as in any one of claims 36-38 comprising maintaining the TSN number, storing last values in memory and incrementing the TSN for a new transmission.

44. The method as in any one of claims 36-38 further comprising setting the TSN number to the initial value and fully resetting the MAC-e/es when a cell reselection occurs.

45. The method as in claim 44 wherein the setting of the TSN and the resetting of the MAC-e/es occurs when the WTRU performs cell reselection.

46. The method as in claim 44 wherein the setting of the TSN and the resetting of the MAC-e/es occurs when a serving radio network subsystem (SRNS) relocation occurs.

47. The method as in claim 46 further comprising the RNC signaling the MAC-e/es reset via an explicit MAC-e/es reset indicator.

48. The method as in claim 46 or 47 further comprising the WTRU implicitly detecting that the SRNS relocation has occurred based on a new U-RNTI.

49. The method as in any one of claims 36-38 further comprising setting up the MAC-e and MAC-es entities per E-DCH resource set.

50. The method as in claim 49 further comprising the WTRU and the RNC resetting the TSN or resetting the MAC-e/es entity each time resources are released.

51. A wireless transmit receive unit configured to perform the method as in any one of claims 1-50.

52. A Node B configured to perform the method as in any one of claims 1-50.

53. An integrated circuit configured to perform the method as in any one of claims 1-50.

ABSTRACT

A method of managing resources in a wireless transmit receive unit (WTRU). The method includes setting up a medium access control (MAC)-es and MAC-e entity when the WTRU makes a random access channel (RACH) access attempt.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ITC-2-1891.00.US
		Application Number	
Title of Invention	METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE		
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-2-1891.00.US
		Application Number	
Title of Invention	METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE		

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Application Information:

Title of the Invention	METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE		
Attorney Docket Number	ITC-2-1891.00.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)		Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ITC-2-1891.00.US
		Application Number	
Title of Invention	METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE		

Publication Information:
☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not been and will not be the subject of an application filed in another country, or under a multilateral agreement, that requires publication at eighteen months after filing.
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Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
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Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number		ITC-2-1891.00.US	
		Application Number			
Title of Invention		METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE			
Organization Name		INTERDIGITAL PATENT HOLDINGS			
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Signature		/Matthew I. Cohen/		Date (YYYY-MM-DD) 2007-10-25	
First Name	Matthew I.	Last Name	Cohen	Registration Number	48133

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Application Number:				
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Title of Invention:	METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE			
First Named Inventor/Applicant Name:	Diana Pani			
Filer:	Thomas A Mattioli/Karen Lynch			
Attorney Docket Number:	ITC-2-1891.00.US			
Filed as Large Entity				
Provisional Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Provisional application filing	1005	1	210	210
Pages:				
Claims:				
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Patent-Appeals-and-Interference:				
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Miscellaneous:				
Total in USD (\$)				210

Electronic Acknowledgement Receipt

EFS ID:	2367977
Application Number:	60982528
International Application Number:	
Confirmation Number:	1431
Title of Invention:	METHOD TO MANAGE AND SETUP MAC-e/es RESOURCES IN CELL-FACH STATE
First Named Inventor/Applicant Name:	Diana Pani
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Filer:	Thomas A Mattioli/Karen Lynch
Filer Authorized By:	Thomas A Mattioli
Attorney Docket Number:	ITC-2-1891.00.US
Receipt Date:	25-OCT-2007
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Time Stamp:	14:34:51
Application Type:	Provisional

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Submitted with Payment	yes
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RAM confirmation Number	7755
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	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
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2	Application Data Sheet	1891_00_US_ADS_Form_S B_14.pdf	1064478 0d81c7810c57201d02eef298eca95a728e3ab548	no	5
Warnings:					
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3	Fee Worksheet (PTO-06)	fee-info.pdf	8157 00343524965a61a1fbb4a12feca073fbc6ca1147	no	2
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