

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:23-cv-491	DATE FILED 10/19/2023	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF INNOVATIVE SONIC LIMITED AND CELERITY IP, LLC		DEFENDANT VERIZON COMMUNICATIONS INC. AND CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 9,237,489 B2	1/12/2016	INNOVATIVE SONIC LIMITED
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
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3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:23-cv-489	DATE FILED 10/19/2023	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF INNOVATIVE SONIC LIMITED AND CELERITY IP, LLC		DEFENDANT AT&T INC., AT&T CORP., AT&T MOBILITY LLC, AT&T MOBILITY II LLC, AND AT&T SERVICES, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 9,237,489 B2	1/12/2016	INNOVATIVE SONIC LIMITED
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
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5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director

Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

Petitioners' Exhibit 1010, p. 2
AT&T et al v. Innovative Sonic & Celerity
IPR2024-01144

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:23-cv-490	DATE FILED 10/19/2023	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF INNOVATIVE SONIC LIMITED AND CELERITY IP, LLC		DEFENDANT T-MOBILE USA, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 U.S. 9,237,489 B2	1/12/2016	INNOVATIVE SONIC LIMITED
2		
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4		
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
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3			
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5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/282,974	01/12/2016	9237489	1291-013.101	7758

106622 7590 12/22/2015
Blue Capital Law Firm, P.C.
611 Anton Blvd., Suite 1050
Costa Mesa, CA 92626

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 1112 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Richard Lee-Chee Kuo, Taipei, TAIWAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to : **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

106622
Blue Capital Law Firm, P.C.
611 Anton Blvd., Suite 1050
Costa Mesa, CA 92626

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101	7758

TITLE OF INVENTION:

METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$960	12/10/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
Mandish K. Randhawa	2475	370-331000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 **Blue Capital Law Firm, P.C.**

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

INNOVATIVE SONIC CORPORATION

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Taipei City, Taiwan

Please check the appropriate assignee category or categories (will not be printed on the patent) :

☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are enclosed:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), or credit any overpayment, to Deposit Account Number

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Sang N. Dang/

Date December 9, 2015

Typed or printed name Sang N. Dang

Registration No. 51,186

This collection of information is required by 37 CFR 1.311. 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 12 minutes to complete, including gathering, preparing and submitting the completed application 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Lee-Chee Kuo
Title: METHOD AND APPARATUS FOR SECONDARY CELL RELEASE
DURING HANDOVER IN A WIRELESS COMMUNICATION
SYSTEM
Serial No.: 13/282,974 Filed: October 27, 2011
Examiner: Mandish K. Randhawa Group Art Unit: 2473
Attorney Docket No.: 1291-013.101 (IS 0990192-US)

**CERTIFICATE OF EFS-WEB TRANSMISSION
UNDER 37 CFR § 1.8**

I hereby certify that the enclosed 1 Page Issue Fee Transmittal; and Payment by Credit Card are being transmitted to the United States Patent and Trademark Office via EFS-Web on December 9, 2015.

Date: December 9, 2015

/Sandy Kim/
Sandy Kim

Mailing Address:

BLUE CAPITAL LAW FIRM, P.C. (Customer No.: 106622)
611 Anton Blvd., Suite 1050
Costa Mesa, California 92626
Tel: 714-839-3800
Fax: 714-795-2995

Electronic Patent Application Fee Transmittal				
Application Number:		13282974		
Filing Date:		27-Oct-2011		
Title of Invention:		METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM		
First Named Inventor/Applicant Name:		Richard Lee-Chee Kuo		
Filer:		Sang N. Dang/Sandy Kim		
Attorney Docket Number:		1291-013.101		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt

EFS ID:	24307446
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	106622
Filer:	Sang N. Dang/Sandy Kim
Filer Authorized By:	Sang N. Dang
Attorney Docket Number:	1291-013.101
Receipt Date:	09-DEC-2015
Filing Date:	27-OCT-2011
Time Stamp:	13:32:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$960
RAM confirmation Number	22997
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		1291-013-101--IssueFeeAsFiled.pdf	63390 4673f4b9524d57c75e290e8ebb5b4e9e599f1255	yes	2
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Issue Fee Payment (PTO-85B)		1	1	
	Miscellaneous Incoming Letter		2	2	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30859 f7a4987393f7c0be05e8672668b6dbdc5b1d707a	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			94249		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

106622 7590 09/10/2015
Blue Capital Law Firm, P.C.
611 Anton Blvd., Suite 1050
Costa Mesa, CA 92626

EXAMINER	
RANDHAWA, MANDISH K	
ART UNIT	PAPER NUMBER
2475	

DATE MAILED: 09/10/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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13/282,974 10/27/2011 Richard Lee-Chee Kuo 1291-013.101 7758

TITLE OF INVENTION: METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	12/10/2015

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

106622 7590 09/10/2015
Blue Capital Law Firm, P.C.
611 Anton Blvd., Suite 1050
Costa Mesa, CA 92626

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101	7758

TITLE OF INVENTION: METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	12/10/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
RANDHAWA, MANDISH K	2475	370-331000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101	7758

106622 7590 09/10/2015
Blue Capital Law Firm, P.C.
611 Anton Blvd., Suite 1050
Costa Mesa, CA 92626

EXAMINER

RANDHAWA, MANDISH K

ART UNIT PAPER NUMBER

2475

DATE MAILED: 09/10/2015

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. 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 12 minutes to complete, including gathering, preparing, and submitting the completed application 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of the law.

Notice of Allowability	Application No. 13/282,974	Applicant(s) KUO, RICHARD LEE-CHEE	
	Examiner MANDISH RANDHAWA	Art Unit 2475	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication(s) filed on 4/28/15.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1,3-6,12,14-17,23-34, renumbered as 1-22. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. ☐ Notice of References Cited (PTO-892) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☐ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/MAN PHAN/
Primary Examiner, Art Unit 2475

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2040	(h04w36/0055 or h04w76/064).cpc.	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:39
L2	1	(source or first or origin\$4) near2 (base station or e\$nb or e\$node\$b or access point or "ap") with (s\$cell or secondary adj cell or complimentary adj cell) near5 (assign\$4 or configur\$4 or allocat\$4 or associat\$4) near6 (user equipment or "ue" or mobile (terminal or node or device or station) or "ms") same (target or destination or terminat\$4 or second) near2 (base station or e\$nb or e\$node\$b or access point or "ap") same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:42
L3	16	(source or first or origin\$4) near2 (base station or e\$nb or e\$node\$b or access point or "ap") with (s\$cell or secondary adj cell or complimentary adj cell) with(user equipment or "ue" or mobile (terminal or node or device or station) or "ms") same (target or destination or terminat\$4 or second) near2 (base station or e\$nb or e\$node\$b or access point or "ap") same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:43
L4	5	((source or first or origin\$4) near2 (base station or e\$nb or e\$node\$b or access point or "ap") with (s\$cell or secondary adj cell or complimentary adj cell) with(user equipment or "ue" or mobile (terminal or node or device or station) or "ms") same (target or destination or terminat\$4 or second) near2 (base station or e\$nb or e\$node\$b or access point or "ap") same (hand\$over or hand\$off)) and 1	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:44
L5	4	((source or first or origin\$4) near2 (base station or e\$nb or e\$node\$b or access point or "ap") with (s\$cell or secondary adj cell or complimentary adj cell) with(user equipment or "ue" or mobile (terminal or node or device or station) or "ms") same (target or destination or terminat\$4 or second) near2 (base station or e\$nb or e\$node\$b or access point or "ap") same (hand\$over or hand\$off)).clm.	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:54
L6	3	5 not 4	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:55

EAST Search History (Prior Art)

L7	1	"13282974"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:56
L8	55593	(kuo.in. or innovative.as.)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:57
L9	1	3 and 8	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:57
L10	1	(\$5index or list or all) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off) and 8	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:58
L11	10	(\$5index or list or all) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off) and 1	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:58
L12	7	11 not 4	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 13:58
L13	1	((source or first or origin\$4 or \$5index or list or all) with (base station or e\$nb or e\$node\$b or access point or "ap") with (s\$cell or secondary adj cell or complimentary adj cell) near5 (assign\$4 or configur\$4 or allocat\$4 or associat\$4 or current\$4 or initial\$4) near6 (user equipment or "ue" or mobile (terminal or node or device or station) or "ms") same (target or destination or terminat\$4 or second) near2 (base station or e\$nb or e\$node\$b or access point or "ap") same (hand\$over or hand\$off)).clm.	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/24 14:01
S2	1	"13282974"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 14:51
S3	158	(secondary cell or s\$2cell) with releas\$4 same (hand\$3over or hand\$3off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:04
S4	1	(secondary cell or s\$2cell) with releas\$4 same (hand\$3over or hand\$3off) same source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:05
S5	12	(secondary cell or s\$2cell) with releas\$4 same (hand\$3over or hand\$3off) and source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:05

EAST Search History (Prior Art)

S6	18	(secondary cell or s\$2cell) with (delet\$4 or remov\$4 or releas\$4) same (hand\$3over or hand\$3off) and source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:07
S7	4	(secondary cell or s\$2cell) same (rrc\$3connection\$3re\$configuration) same mobility\$control\$7 same (hand\$3over or hand\$3off) and source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:16
S8	19	(secondary cell or s\$2cell) same (rrc\$3connection\$3re\$configuration) same mobility\$control\$7 same (hand\$3over or hand\$3off) and (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:18
S9	15	S8 not S7	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:18
S10	10	(secondary cell or s\$2cell) with (re\$leas\$5) same (rrc\$3connection\$3re\$configuration) same (hand\$3over or hand\$3off) and (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:22
S11	27	(secondary cell or s\$2cell) with (re\$leas\$5) and (rrc\$3connection\$3re\$configuration) and s\$cell\$3to\$releas\$6 and (hand\$3over or hand\$3off) and (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:23
S12	23	S11 not S9	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:24
S13	86	(s\$2cell\$2to\$2releas\$2list)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:30
S14	41	(s\$2cell\$2to\$2releas\$2list) same (s\$cell\$2 near4 index)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:30
S15	41	(s\$2cell\$2to\$2releas\$2list) same (s\$cell\$2 near4 (indic\$4 or all or index))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:32
S16	0	S15 not S14	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:32
S17	45	S13 not S14	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:33
S18	43	S17 and (hand\$4over or hand\$4off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:33

EAST Search History (Prior Art)

S19	1	(hand\$over\$preparation\$15) same (list or all or index) with (s\$cell or secondary cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:40
S20	70	(hand\$over\$25) same (list or all or index) with (s\$cell or secondary cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:41
S21	20	(hand\$over\$25) same (list or all or index) with (s\$cell or secondary cell) same (re\$leas\$4 or remov\$4 or modif\$7 or delet\$4) with s\$cell	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:42
S22	3	"2011120716"	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:48
S23	3	(hand\$4over\$1 or hand\$4off\$1) adj3 prepar\$25 same (s\$cell or secondary near2 cell) same (releas\$4 or modif\$4 or remov\$4)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:50
S24	7	(hand\$4over\$1 or hand\$4off\$1) adj3 prepar\$25 same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:56
S25	5	S24 not S23	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:56
S26	12	((hand\$4over\$1 or hand\$4off\$1) adj3 prepar\$25 or hand\$2over\$preparation\$2information) same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:58
S27	5	S26 not S24	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:59
S28	20	(releas\$4) near5 (all or index or list) with (s\$cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:00
S29	3	(hand\$2over\$preparation\$2information) same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:03
S33	3	(hand\$2over\$preparation\$25) same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:05
S34	1	(hand\$2over\$preparation\$25) and (s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:06

EAST Search History (Prior Art)

S35	4686	(s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:06
S36	357	(information or indicator or target (\$2node\$2b or e\$nb) or tag) with (s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:07
S37	4	(information or indicator or tag) same target (\$2node\$2b or e\$nb) same (s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:08
S38	2	"20110026493"	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:12
S39	304	(configur\$7 with (secondary near3 cell or s\$2cell)) and (releas\$4 with (secondary near3 cell or s\$2cell)) and (hand\$4over or hand\$4off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:15
S40	147	(configur\$7 with (secondary near3 cell or s\$2cell)) and (releas\$4 with (secondary near3 cell or s\$2cell)) same (hand\$4over or hand\$4off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:15
S41	182	(configur\$7 with (secondary near3 cell or s\$2cell)) and (releas\$4 with (secondary near3 cell or s\$2cell)) same (hand\$4over or hand\$4off or rrc\$connection\$reconfiguration)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:16
S42	14	(s\$cell\$2to\$2releas\$4list) same s\$cell\$4index	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:21
S43	1	("8693437").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/01/21 16:42
S44	13	(source near4 (RAT or node or e\$node\$b or e\$nb or network)) same (message or indicat\$7 or information) with (s\$cell or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:48
S45	13	(source near4 (RAT or node or e\$node\$b or e\$nb or network)) same (message or indicat\$7 or information) with (s\$cell or s\$cell\$index or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:48

EAST Search History (Prior Art)

S46	13	(source near4 (RAT or node or e\$node\$b or e\$nb or network or ran)) same (message or indicat\$7 or information) with (s\$cell or s\$cell\$index or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network or ran)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:48
S47	14	(source near4 (RAT or node or e\$node\$b or e\$nb or network or ran or rnc)) same (message or indicat\$7 or information) with (s\$cell or s\$cell\$index or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network or ran or rnc)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:50
S48	2	((("20110070880") or ("30100075684") or ("6400951")).PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/01/21 17:00
S49	1	("20100075684").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/01/21 17:03
S50	0	(rrc\$2conn\$9reconfig\$9) same (\$10releas\$4s\$cell\$10)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:13
S51	114	(rrc\$2conn\$9re\$config\$9) same (s\$cell\$10)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:16
S52	22	(rrc\$2conn\$9re\$config\$9 or hand\$2over near4 command) same (s\$cell\$2releas\$8)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:38
S53	85	(rrc\$2conn\$9re\$config\$9 or hand\$2over) same (s\$cell\$2releas\$8)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:39
S54	63	S53 not S52	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:40
S55	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (all near4 (s\$1cell or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:47
S56	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (all near6 (s\$cell or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:48
S57	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (all near6 (s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:48

EAST Search History (Prior Art)

S58	7	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 ((s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:49
S59	7	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (("CC" or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:52
S60	7	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 ((cc\$2 or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:52
S61	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (all or every or each) near7 ((cc\$2 or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:53
S62	15	(inter\$2 or different or another or other or second or target) adj2 (e\$nodeb or e\$nb or base station or "bs") with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 ((cc\$2 or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:55
S63	8	S62 not S60	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:56
S64	1	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command) same (rrc\$2connection\$2re\$10)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:05
S65	509	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:06
S66	14	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command) and (secondary near3 cell or s\$cell) with (releas\$4 or remov\$4 or de\$activat\$5 or delet\$4)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:07
S67	61	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command) and (secondary near3 cell or s\$cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:30
S68	47	S67 not S66	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:31
S69	15	scellto releaselist same mobilitycontrolinfo	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:37

EAST Search History (Prior Art)

S70	6	(inter\$e\$nb or inter\$e\$nodeb) with (handover) same (scell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:53
S71	35	(inter\$e\$nb or inter\$e\$nodeb) with (handover) and (scell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:54
S72	29	S71 not S70	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:54
S73	1	"13282974"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/22 13:28
S74	1	("20100062774").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/08/22 11:17
S75	46	source near3 (base station or e\$nb or e\$node\$b or "bs") same target near3 (base station or e\$nb or e\$node\$b or "bs") same s\$cell	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:39
S76	1	source near3 (base station or e\$nb or e\$node\$b or "bs") same target near3 (base station or e\$nb or e\$node\$b or "bs") same s\$cell and kuo.in.	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:51
S77	1	source near3 (base station or e\$nb or e\$node\$b or "bs") same target near3 (base station or e\$nb or e\$node\$b or "bs") same s\$cell and innovative.as.	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:52
S78	22	source near3 (base station or e\$nb or e\$node\$b or "bs") same target near3 (base station or e\$nb or e\$node\$b or "bs") same (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$cell or secondary adj2 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:54
S79	2861	(base station or e\$nb or e\$node\$b or "bs") same (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$cell or secondary adj2 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:55
S80	388	(base station or e\$nb or e\$node\$b or "bs") same (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:55
S81	31	(base station or e\$nb or e\$node\$b or "bs") same (\$5index or list) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 11:57

EAST Search History (Prior Art)

S82	18	S81 not S75	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:01
S83	6	((("20100142485") or ("20120008600") or ("20110134774") or ("20120002643") or ("20110045863") or ("20120026977"))).PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/08/22 12:07
S84	2	S83 and (secondary adj3 cell or scell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:11
S85	2	"20090238144"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:18
S86	163	(hand\$over\$20 or hand\$off\$20) with (includ\$4 or configured or assigned or allocated or current\$4) with (scell or secondary adj3 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:21
S87	47	(hand\$over\$20 or hand\$off\$20) with (includ\$4 or configured or assigned or allocated or current\$4) with (scell or secondary adj3 cell) same target	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:21
S88	2	((("20110200014") or ("20060013165"))).PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/08/22 12:30
S89	10	sCellToReleaseList same target	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:39
S90	11	(sCellToReleaseList or SCell index) same target	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:41
S91	1	S90 not S89	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:41
S92	38	inter\$2 adj (frequency or base station or e\$node\$b or e\$nb) near5 handover same (scell or secondary adj3 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:49
S93	7	(prior or before) near4 handover with (scell or secondary adj3 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:55
S94	29	(prior or before) near4 handover same (scell or secondary adj3 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:56
S95	22	S94 not S93	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 12:56

EAST Search History (Prior Art)

S96	44	(\$5index or list) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:11
S97	44	(\$5index or list) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial or all) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:12
S98	31	(base station or e\$node\$b or "bs") same (\$5index or list) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:13
S99	13	S97 not S98	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:13
S100	1	"20110317645"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:14
S101	2	"20110134774"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:15
S102	44	(\$5index or list or all) with (configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:24
S103	755	(configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:24
S104	184	(configured or assigned or allocated or associated or correspond\$4 or current\$4 or initial) with (s\$1cell or secondary adj2 cell) with (user equipment or "ue" or mobile) same (hand\$over or hand\$off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:25
S105	166	S104 not S96	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:29
S106	16	(s\$cell\$2to\$2releas\$4list) same s\$cell\$4index and handover	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:55
S107	99	(s\$cell\$2to\$2releas\$4list) same handover	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 14:58
S108	5	(s\$cell\$2to\$2releas\$4list) with (configured or all) near3 (s\$cell or secondary cell) same handover	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 15:01

EAST Search History (Prior Art)

S10 9	1	"20100222059"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/08/22 15:15
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EAST Search History (Interference)

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Search Notes 	Application/Control No. 13282974	Applicant(s)/Patent Under Reexamination KUO, RICHARD LEE-CHEE
	Examiner MANDISH RANDHAWA	Art Unit 2475

CPC- SEARCHED		
Symbol	Date	Examiner
H04W 36/0055, H04W 76/064	8/24/2015	MR

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	331,332	1/21/2015	MR

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor/Double Patenting search	1/22/2015	MR
Consulted with Primary Examiner, Rasheed Gidado, regarding claim allowability	8/24/2015	MR
Updated East text /cpc search	8/24/2015	MR
Performed Inventor/Double Patenting search	8/24/2015	MR
Performed Interference search	8/24/2015	MR
Consulted with SPE, Dang Ton, regarding claim allowability	8/24/2015	MR
Consulted with Primary Examiner, Man Phan, regarding claim allowability	9/2/2015	MR

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
H04W	36/0055, 76/064	8/24/2015	MR

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Issue Classification 	Application/Control No. 13282974	Applicant(s)/Patent Under Reexamination KUO, RICHARD LEE-CHEE	
	Examiner MANDISH RANDHAWA	Art Unit 2475	

CPC						
Symbol					Type	Version
H04W		36		0055	F	2013-01-01
H04W		76		064	I	2013-01-01
						
						
						
						
						
						
						
						
						
						
						
						
						

CPC Combination Sets					
Symbol		Type	Set	Ranking	Version
					
					

/MANDISH RANDHAWA/ Examiner.Art Unit 2475	09/03/2015	Total Claims Allowed: 20	
(Assistant Examiner)	(Date)		
/MAN PHAN/ Primary Examiner.Art Unit 2475	09/04/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

Issue Classification 	Application/Control No. 13282974	Applicant(s)/Patent Under Reexamination KUO, RICHARD LEE-CHEE
	Examiner MANDISH RANDHAWA	Art Unit 2475

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	21	17	18	33										
	2		18	20	34										
2	3		19												
3	4		20												
8	5		21												
10	6		22												
	7	11	23												
	8	4	24												
	9	6	25												
	10	5	26												
	11	7	27												
12	12	9	28												
	13	22	29												
13	14	15	30												
14	15	17	31												
19	16	16	32												

/MANDISH RANDHAWA/ Examiner.Art Unit 2475 (Assistant Examiner)	09/03/2015 (Date)	Total Claims Allowed: 20	
/MAN PHAN/ Primary Examiner.Art Unit 2475 (Primary Examiner)	09/04/2015 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 6

Docket No. 1291-013.101(IS0990190-US)
Appl. No. 13/282,974
Amdt. Dated April 28, 2015
Reply to Office Action of January 28, 2015

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 13/282,974
Confirmation No. : 7758
Applicant : Richard Lee-Chee Kuo
Filed : October 27, 2011
Title : METHOD AND APPARATUS FOR SECONDARY CELL RELEASE
DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
TC/A.U. : 2475
Examiner : Mandish K. Randhawa
Docket No. : 1291-013.101(IS0990190-US)
Customer No. : 106622

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the non-final Office Action mailed on January 28, 2015, having a three-month period for filing a response to **April 28, 2015**, please amend the above-identified application as follows:

Amendments to Claims begin on page 2.

Remarks begin on page 6.

IN THE CLAIMS:

1. (Currently Amended) A method of Secondary Cell (SCell) release during handover comprising:
 configuring at least one SCell by a source eNB to a User Equipment (UE); and
 including information by the source eNB in a *HandoverPreparationInformation* message for a target eNB to control SCell release in the UE during a handover,
 wherein the information indicates SCell indexes of all SCells configured to the UE before the handover, thereby allowing the target eNB to include a *sCellToReleaseList* with all the SCells configured to the UE in a handover command for the UE to release the SCells included in the *sCellToReleaseList*.
2. (Cancelled)
3. (Currently Amended) The method of claim[[2]]1, wherein the handover command corresponds to an *RRCConnectionReconfiguration* message including *mobilityControlInfo*.
4. (Original) The method of claim 3, wherein the *RRCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.
5. (Currently Amended) The method of claim 1, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request [[a]] the handover.
6. (Original) The method of claim 1, wherein the handover is an inter-eNB handover.
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) A communication device for use in a wireless communication system, the communication device comprising:

a control circuit;

a processor installed in the control circuit; and

a memory installed in the control circuit and coupled to the processor;

wherein the processor is configured to execute a program code stored in memory to:

configuring at least one SCell by a source eNB to a User Equipment (UE); and

including information by the source eNB in a *HandoverPreparationInformation* message for a target eNB to control SCell release in the UE during a handover,

wherein the information indicates SCell indexes of all SCells configured to the UE before the handover, thereby allowing the target eNB to include a *sCellToReleaseList* with all the SCells configured to the UE in a handover command for the UE to release the SCells included in the *sCellToReleaseList*.

13. (Cancelled)

14. (Currently Amended) The device of claim [[13]] 12, wherein the handover command corresponds to an *RRCCConnectionReconfiguration* message including *mobilityControlInfo*.

15. (Original) The device of claim 14, wherein the *RRCCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.

16. (Currently Amended) The device of claim 12, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request [[a]]the handover.

17. (Original) The device of claim 12, wherein the handover is an inter-eNB handover.
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
21. (Cancelled)
22. (Cancelled)
23. (New) The method of claim 1, wherein a *RRCCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.
24. (New) The method of claim 3, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request the handover.
25. (New) The method of claim 4, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request the handover.
26. (New) The method of claim 3, wherein the handover is an inter-eNB handover.
27. (New) The method of claim 4, wherein the handover is an inter-eNB handover.
28. (New) The method of claim 5, wherein the handover is an inter-eNB handover.
29. (New) The device of claim 12, wherein a *RRCCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.

30. (New) The device of claim 14, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request the handover.

31. (New) The device of claim 15, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request the handover.

32. (New) The device of claim 14, wherein the handover is an inter-eNB handover.

33. (New) The device of claim 15, wherein the handover is an inter-eNB handover.

34. (New) The device of claim 16, wherein the handover is an inter-eNB handover.

REMARKS

Claims 1-22 are pending in the application. In the Office Action, claims 1, 5, 6, 12, 16, and 17 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by R2-104791. *See* Office Action, Page 2, ¶ 2. Furthermore, claims 1-6 and 12-17 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over the combination of R2-104991 and R2-104791. *See* Office Action, Page 3, ¶ 5. In addition, claims 7-11 and 18-22 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over the combination of R2-104991 and R2-104421. *See* Office Action, Page 5, ¶ 6.

Claims 2, 7-11, 13, and 18-22 have been cancelled. Claims 1, 3, 5, 12, 14 and 16 have been amended. Claims 23-34 have been added. No new matter has been added. Applicant respectfully requests reconsideration of the claims as amended.

The amendments in claims 1 and 12 are supported at least by Paragraphs [0041], [0042], and [0044] of the present application, which state:

[0041] Before sending the handover message to the UE, the source eNB firstly selects the target eNB. **The source eNB may also provide the target eNB with a list of cells. The target eNB decides which serving cells are to be configured for use after handover**, which may include cells other than the ones indicated by the source eNB. The target eNB generates the message containing one Pcell or at least one SCell along with one Pcell for initiating the handover. After receiving the handover message, the UE attempts to access the target PCell at the first available RACH occasion according to the defined Random Access resource selection. Upon successful completion of the handover, the UE sends a message to confirm the handover.

[0042] However, currently there is no information included in *RRConnectionReconfiguration* message for a UE to distinguish whether the handover is an intra-eNB or inter-eNB handover. Accordingly, the UE cannot decide whether or not to release the current SCells upon handover. As a result, the target eNB has to include a *sCellToReleaseList* with all valid SCell indexes in the handover command for the UE to release all the potentially configured SCells even when there is actually no SCell configured to the UE.

[0044] According to one aspect the disclosure, to avoid the above-described signaling overhead during handover, information is included by the source eNB in the *HandoverPreparationInformation* message for the target eNB to control SCell release in a UE during an inter-eNB handover procedure. More specifically, **the information indicates the SCell indexes of all the SCells configured to the**

concerned UE, thereby allowing the target eNB to include the *sCellToReleaseList* with the SCells configured to the UE in the *RRCCConnectionReconfiguration* message so that the UE can release the Scell(s) according to the *sCellToReleaseList*.

See Application, Paragraphs [0041], [0042], and [0044], emphasis added.

As described in Paragraphs [0041], [0042], and [0044] of the present application, there could be two SCell lists. One list indicates the potential SCells for use after handover, while the other list indicates the SCells that are configured to the UE before handover and that are to be released due to handover.

Claims 1 and 12 recite “wherein the information indicates SCell indexes of all SCells configured to the UE before the handover, thereby allowing the target eNB to include a *sCellToReleaseList* with all the SCells configured to the UE in a handover command for the UE to release the SCells in the *sCellToReleaseList*.” Applicant respectfully submits that no combination of R2-104791, R2-104991, and/or R2-104421 discloses the noted limitations.

More specifically, Applicant respectfully submits that the information disclosed in claims 1 and 12 indicates all SCells that are configured to the UE by the source eNB before handover and that are to be released by the UE due to the handover, while the list in R2-104791 indicates candidate SCells to be configured to the UE for use after handover.

According to § 1 in R2-104791, it was agreed in RAN2#70bis that a list of candidate SCells will be transmitted from source eNB to target eNB. The related discussions and agreements in RAN2#70bis are provided in R2-105223 “Report of 3GPP TSG RAN WG2 meeting #70bis, Stockholm, Sweden, June 28 – July 2, 2010). Section 7.1.1.4 of R2-105223 states:

7.1.1.4 CC/cell management: CC/cell change

Aspects of CC/cell management related to mobility/ addition/removal e.g.:

- ***What information is exchanged between source and target eNB to facilitate Scell selection ?***
 - *What is activation status of Scells after handover ?*
 - *Note: Issue of optimised PCC change handling without handover will be rediscussed only in RAN2#71.*
- => Including outcome of [70#10] LTE CA: Information provided to target eNB at handover [ZTE]*

=> Including outcome of [70#11] LTE CA: Scell activation status after handover
[Motorola]

=> Email discussion report [70#10]: Information provided to target eNB

R2-103720: Email summary of [70#10] LTE CA: Information provided to target eNB ZTE
Report

=> Updated to R2-104060

R2-104060: Email summary of [70#10] LTE CA: Information provided to target eNB ZTE
Report

R2-103567: SCell selection at CA handover Qualcomm Incorporated Disc

R2-103598: Candidate Scell List and Additional Measurement Results in CA Panasonic
Disc

R2-103913: Transfer of Information at handover Motorola Disc

R2-103631: Information Forwarding for Scell Selection in CA Handover MediaTek Disc

R2-103526: Pcell and Scell candidate sets CATT Disc

Discussion:

After offline discussion:

- Based on offline discussion, some companies think not only the best cell should be reported but also additional cells should be reported.
- Companies do not agree on whether measurement results should be forwarded or not.
- ALU wonders whether it should only be aggregatable cells or any cell ? CATT assumes that if it is only aggregatable cells, the source eNB would have to know what the aggregatable cells of the target eNB are. Mediatek thinks if the source eNB does not know the aggregatable cells, this will introduce unnecessary reporting. Chairman does not see why we would restrict to aggregatable cells. It is important for the target to know if there is a strong cell on a frequency, even if that is not aggregatable. At least the target should not add another cell on that frequency.
- DT sees no reason to inform the source eNB about aggregatable cells. We should just forward strongest cells.
- ALU thinks the cells listed by the source should be reasonable for aggregation as far as the source is concerned , so e.g. the RSRP should not be to much different. QC thinks if the source eNB is only to include "sensible" cells, then source and target RRM strategies should be aligned. NTT DCM agrees: an eNB might have policies based on traffic load and radio quality. E.g. even if the quality is relatively low, if also the load is low a target eNB might still want to add an Scell, but the source eNB might not be aware of such strategies.

- Nokia wonders why Scells preferably need to have similar radio quality in CA ? NTT DCM refers to their simulation results from the last meeting: if you add a user to a bad CC, that user will most likely take away some of the capacity of that CC, although it would preferably have been given to somebody else.
- Panasonic thinks the measurement information should be transferred to give the target eNB the complete picture.
- CATT wonders why we would report on cells not part of the target eNB ? Mediatek shares the concern and is worried about network interface overhead. DT thinks this should not be a concern.
- LG wonders how the source eNB can know the best cell on each frequency without additional reporting from the UE ? Nokia assumes network should configure the necessary events for this.

Agreements:

To enable Scell selection in the target eNB, the source can provide a list indicating at least the best cell of each reported frequency (FFS if more cells on a freq can be reported). List contains entries of (freq, L1 identity). The list starts with the "strongest strongest cell", and is ordered based on radio quality going down.

The source eNB does not need to be aware of the capability of the target eNB w.r.t. aggregation; i.e the list could include cells even from other eNB's, or cells that the target eNB cannot aggregate together.

Is the source eNB somehow only including "sensible cells" in the list (e.g. cells with not to much difference in radio quality), or do we need to include radio measurements for the cells in the list so that the target eNB can decide what is sensible.

See R2-105223, Section 7.1.1.4, emphasis and highlight added.

As noted in highlight, the above discussion was based on R2-104060 "Information provided to target eNB at handover." Section 1 of R2-104060 states:

1 Introduction

At last RAN2#70 meeting it was agreed that in Rel10, during the handover procedure, the Pcell is selected by the source eNB as in Rel8/9, to ensure backwards compatibility. And, as in Rel8/9, the possibility for the target eNB to override the source eNB decision and change the Pcell is maintained. However, it was agreed that nothing is promoted to enhance this behavior, e.g. there is no need to discuss additional information to be provided to the target eNB.

RAN2 also agreed that it is up to the target eNB to decide which SCells to be configured at the handover. However, it was not clear what kind of information is needed for the target eNB to make this decision. So the email discussion will discuss the following issues [1]:

Issue1: What information does the source eNB provide to the target eNB for enabling it to make a sensible Scell selection ? E.g. measurement information, candidate list,...

Issue2: Do we need additional UE measurement reporting for providing this information?

See R2-104060, Section 1, highlight added.

Based on the above highlighted text of Section 1 of R2-104060, it is clear the above-mentioned candidate list indicates SCells to be configured for use after handover.

As seen, the information recited in claims 1 and 12 indicates all SCells configured to the UE by the source eNB before handover and to be released by the UE due to the handover, while the list in R2-104791 indicates candidate SCells to be configured to the UE for use after handover. Therefore, the information recited in claims 1 and 12 are distinguishable from the list disclosed in R2-104791.

In addition, Paragraph 5 on Page 3 of the Office Action alleges:

Regarding claims 1 and 12, R2-104991 teaches a method of Secondary Cell (SCell) release during handover comprising: configuring at least one SCell by a source eNB to a User Equipment (UE) (§5.3.1.1); and including information by the source eNB in a message for a target eNB to control SCell release in the UE during handover (§5.3.1.3).

See Office Action, Page 3, Paragraph 5.

However, Section 5.3.1.3 of R2-104991 states:

As noted in highlight, the above discussion was based on R2-104060 “Information provided to target eNB at handover.” Section 1 of R2-104060 states:

Before sending the handover message to the UE, the source eNB prepares one or more target cells. The source eNB selects the target PCell. ***The source eNB may also provide the target eNB with a list of cells, in order of decreasing radio quality, which includes the best cell on each frequency for which measurement information is available.*** The source may also include available measurement information. ***The target eNB decides which SCells are configured for use after handover,*** which may include cells other than the ones indicated by the source eNB.

See R2-104060, Section 1, emphasis and highlight added.

Docket No. 1291-013.101(IS0990190-US)
Appl. No. 13/282,974
Amdt. Dated April 28, 2015
Reply to Office Action of January 28, 2015

Based on the emphasized and highlighted text, it is clear that the target eNB decides which SCells are configured for use after handover based on the candidate list provided by the source eNB. This is consistent with the above discussion.

Based on the foregoing, Applicant respectfully submits that claims 1, 3-6, 12, 14-17, and 23-34 are patentable over any combination of R2-104791, R2-104991, and/or R2-104421.

CONCLUSION

In view of the foregoing it is respectfully submitted that the pending claims are in condition for allowance. Reconsideration of the rejections is requested. Allowance of the claims at an early date is solicited. The Examiner is invited to contact Applicant's undersigned counsel by telephone at (714) 839-3800 to expedite the prosecution of this case should there be any unresolved matters remaining.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made.

Respectfully submitted,
Sang N. Dang
BLUE CAPITAL LAW FIRM, P.C.

Dated: April 28, 2015

/Sang N. Dang/

Reg. No. 51,186

Tel.: (714) 839-3800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Lee-Chee Kuo
Title: METHOD AND APPARATUS FOR SECONDARY CELL RELEASE
DURING HANDOVER IN A WIRELESS COMMUNICATION
SYSTEM
Serial No.: 13/282,974 Filed: October 27, 2011
Examiner: Mandish K. Randhawa Group Art Unit: 2473
Attorney Docket No.: 1291-013.101 (IS 0990192-US)

**CERTIFICATE OF EFS-WEB TRANSMISSION
UNDER 37 CFR § 1.8**

I hereby certify that the enclosed 2 Page Amendment Transmittal; and 11 Page
Amendment are being transmitted to the United States Patent and Trademark Office via EFS-
Web on April 28, 2015 .

Date: April 28, 2015

/Sandy Kim/
Sandy Kim

Mailing Address:

BLUE CAPITAL LAW FIRM, P.C. (Customer No.: 106622)
611 Anton Blvd., Suite 1050
Costa Mesa, California 92626
Tel: 714-839-3800
Fax: 714-795-2995

Electronic Acknowledgement Receipt

EFS ID:	22191069
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	106622
Filer:	Sang N. Dang/Sandy Kim
Filer Authorized By:	Sang N. Dang
Attorney Docket Number:	1291-013.101
Receipt Date:	28-APR-2015
Filing Date:	27-OCT-2011
Time Stamp:	15:05:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		1291-013-101-- ROAof01282015asFiled042820 15.pdf	193363 72050322d6722a889173e888c084ea38772 99b1d	yes	14

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Transmittal Letter	1	2
	Amendment/Req. Reconsideration-After Non-Final Reject	3	3
	Claims	4	7
	Applicant Arguments/Remarks Made in an Amendment	8	13
	Miscellaneous Incoming Letter	14	14
Warnings:			
Information:			
Total Files Size (in bytes):		193363	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.			

Amendment Transmittal Letter

Docket Number

1291-013.101

Address To
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Title of Invention

METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

First Named Inventor **Richard Lee-Chee Kuo**

Application No. **13/282,974**

Filing Date **October 27, 2011**

Examiner **Mandish K. Randhawa**

Art Unit **2475**

Transmitted herewith is an amendment in the above-identified application.

The fee has been calculated and is transmitted as shown below.

☐ Applicant claims Small Entity Status. See 37 CFR 1.27.

Fee Calculation

Claims as Amended

For	#Filed	#Previously Paid For	#Extra	Rate	Fee
Total Claims	22	- 22 =		x 80 =	
Total Indep. Claims	2	- 4 =		x 420 =	
Multiple Dependent Claims (check if applicable) ☐					
TOTAL					\$0

Method of Payment

☐ Deposit Account ☐ Credit Card ☐ Check ☐ Money Order ☐ Other: _____

Deposit Account Number _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

- ☐ Charge the fee(s) set forth above
☐ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17
☐ Charge fee(s) indicated above, **except for the filing fee**
☐ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on form PTO-2038.

Amount Grand Total _____ \$0

Amendment Transmittal Letter

Docket Number

1291-013.101

Correspondence Address

Customer Number 106622

-OR-

Name

Address

City

State

Country

Postal Code

Phone Number

E-mail Address

Certificate of Mailing by Express Mail

I hereby certify that this Amendment, accompanying documents, and fee (if appropriate) are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on the date indicated below:

(Date of Mailing)

(Typed or Printed Name of Person Mailing Correspondence)

(Signature of Person Mailing Correspondence)

("Express Mail" Mailing Label Number)

Certificate of Mailing by First Class Mail

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Certificate of Transmission

I hereby certify that this Amendment, accompanying documents, and fee (if appropriate) authorization are being facsimile transmitted to the United States Patent and Trademark Office on the date indicated below:

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(Signature of Person Transmitting Correspondence)

Signature Instructions

Select the name of the person who will electronically sign the Amendment from the drop-down box below.

If a practitioner is not present in the drop-down list, you must close this form and select 'Add Practitioner...' in the Form Manager's Utility menu.

Verify that the signatory information is correct and press the 'eSign' button to electronically sign the submission. If you prefer to sign the form manually, simply do not click the 'eSign' button; just print and manually sign.

Signatory Drop-Down Box

Sang N. Dang

Name

Sang N. Dang

Registration Number

51,186

Signatory Capacity

Attorney for Applicant(s)

E-mail Address

sdang@bluecapitallaw.com

eSign

/Sang N. Dang/

Date Signed

04/28/2015

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/282,974	Filing Date 10/27/2011	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☒ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	380
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	380

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	04/28/2015	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 22	Minus	** 22	= 0	X \$80 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	***4	= 0	X \$420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE						0	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/GLORIA J. TRAMMELL/

This collection of information is required by 37 CFR 1.16. 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 12 minutes to complete, including gathering, preparing, and submitting the completed application 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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101	7758

106622 7590 01/28/2015
Blue Capital Law Firm, P.C.
600 Anton Blvd., Suite 1000
Costa Mesa, CA 92626

EXAMINER

RANDHAWA, MANDISH K

ART UNIT	PAPER NUMBER
----------	--------------

2475

NOTIFICATION DATE	DELIVERY MODE
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01/28/2015

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@bluecapitallaw.com

Office Action Summary	Application No. 13/282,974	Applicant(s) KUO, RICHARD LEE-CHEE	
	Examiner MANDISH RANDHAWA	Art Unit 2475	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/27/11.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-22 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-22 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date <u>04/19/12, 01/07/14</u> . | 4) ☐ Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 5, 6, 12, 16 and 17 are rejected under pre-AIA 35 U.S.C. 102(a) as being anticipated by "Transferring of List of candidate SCells" (hereinafter "R2-104791").

Regarding claims 1 and 12, R2-104791 teaches a method of Secondary Cell (SCell) release during handover comprising: configuring at least one SCell by a source eNB to a User Equipment (§ 1); and including information by the source eNB in a *HandoverPreparationInformation* message for a target eNB to control SCell release in the UE during handover (§2.2).

Regarding claims 5 and 16, R2-104791 teaches the method of claim 1, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request a handover (§1, §2.2).

Regarding claims 6 and 17, R2-104791 teaches the method of claim 1, wherein the handover is an inter-eNB handover (§1, §2.2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

Art Unit: 2475

obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-6 and 12-17 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over “Introduction of Carrier Aggregation” (hereinafter “R2-104991”) in view of R2-104791.

Regarding claims 1 and 12, R2-104991 teaches a method of Secondary Cell (SCell) release during handover comprising: configuring at least one SCell by a source eNB to a User Equipment (UE) (§5.3.1.1); and including information by the source eNB in a message for a target eNB to control SCell release in the UE during handover (§5.3.1.3).

R2-104991 does not explicitly teach the information is included in a *HandoverPreparationInformation* message.

R2-104791 teaches including information, by the source eNB, in a *HandoverPreparationInformation* message for a target eNB (§1, §2.2).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the method of R2-104791 to include the information in a *HandoverPreparationInformation* message in the system of R2-104991. The motivation for doing this is to a matter of design choice.

Regarding claims 2 and 13, R2-104991 in view of R2-104791 teaches the method of claim 1, wherein the information indicates SCell indexes of all SCells configured to the UE, thereby allowing the target eNB to include a *sCellToReleaseList* with all the SCells configured to the UE in a handover command (§5.3.5.4, §5.3.10.3a of R2-104991).

Regarding claims 3 and 14, R2-104991 in view of R2-104791 teaches the method of claim 2, wherein the handover command corresponds to an *RRCCConnectionReconfiguration* message including *mobilityControlInfo* (§5.3.1.3 of R2-104991).

Regarding claims 4 and 15, R2-104991 in view of R2-104791 teaches the method of claim 3, wherein the *RRCCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure (§5.3.1.3 of R2-104991).

Regarding claims 5 and 16, R2-104991 in view of R2-104791 teaches the method of claim 1, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request a handover (§1, §2.2 of R2-104791).

Regarding claims 6 and 17, R2-104991 in view of R2-104791 teaches the method of claim 1, wherein the handover is an inter-eNB handover (§1, §2.2 of R2-104791 and §5.4.1 of R2-104991).

6. Claims 7-11 and 18-22 rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over R2-104991 in view of “Optimization of Intra-eNB Pcell change procedure” (hereinafter “R2-104421”).

Regarding claims 7-9 and 18-20, R2-104991 teaches a method of Secondary Cell (SCell) release during handover comprising: configuring at least one SCell by a source eNB to a User Equipment (UE) (§5.3.1.1); and the UE receives a handover command from a target eNB and releases some or all the configured SCells (§5.3.10.3a and §6.2.2).

R2-104991 does not explicitly teach including an indicator in a handover command by a target eNB for the UE to distinguish whether or not to release all the configured SCells.

R2-104421 teaches determining whether or not to release all configured SCells based on whether the handover is an intra-eNB or inter-eNB handover (§2.1 and §2.3.2).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the method of R2-104421 to distinguish whether or not to release all the configured SCells based on whether the handover is an intra-eNB or inter-eNB handover. The system of R2-104991 can be modified to include an indicator in a handover command, by a target eNB, for the UE to indicate whether the handover is intra-eNB or inter-eNB and release all configured SCells if the handover is an inter-eNB handover. The motivation for doing this is to reduce signaling overhead (§2.1 of R2-104421).

Regarding claims 10 and 21, R2-104991 in view of R2-104421 teaches the method of claim 7, wherein the handover command corresponds to an *RRConnectionReconfiguration* message including *mobilityControlInfo* (§5.3.1.3 of R2-104991).

Regarding claims 11 and 22, R2-104991 in view of R2-104421 teaches the method of claim 10, wherein the *RRConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure (§5.3.1.3 of R2-104991).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANDISH RANDHAWA whose telephone number is (571)270-5650. The examiner can normally be reached on M-R 7AM -4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MANDISH RANDHAWA/
Examiner, Art Unit 2475

/DANG TON/
Supervisory Patent Examiner, Art Unit 2475/D. T./
Supervisory Patent Examiner, Art Unit 2475

Notice of References Cited	Application/Control No. 13/282,974	Applicant(s)/Patent Under Reexamination KUO, RICHARD LEE-CHEE	
	Examiner MANDISH RANDHAWA	Art Unit 2475	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Introduction of Carrier Aggregation, R2-104991, August 23-27, 2010
	V	Optimization of Intra-eNB Pcell change procedure, R2-104421, August 23-27, 2010
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 13282974	Applicant(s)/Patent Under Reexamination KUO, RICHARD LEE-CHEE
	Examiner MANDISH RANDHAWA	Art Unit 2475

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	331,332	1/21/2015	MR

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor/Double Patenting search	1/22/2015	MR

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 13282974	Applicant(s)/Patent Under Reexamination KUO, RICHARD LEE-CHEE
	Examiner MANDISH RANDHAWA	Art Unit 2475

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant											☐ CPA											☐ T.D.											☐ R.1.47										
CLAIM		DATE																																									
Final	Original	01/22/2015																																									
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	22	✓																																									

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S2	1	"13282974"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 14:51
S3	158	(secondary cell or s\$2cell) with releas\$4 same (hand\$3over or hand\$3off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:04
S4	1	(secondary cell or s\$2cell) with releas\$4 same (hand\$3over or hand\$3off) same source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:05
S5	12	(secondary cell or s\$2cell) with releas\$4 same (hand\$3over or hand\$3off) and source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:05
S6	18	(secondary cell or s\$2cell) with (delet\$4 or remov\$4 or releas\$4) same (hand\$3over or hand\$3off) and source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:07
S7	4	(secondary cell or s\$2cell) same (rrc\$3connection\$3re\$configuration) same mobility\$control\$7 same (hand\$3over or hand\$3off) and source near4 (node\$2 b or e\$nb or base station) same (target or destination) near4 (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:16
S8	19	(secondary cell or s\$2cell) same (rrc\$3connection\$3re\$configuration) same mobility\$control\$7 same (hand\$3over or hand\$3off) and (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:18
S9	15	S8 not S7	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:18
S10	10	(secondary cell or s\$2cell) with (re\$leas\$5) same (rrc\$3connection\$3re\$configuration) same (hand\$3over or hand\$3off) and (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:22
S11	27	(secondary cell or s\$2cell) with (re\$leas\$5) and (rrc\$3connection\$3re\$configuration) and s\$cell\$3to\$releas\$6 and (hand\$3over or hand\$3off) and (node\$2 b or e\$nb or base station)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:23

EAST Search History (Prior Art)

S12	23	S11 not S9	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:24
S13	86	(s\$2cell\$2to\$2releas\$2list)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:30
S14	41	(s\$2cell\$2to\$2releas\$2list) same (s\$cell\$2 near4 index)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:30
S15	41	(s\$2cell\$2to\$2releas\$2list) same (s\$cell\$2 near4 (indic\$4 or all or index))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:32
S16	0	S15 not S14	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:32
S17	45	S13 not S14	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:33
S18	43	S17 and (hand\$4over or hand\$4off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:33
S19	1	(hand\$over\$preparation\$15) same (list or all or index) with (s\$cell or secondary cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:40
S20	70	(hand\$over\$25) same (list or all or index) with (s\$cell or secondary cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:41
S21	20	(hand\$over\$25) same (list or all or index) with (s\$cell or secondary cell) same (re\$leas\$4 or remov\$4 or modif\$7 or delet\$4) with s\$cell	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:42
S22	3	"2011120716"	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:48
S23	3	(hand\$4over\$1 or hand\$4off\$1) adj3 prepar\$25 same (s\$cell or secondary near2 cell) same (releas\$4 or modif\$4 or remov\$4)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:50
S24	7	(hand\$4over\$1 or hand\$4off\$1) adj3 prepar\$25 same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:56
S25	5	S24 not S23	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 15:56
S26	12	((hand\$4over\$1 or hand\$4off\$1) adj3 prepar\$25 or hand\$2over\$preparation\$2information)same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:58

EAST Search History (Prior Art)

S27	5	S26 not S24	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 15:59
S28	20	(releas\$4) near5 (all or index or list) with (s\$cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:00
S29	3	(hand\$2over\$preparation\$2information) same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:03
S33	3	(hand\$2over\$preparation\$25) same (s\$cell or secondary near2 cell)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:05
S34	1	(hand\$2over\$preparation\$25) and (s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:06
S35	4686	(s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:06
S36	357	(information or indicator or target (\$2node\$2b or e\$nb) or tag) with (s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:07
S37	4	(information or indicator or tag) same target (\$2node\$2b or e\$nb) same (s\$cell or secondary near2 cell) with (releas\$4 or remov\$4 or modif\$6 or delet\$5)	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:08
S38	2	"20110026493"	US-PGPUB; USPAT; EPO; DERWENT	NEAR	ON	2015/01/21 16:12
S39	304	(configur\$7 with (secondary near3 cell or s\$2cell)) and (releas\$4 with (secondary near3 cell or s\$2cell)) and (hand\$4over or hand\$4off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:15
S40	147	(configur\$7 with (secondary near3 cell or s\$2cell)) and (releas\$4 with (secondary near3 cell or s\$2cell)) same (hand\$4over or hand\$4off)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:15
S41	182	(configur\$7 with (secondary near3 cell or s\$2cell)) and (releas\$4 with (secondary near3 cell or s\$2cell)) same (hand\$4over or hand\$4off or rrc\$connection\$reconfiguration)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:16

EAST Search History (Prior Art)

S42	14	(s\$cell\$2to\$2releas\$4list) same s\$cell\$4index	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:21
S43	1	("8693437").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/01/21 16:42
S44	13	(source near4 (RAT or node or e\$node\$b or e\$nb or network)) same (message or indicat\$7 or information) with (s\$cell or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:48
S45	13	(source near4 (RAT or node or e\$node\$b or e\$nb or network)) same (message or indicat\$7 or information) with (s\$cell or s\$cell\$index or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:48
S46	13	(source near4 (RAT or node or e\$node\$b or e\$nb or network or ran)) same (message or indicat\$7 or information) with (s\$cell or s\$cell\$index or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network or ran)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:48
S47	14	(source near4 (RAT or node or e\$node\$b or e\$nb or network or ran or rnc)) same (message or indicat\$7 or information) with (s\$cell or s\$cell\$index or secondary near4 cell) same target near4 (RAT or node or e\$node\$b or e\$nb or network or ran or rnc)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 16:50
S48	2	((("20110070880") or ("30100075684") or ("6400951")).PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/01/21 17:00
S49	1	("20100075684").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2015/01/21 17:03
S50	0	(rrc\$2conn\$9reconfig\$9) same (\$10releas\$4s\$cell\$10)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:13
S51	114	(rrc\$2conn\$9re\$config\$9) same (s\$cell\$10)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:16
S52	22	(rrc\$2conn\$9re\$config\$9 or hand\$2over near4 command) same (s\$cell\$2releas\$8)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:38
S53	85	(rrc\$2conn\$9re\$config\$9 or hand\$2over) same (s\$cell\$2releas\$8)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:39

EAST Search History (Prior Art)

S54	63	S53 not S52	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 17:40
S55	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (all near4 (s\$1cell or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:47
S56	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (all near6 (s\$cell or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:48
S57	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (all near6 (s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:48
S58	7	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 ((s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:49
S59	7	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 (("CC" or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:52
S60	7	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 ((cc\$2 or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:52
S61	0	(inter\$2 adj2 (e\$nodeb or e\$nb or base station or "bs")) with (hand\$3over or hand\$4off) same (all or every or each) near7 ((cc\$2 or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:53
S62	15	(inter\$2 or different or another or other or second or target) adj2 (e\$nodeb or e\$nb or base station or "bs") with (hand\$3over or hand\$4off) same (releas\$4 or de\$activat\$4 or remov\$4 or delet\$4) near4 ((cc\$2 or s\$cell\$2 or secondary near3 cell))	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:55
S63	8	S62 not S60	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 19:56
S64	1	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command) same (rrc\$2connection\$2re\$10)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:05

EAST Search History (Prior Art)

S65	509	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:06
S66	14	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command) and (secondary near3 cell or s\$cell) with (releas\$4 or remov\$4 or de\$activat\$5 or delet\$4)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:07
S67	61	(source) with (hand\$3over with prepar\$7) same (target) and (hand\$over near4 command) and (secondary near3 cell or s\$cell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:30
S68	47	S67 not S66	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:31
S69	15	scelltoreleaselist same mobilitycontrolinfo	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:37
S70	6	(inter\$e\$nb or inter\$e\$nodeb) with (handover) same (scell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:53
S71	35	(inter\$e\$nb or inter\$e\$nodeb) with (handover) and (scell)	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:54
S72	29	S71 not S70	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/21 20:54
S73	1	"13282974"	US-PGPUB; USPAT; EPO	NEAR	ON	2015/01/22 13:28



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BIB DATA SHEET

CONFIRMATION NO. 7758

SERIAL NUMBER 13/282,974	FILING or 371(c) DATE 10/27/2011 RULE	CLASS 370	GROUP ART UNIT 2475	ATTORNEY DOCKET NO. 1291-013.101	
APPLICANTS INVENTORS Richard Lee-Chee Kuo, Taipei, TAIWAN; ** CONTINUING DATA ***** This appln claims benefit of 61/409,416 11/02/2010 ** FOREIGN APPLICATIONS ***** /M.R./ 01/22/15 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 11/07/2011					
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /MANDISH RANDHAWA/ Acknowledged Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY TAIWAN	SHEETS DRAWINGS 6	TOTAL CLAIMS 22	INDEPENDENT CLAIMS 4
ADDRESS Blue Capital Law Firm, P.C. 600 Anton Blvd., Suite 1000 Costa Mesa, CA 92626 UNITED STATES					
TITLE METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM					
FILING FEE RECEIVED 1620	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13282974
	Filing Date		2011-10-27
	First Named Inventor	Richard Lee-Chee Kuo	
	Art Unit	2475	
	Examiner Name	Mandish K. Randhawa	
	Attorney Docket Number	1291-013.101	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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	Examiner Name	Mandish K. Randhawa	
	Attorney Docket Number	1291-013.101	

/M.R./	1	3GPP TS 36.300 V10.1.0 (2010-09)	☐
/M.R./	2	TSG-RAN WG2#71, 23-27 August 2010, Madrid, Spain (R2-104791)	☐
/M.R./	3	3GPP TSG-RAN2 Meeting #71bis, Xi'an, China, October 11-15, 2010, Madrid, Spain (R2-105761)	☐
/M.R./	4	Office Action on corresponding KR Patent Application No. 10-2011-0112048 October 31, 2013	☐

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EXAMINER SIGNATURE			
Examiner Signature	/Mandish Randhawa/		Date Considered 01/22/2015
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.			

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13282974	
	Filing Date		2011-10-27	
	First Named Inventor	Richard Lee-Chee Kuo		
	Art Unit	2473 2475		
	Examiner Name	~~Not Yet Assigned~~ Mandish Randhawa		
	Attorney Docket Number	1291-013.101		

U.S. PATENTS

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13282974
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Examiner Name	Not Yet Assigned
Attorney Docket Number	1291-013.101

/M.R./	1	3GPP TS 36.300 V10.0.0 (2010-06)	☐
/M.R./	2	3GPP TSG-RAN WG2 Meeting #71 bis, Xian, P.R. China, 11-15 October 2010 (R2-105507)	☐
/M.R./	3	3GPP TSG-RAN WG2 Meeting #70 bis, Montreal, Canada, 10th-14th May 2010 (R2-103427)	☐
/M.R./	4	TSG-RAN WG2 Meeting #71, 23-26 August 2010, Madrid, Spain (R2-104790)	☐
/M.R./	5	Search Report on corresponding EP Patent Application No. 11008725.1 dated January 27, 2012	☐

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EXAMINER SIGNATURE

Examiner Signature	/Mandish Randhawa/	Date Considered	01/22/2015
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
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FOREIGN PATENT DOCUMENTS								
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13282974
	Filing Date		2011-10-27
	First Named Inventor	Richard Lee-Chee Kuo	
	Art Unit	2475	
	Examiner Name	Mandish K. Randhawa	
	Attorney Docket Number	1291-013.101	

1	3GPP TS 36.300 V10.1.0 (2010-09)	☐
2	TSG-RAN WG2#71, 23-27 August 2010, Madrid, Spain (R2-104791)	☐
3	3GPP TSG-RAN2 Meeting #71bis, Xi'an, China, October 11-15, 2010, Madrid, Spain (R2-105761)	☐
4	Office Action on corresponding KR Patent Application No. 10-2011-0112048 October 31, 2013	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	17838321
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	106622
Filer:	Sang N. Dang/Sandy Kim
Filer Authorized By:	Sang N. Dang
Attorney Docket Number:	1291-013.101
Receipt Date:	07-JAN-2014
Filing Date:	27-OCT-2011
Time Stamp:	13:14:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	1291-013-101-- IDSasFiled01072014.pdf	54986 1e95ecc10e8cbd46b160760629028d304cf90bcc	no	2

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Information:

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2	Non Patent Literature	3GPPTS36300V1010.pdf	4430405 51d943d7ae4a8f9881eeca8d2ea72c9dafb54fc4	no	192
Warnings:					
Information:					
3	Non Patent Literature	R2-104791.pdf	113831 a77d1b76a423b6d69a6d8c784a4da961299aa36	no	3
Warnings:					
Information:					
4	Non Patent Literature	R2-105761.pdf	218670 cf9f067384ef9a2c49df72fbf66120d86ab87273	no	6
Warnings:					
Information:					
5	Non Patent Literature	KROfficeAction-20131031.pdf	4998087 023c39e905961d8a2316b37659936859760e0485	no	7
Warnings:					
Information:					
Total Files Size (in bytes):			9815979		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101

106622
Blue Capital Law Firm, P.C.
600 Anton Blvd., Suite 1000
Costa Mesa, CA 92626

CONFIRMATION NO. 7758
POA ACCEPTANCE LETTER



Date Mailed: 08/08/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/30/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/agizaw/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

**Substitution/Power of Attorney by Assignee
And Change of Correspondence Address
(including Statement Under 37 CFR 3.73(b))**

Innovative Sonic Corporation, the assignee of the entire interest in and to the below listed United States patents, patent applications and provisional applications hereby revokes all previous powers of attorneys and appoints the practitioners associated with

CUSTOMER NUMBER 106622

To prosecute the below listed patent applications and any subsequent or prior applications based on the disclosure of these applications, and any reexaminations or reissues of any patents issuing from such applications or of any of the below listed patents, and to transact all business before or with the United States Patent and Trademark Office in connection with these patent applications and any subsequent or prior applications, patents and reexaminations or reissues.

Please direct all correspondence to the address associated with customer number **106622**.

Direct all phone calls to Sang N. Dang at 714-839-3800.

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
13/232,192	09/14/2011	01/18/2012	027550/0421	From Inventors to Innovative Sonic Corporation	1291-003.101
13/249,967	09/30/2011	09/30/2011	027000/0792	From Inventors to Innovative Sonic Corporation	1291-005.101

Substitution of Attorney
Innovative Sonic Corporation
Page 2 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
12/939,501	11/04/2010	10/11/2011	027043/0534	From Inventors to Innovative Sonic Corporation	1291-010.101
12/939,810	11/04/2010	10/11/2011	027043/0403	From Inventors to Innovative Sonic Corporation	1291-011.101
13/282,974	10/27/2011	11/08/2011	027190/0647	From Inventors to Innovative Sonic Corporation	1291-013.101
12/970,730	12/16/2010	10/11/2011	027043/0205	From Inventors to Innovative Sonic Corporation	1291-018.101
12/956,256	11/30/2010	10/10/2011	027036/0587	From Inventors to Innovative Sonic Corporation	1291-019.101
12/965,490	12/10/2010	10/10/2011	027036/0325	From Inventors to Innovative Sonic Corporation	1291-020.101
12/986,797	01/07/2011	10/11/2011	027043/0871	From Inventors to Innovative Sonic Corporation	1291-025.101

Substitution of Attorney
Innovative Sonic Corporation
Page 3 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
12/789,474	05/28/2010	05/28/2010	024453/0168	From Inventors to Innovative Sonic Corporation	1291-037.101
12/842,041	07/23/2010	02/07/2011	025756/0175	From Inventors to Innovative Sonic Corporation	1291-037.102
13/100,846	05/04/2011	10/11/2011	027043/0752	From Inventors to Innovative Sonic Corporation	1291-039.101
13/007,216	01/14/2011	10/11/2011	027043/0645	From Inventors to Innovative Sonic Corporation	1291-041.101
13/314,681	12/08/2011	12/13/2011	027372/0389	From Inventors to Innovative Sonic Corporation	1291-042.101
13/314,877	12/08/2011	12/13/2011	027370/0619	From Inventors to Innovative Sonic Corporation	1291-042.102

Substitution of Attorney
Innovative Sonic Corporation
Page 4 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
13/331,438	12/20/2011	12/20/2011	027419/0770	From Inventors to Innovative Sonic Corporation	1291-044.101
13/331,345	12/20/2011	12/20/2011	027419/0420	From Inventors to Innovative Sonic Corporation	1291-044.102
13/357,057	01/24/2012	01/24/2012	027585/0193	From Inventors to Innovative Sonic Corporation	1291-081.101
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13/357,119	01/24/2012	01/24/2012	027585/0521	From Inventors to Innovative Sonic Corporation	1291-081.103
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Substitution of Attorney
Innovative Sonic Corporation
Page 5 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
12/855,712	08/13/2010	03/09/2011	025929/0212	From Inventors to Innovative Sonic Corporation	1291-090.101
12/848,231	08/02/2010	03/24/2011	026018/0560	From Inventors to Innovative Sonic Corporation	1291-092.101
12/848,240	08/02/2010	03/24/2011	026018/0663	From Inventors to Innovative Sonic Corporation	1291-092.102
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13/094,152	04/26/2011	10/11/2011	027044/0264	From Inventors to Innovative Sonic Corporation	1291-094.101
12/889,423	09/24/2010	07/18/2011	026606/0283	From Inventors to Innovative Sonic Corporation	1291-095.101
13/423,829	03/19/2012	03/19/2012	027886/0988	From Inventors to Innovative Sonic Corporation	1291-096.101

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
13/426,085	03/21/2012	03/21/2012	027903/0562	From Inventors to Innovative Sonic Corporation	1291-096.102
13/103,612	05/09/2011	02/16/2012	027715/0745	From Inventors to Innovative Sonic Corporation	1291-098.101
13/103,706	05/09/2011	10/11/2011	027044/0189	From Inventors to Innovative Sonic Corporation	1291-098.102
13/432,451	03/28/2012	03/28/2012	027946/0474	From Inventors to Innovative Sonic Corporation	1291-099.101
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13/432,526	03/28/2012	03/28/2012	027946/0946	From Inventors to Innovative Sonic Corporation	1291-099.103
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Innovative Sonic Corporation
Page 7 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
13/449,709	04/18/2012	04/18/2012	028065/0682	From Inventors to Innovative Sonic Corporation	1291-105.101
13/463,135	05/03/2012	05/03/2012	028150/0197	From Inventors to Innovative Sonic Corporation	1291-112.101
13/464,472	05/04/2012	05/04/2012	028159/0572	From Inventors to Innovative Sonic Corporation	1291-113.101
13/477,487	05/22/2012	05/22/2012	028248/0814	From Inventors to Innovative Sonic Corporation	1291-118.101
13/484,749	05/31/2012	05/31/2012	028296/0044	From Inventors to Innovative Sonic Corporation	1291-124.101
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13/227,029	09/07/2011	10/11/2011	027044/0105	From Inventors to Innovative Sonic Corporation	1291-129.101

Substitution of Attorney
Innovative Sonic Corporation
Page 8 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
13/223,770	09/01/2011	10/11/2011	027043/0946	From Inventors to Innovative Sonic Corporation	1291-129.102
61/509,358	07/19/2011	07/19/2011	026637/0230	From Inventors to Innovative Sonic Corporation	1291-133.001
13/207,036	08/10/2011	10/12/2011	027048/0694	From Inventors to Innovative Sonic Corporation	1291-134.101
61/523,022	08/12/2011	08/12/2011	026745/0386	From Inventors to Innovative Sonic Corporation	1291-138.001
61/524,013	08/16/2011	08/16/2011	026757/0636	From Inventors to Innovative Sonic Corporation	1291-140.001
12/787,408	05/26/2010	05/26/2010	024439/0931	From Inventors to Innovative Sonic Corporation	1291-143.101
12/787,401	05/26/2010	05/26/2010	024439/0891	From Inventors to Innovative Sonic Corporation	1291-143.102

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Innovative Sonic Corporation
Page 9 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
61/531,379	09/06/2011	09/06/2011	026860/0748	From Inventors to Innovative Sonic Corporation	1291-144.001
61/533,920	09/13/2011	09/13/2011	026894/0905	From Inventors to Innovative Sonic Corporation	1291-145.001
61/539,202	09/26/2011	09/26/2011	026968/0676	From Inventors to Innovative Sonic Corporation	1291-146.001
61/541,499	09/30/2011	09/30/2011	027000/0657	From Inventors to Innovative Sonic Corporation	1291-148.001
61/551,153	10/25/2011	10/25/2011	027117/0725	From Inventors to Innovative Sonic Corporation	1291-153.001
61/553,423	10/31/2011	10/31/2011	027147/0933	From Inventors to Innovative Sonic Corporation	1291-155.001
61/555,829	11/04/2011	11/04/2011	027178/0711	From Inventors to Innovative Sonic Corporation	1291-156.001

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Innovative Sonic Corporation
Page 10 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
61/559,279	11/14/2011	11/14/2011	027221/0331	From Inventors to Innovative Sonic Corporation	1291-157.001
12/818,159	06/18/2010	06/18/2010	024556/0170	From Inventors to Innovative Sonic Corporation	1291-160.101
61/566,245	12/02/2011	12/02/2011	027316/0148	From Inventors to Innovative Sonic Corporation	1291-162.001
61/566,241	12/02/2011	12/02/2011	027321/0082	From Inventors to Innovative Sonic Corporation	1291-163.001
61/568,824	12/09/2011	12/09/2011	027361/0338	From Inventors to Innovative Sonic Corporation	1291-164.001
61/576,033	12/15/2011	12/15/2011	027390/0239	From Inventors to Innovative Sonic Corporation	1291-165.001
61/577,267	12/19/2011	12/19/2011		From Inventors to Innovative Sonic Corporation	1291-167.001

Substitution of Attorney
Innovative Sonic Corporation
Page 11 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
61/579,910	12/23/2011	12/23/2011	027442/0092	From Inventors to Innovative Sonic Corporation	1291-168.001
61/586,255	01/13/2012	01/13/2012	027529/0081	From Inventors to Innovative Sonic Corporation	1291-170.001
61/588,370	01/19/2012	01/19/2012	027561/0353	From Inventors to Innovative Sonic Corporation	1291-172.001
61/594,545	02/03/2012	02/03/2012	027649/0361	From Inventors to Innovative Sonic Corporation	1291-173.001
61/595,311	02/06/2012	02/16/2012	027656/0683	From Inventors to Innovative Sonic Corporation	1291-174.001
12/784,514	05/21/2010	05/21/2010	024419/0538	From Inventors to Innovative Sonic Corporation	1291-175.101
61/604,768	02/29/2012	02/29/2012	027783/0437	From Inventors to Innovative Sonic Corporation	1291-177.001

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Innovative Sonic Corporation
Page 12 of 13

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
61/610,193	03/13/2012	03/13/2012	027856/0298	From Inventors to Innovative Sonic Corporation	1291-178.001
61/612,692	03/19/2012	03/19/2012	027887/0431	From Inventors to Innovative Sonic Corporation	1291-180.001
61/624,615	04/16/2012	04/16/2012	028051/0617	From Inventors to Innovative Sonic Corporation	1291-181.001
61/624,596	04/16/2012	04/16/2012	028051/0509	From Inventors to Innovative Sonic Corporation	1291-182.001
61/636,903	04/23/2012	04/23/2012	028089/0462	From Inventors to Innovative Sonic Corporation	1291-184.001
61/641,426	05/02/2012	05/02/2012	028142/0095	From Inventors to Innovative Sonic Corporation	1291-185.001
61/644,667	05/09/2012	05/09/2012	028181/0042	From Inventors to Innovative Sonic Corporation	1291-186.001

Patent No./Patent Application No./Provisi onal Application No.	Issued/ Filing Date	Assignment Recording Date	Reel/Frame		Attorney Docket No.
61/645,774	05/11/2012	05/11/2012	028194/0548	From Inventors to Innovative Sonic Corporation	1291-187.001
61/648,777	05/18/2012	05/18/2012	028232/0952	From Inventors to Innovative Sonic Corporation	1291-188.001
61/649,487	05/21/2012	05/21/2012		From Inventors to Innovative Sonic Corporation	1291-189.001
12/796,657	06/08/2010	06/08/2010	024504/0782	From Inventors to Innovative Sonic Corporation	1291-190.101
61/653,045	05/30/2012	05/30/2012	028288/0504	From Inventors to Innovative Sonic Corporation	1291-191.001

The undersigned is authorized to act on behalf of the assignee with respect to the above listed
patents and patent applications

INNOVATIVE SONIC CORPORATION

By: Sun Feng Chen
Name: Sun Feng Chen
Title: General Manager

June 25th, 2012
Date

Electronic Acknowledgement Receipt

EFS ID:	13377060
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	22145
Filer:	Sang N. Dang/Sandy Kim
Filer Authorized By:	Sang N. Dang
Attorney Docket Number:	1291-013.101
Receipt Date:	30-JUL-2012
Filing Date:	27-OCT-2011
Time Stamp:	20:22:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	1291-013-101-- POAsFiled07202012.pdf	5670858 849bfec468272281c8ae5202e61a6bb598969032	no	13

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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.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101

CONFIRMATION NO. 7758

PUBLICATION NOTICE



OC000000054081328

22145
KLEIN, O'NEILL & SINGH, LLP
18200 VON KARMAN AVENUE
SUITE 725
IRVINE, CA 92612

Title:METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

Publication No.US-2012-0106510-A1

Publication Date:05/03/2012

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13282974	
	Filing Date		2011-10-27	
	First Named Inventor	Richard Lee-Chee Kuo		
	Art Unit	2473		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	1291-013.101		

U.S.PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13282974
Filing Date	2011-10-27
First Named Inventor	Richard Lee-Chee Kuo
Art Unit	2473
Examiner Name	Not Yet Assigned
Attorney Docket Number	1291-013.101

1	3GPP TS 36.300 V10.0.0 (2010-06)	☐
2	3GPP TSG-RAN WG2 Meeting #71 bis, Xian, P.R. China, 11-15 October 2010 (R2-105507)	☐
3	3GPP TSG-RAN WG2 Meeting #70 bis, Montreal, Canada, 10th-14th May 2010 (R2-103427)	☐
4	TSG-RAN WG2 Meeting #71, 23-26 August 2010, Madrid, Spain (R2-104790)	☐
5	Search Report on corresponding EP Patent Application No. 11008725.1 dated January 27, 2012	☐

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	12580974
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	22145
Filer:	Mirsafian Saeid/Sandy Kim
Filer Authorized By:	Mirsafian Saeid
Attorney Docket Number:	1291-013.101
Receipt Date:	19-APR-2012
Filing Date:	27-OCT-2011
Time Stamp:	15:02:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	1291-013-101-- IDSasFiled04192012.PDF	255974 cd69b500b71fc9c0d7647d989193a3888afcd8e6	no	2

Warnings:

Information:

This is not an USPTO supplied IDS fillable form					
2	Non Patent Literature	3GPPTS36-300XP050441905.pdf	11570782 00ec48cbd6498cfc9e9903dc90de9325d684fd0	no	193
Warnings:					
Information:					
3	Non Patent Literature	R2-105507.pdf	9635296 a262bc7b3b078a2004082e7f97c194a258fed20	no	75
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Information:					
4	Non Patent Literature	R2-103427.pdf	1148768 9a3bb4d1c3d341084627cce243d081ee5dd0842	no	22
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Information:					
5	Non Patent Literature	R2-104790.pdf	234799 2e3d18694527b23223b8943bd80bf14e6803d901	no	4
Warnings:					
Information:					
6	Non Patent Literature	EPSearchReport-20120127.pdf	374719 a98adbcd3bd908b69ca94a1b6514f2ec00703d0a6	no	8
Warnings:					
Information:					
Total Files Size (in bytes):			23220338		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/282,974	10/27/2011	2473	1620	1291-013.101	22	4

CONFIRMATION NO. 7758

UPDATED FILING RECEIPT



22145
KLEIN, O'NEILL & SINGH, LLP
18200 VON KARMAN AVENUE
SUITE 725
IRVINE, CA 92612

Date Mailed: 12/13/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. 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 submit a written request for a Filing Receipt Correction. 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)

Richard Lee-Chee Kuo, Taipei, TAIWAN;

Assignment For Published Patent Application

Innovative Sonic Corporation, Taipei, TAIWAN

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/409,416 11/02/2010

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

If Required, Foreign Filing License Granted: 11/07/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/282,974**

Projected Publication Date: 05/03/2012

Non-Publication Request: No

Early Publication Request: No

Title

METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

Preliminary Class

370

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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NOT GRANTED

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/282,974				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	380			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	620			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	250			
TOTAL CLAIMS (37 CFR 1.16(j))	22 minus 20 =	*			OR	x 60 =	120			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	*				x 250 =	250			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1620			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Lee-Chee Kuo
Title : METHOD AND APPARATUS FOR SECONDARY CELL
RELEASE DURING HANDOVER IN A WIRELESS
COMMUNICATION SYSTEM
Serial No.: 13/282,974
Filed: October 27, 2011 Examiner: To be assigned
Group Art Unit: 2473 Confirmation No.: 7758
Attorney Docket No.: 1291-013.101

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

Sir:

In response to the Notice to File Corrected Application Papers of the above-identified non-provisional patent application mailed November 8, 2011, enclosed are the following requested items:

- Replacement drawings for Figs. 1, 2, 3, 4, 5, 6, and 7.

These replacement drawings are submitted in compliance with USPTO Rules. No new matter has been added.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 11-1159 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17.

Respectfully submitted,

Date: November 29, 2011


Saeid Mirsafari (Reg. No. 52,035)
Klein, O'Neill & Singh, LLP
18200 Von Karman Avenue, Suite 725
Irvine, California 92612
Tel: (949) 955-1920
Fax: (949) 955 1921

1/6

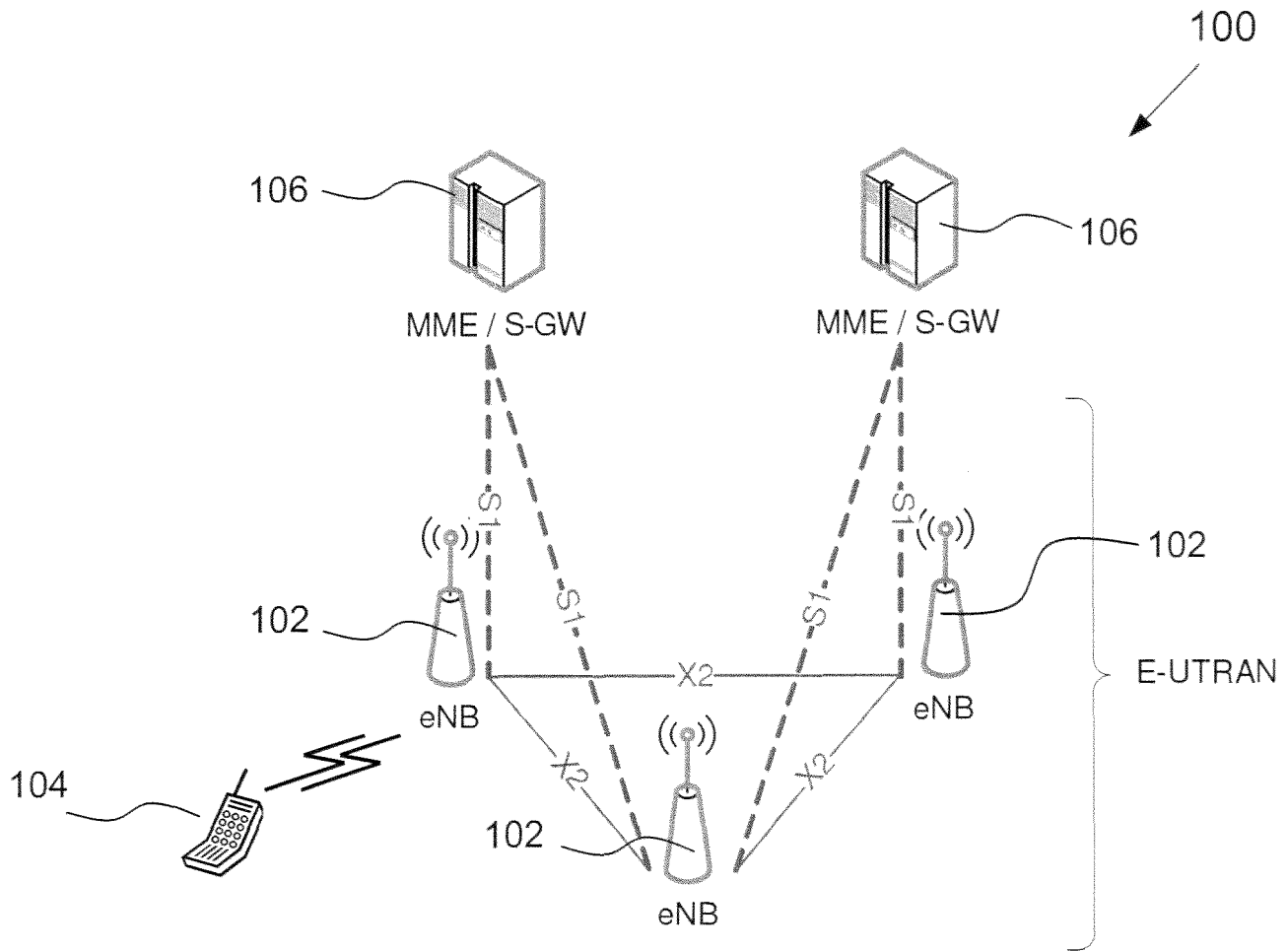


FIG. 1

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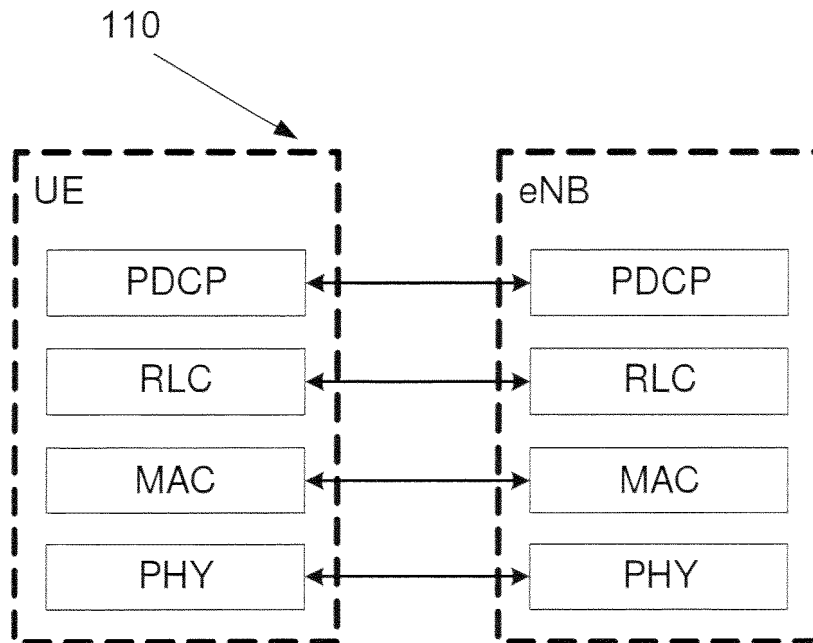


FIG. 2

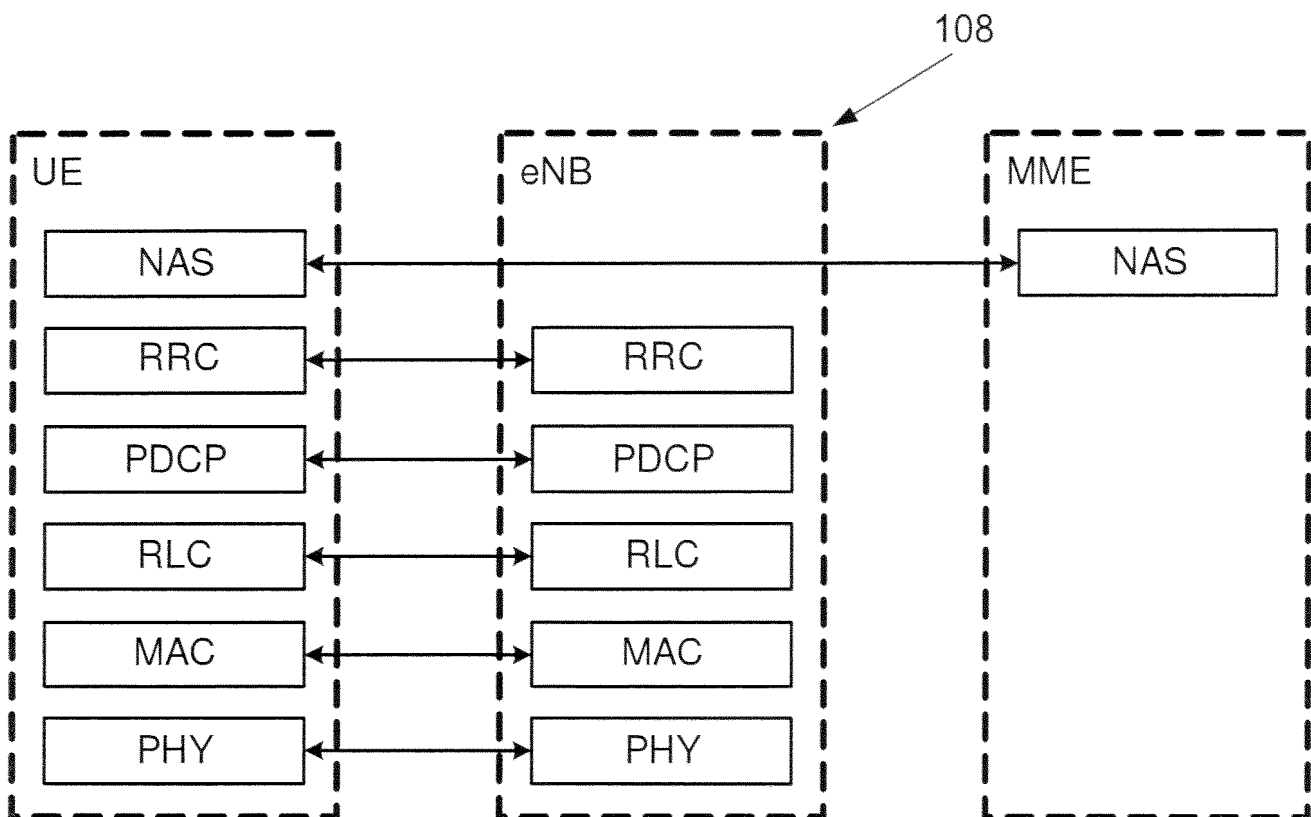


FIG. 3

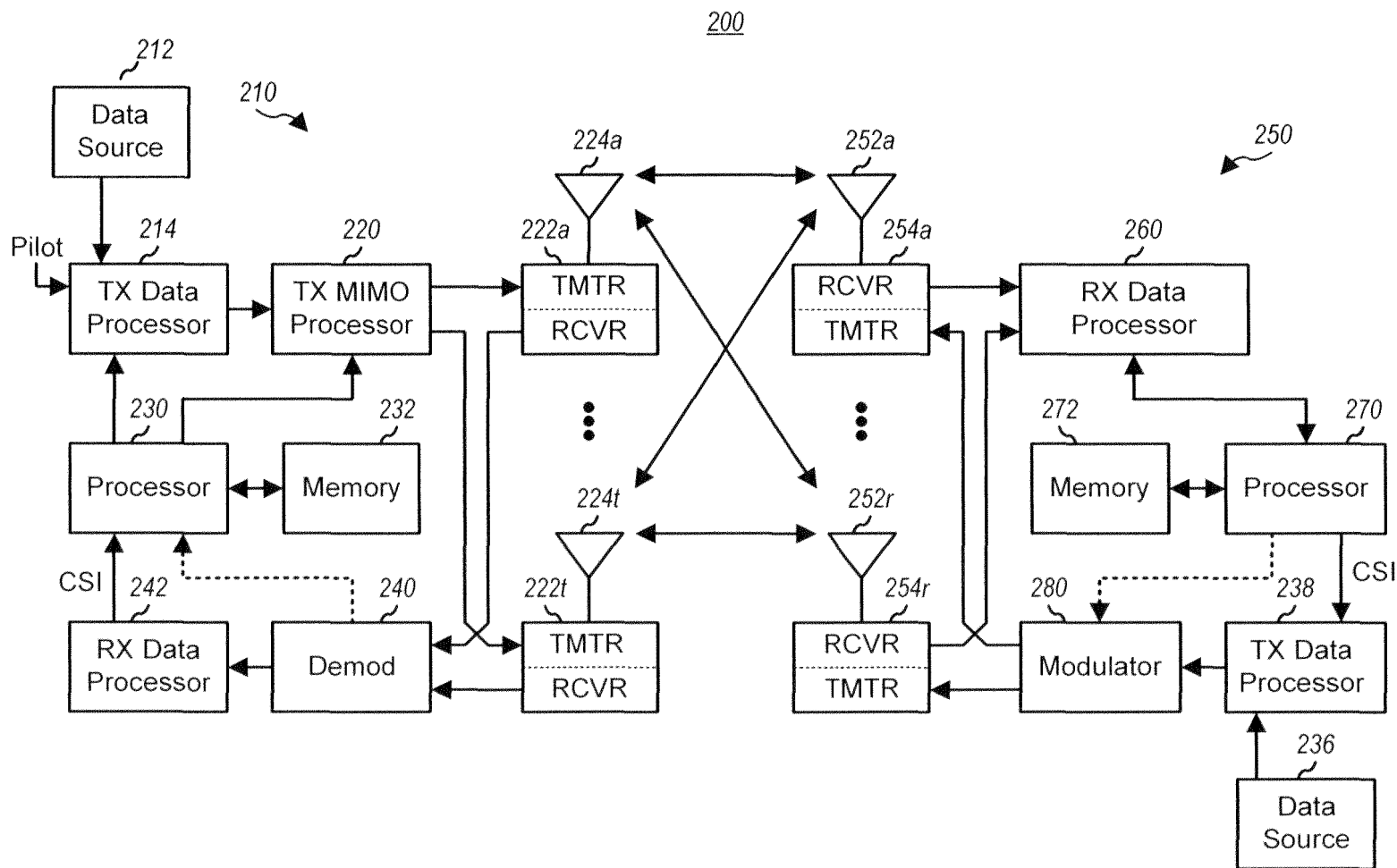


FIG. 4

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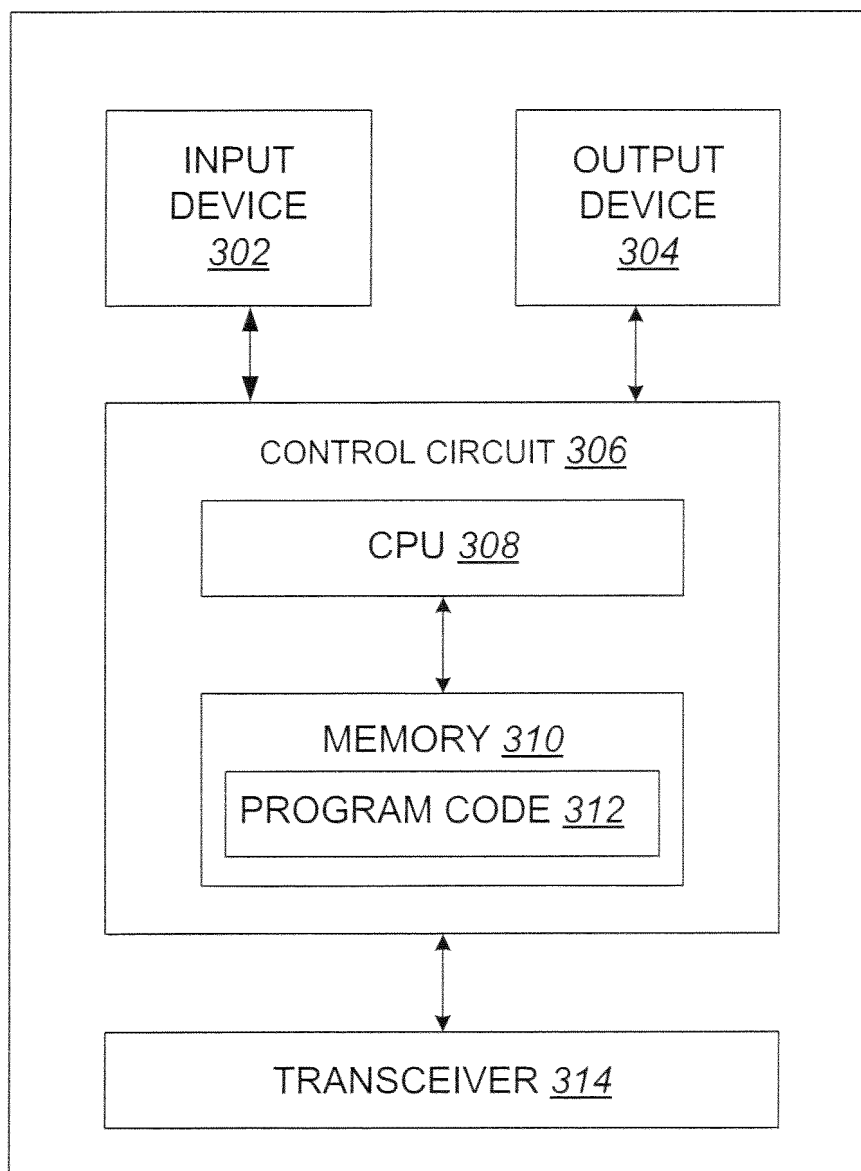


FIG. 5

5/6

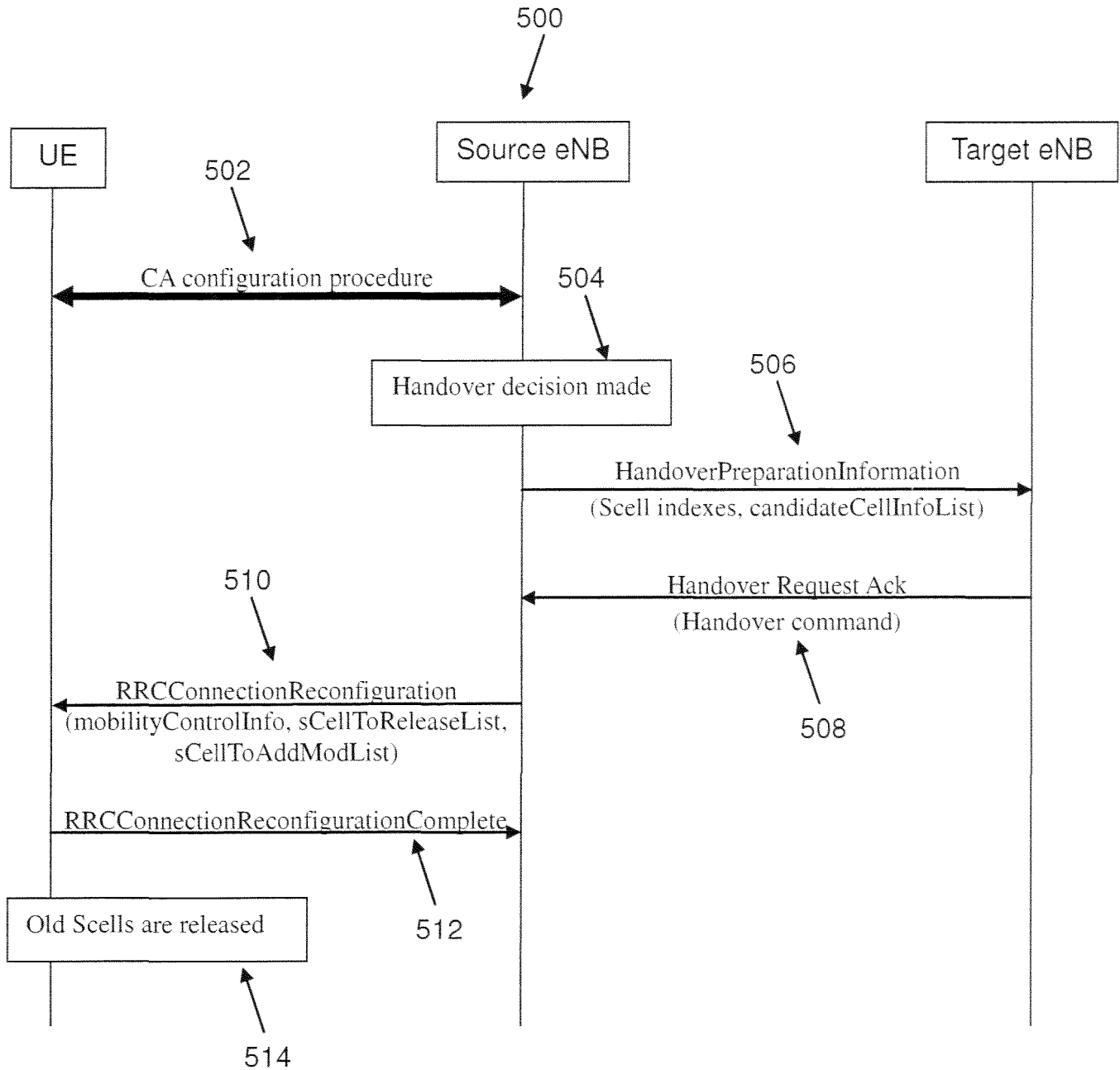


FIG. 6

6/6

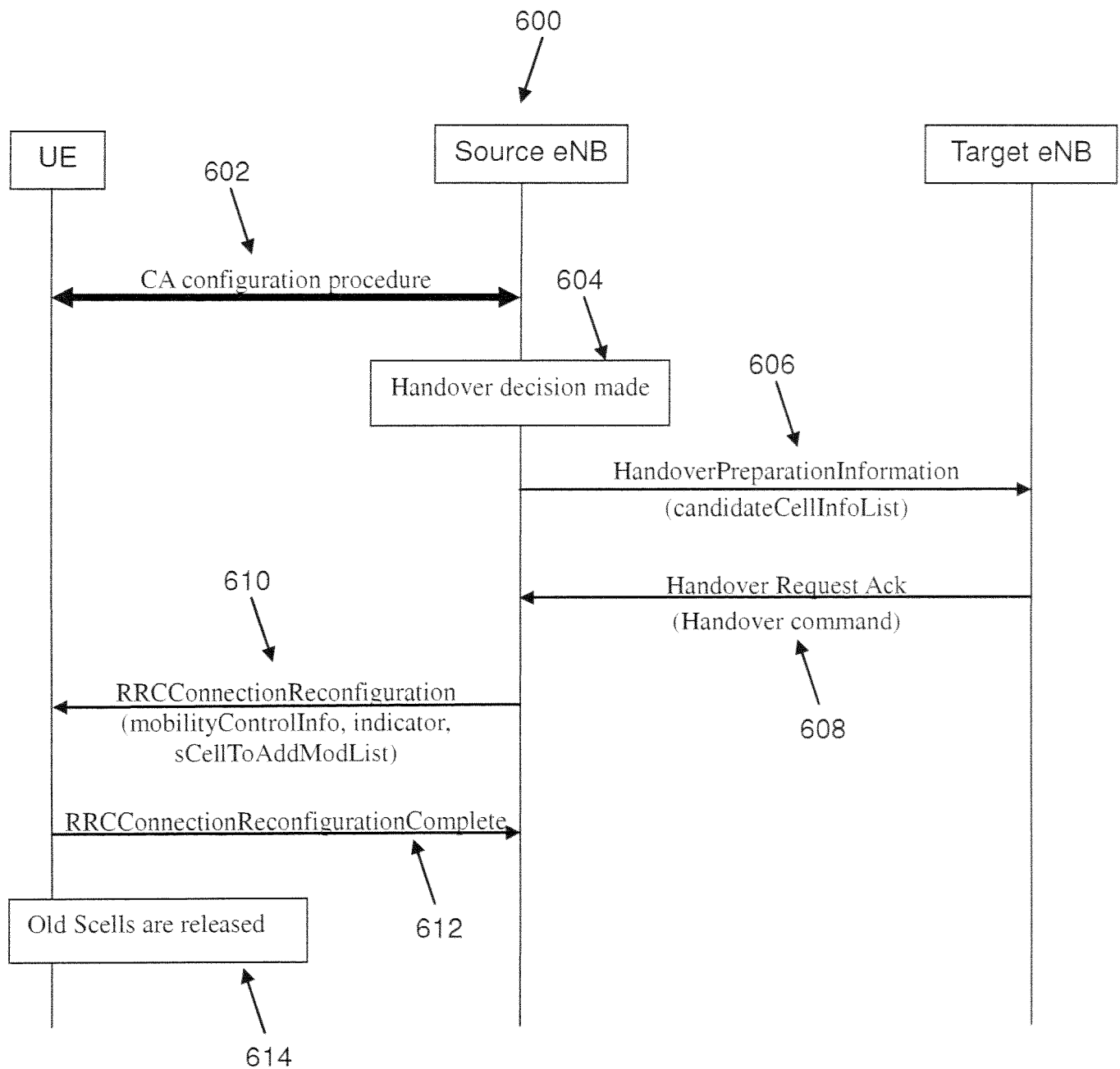


FIG. 7

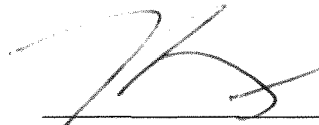
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Lee-Chee Kuo
Title: METHOD AND APPARATUS FOR SECONDARY CELL RELEASE
DURING HANDOVER IN A WIRELESS COMMUNICATION
SYSTEM
Serial No.: 13/282,974 Filed: October 27, 2011
Examiner: TBD Group Art Unit: 2473
Attorney Docket No.: 1291-013.101 (IS 0990192-US)

**CERTIFICATE OF EFS-WEB TRANSMISSION
UNDER 37 CFR § 1.8**

I hereby certify that the enclosed 1 Page Response to Notice to File Corrected
Application Papers; and 6 Page Drawings of Figs. 1-7 are being transmitted to the United States
Patent and Trademark Office via EFS-Web on November 29, 2011.

Date: November 29, 2011


Sandy Kim

Mailing Address:

KLEIN, O'NEILL & SINGH, LLP (Customer No.: 22145)
18200 Von Karman Ave., Suite 725
Irvine, California 92612
Tel: 949-955-1920
Fax: 949-955-1921

Electronic Acknowledgement Receipt

EFS ID:	11499392
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	22145
Filer:	Mirsafian Saeid/Sandy Kim
Filer Authorized By:	Mirsafian Saeid
Attorney Docket Number:	1291-013.101
Receipt Date:	29-NOV-2011
Filing Date:	27-OCT-2011
Time Stamp:	15:10:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		1291-013-101-- ResponsetoNtctoFileCorrectPa persasFiled11292011.PDF	416004 ca855e5a5441eb744a2032ab88a85bb7d89 20523	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Applicant Response to Pre-Exam Formalities Notice	1	1
	Drawings-only black and white line drawings	2	7
	Miscellaneous Incoming Letter	8	8
Warnings:			
Information:			
Total Files Size (in bytes):		416004	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.			



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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/282,974	10/27/2011	Richard Lee-Chee Kuo	1291-013.101

CONFIRMATION NO. 7758

FORMALITIES LETTER



22145
KLEIN, O'NEILL & SINGH, LLP
18200 VON KARMAN AVENUE
SUITE 725
IRVINE, CA 92612

Date Mailed: 11/08/2011

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings have a line quality that is too light to be reproduced (weight of all lines and letters must be heavy enough to permit adequate reproduction) or text that is illegible (reference characters, sheet numbers, and view numbers must be plain and legible) see 37 CFR 1.84(l) and (p)(1)); See Figure(s) 1-5.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies should be mailed to:

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Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

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/sduong/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/282,974				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	380			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	620			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	250			
TOTAL CLAIMS (37 CFR 1.16(j))	22 minus 20 =	*				x 60 =	120			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	*				x 250 =	250			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1620			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =			x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =			x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =			x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =			x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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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
13/282,974	10/27/2011	2473	1620	1291-013.101	22	4

CONFIRMATION NO. 7758

22145
KLEIN, O'NEILL & SINGH, LLP
18200 VON KARMAN AVENUE
SUITE 725
IRVINE, CA 92612

FILING RECEIPT



Date Mailed: 11/08/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. 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 submit a written request for a Filing Receipt Correction. 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)

Richard Lee-Chee Kuo, Taipei, TAIWAN;

Assignment For Published Patent Application

Innovative Sonic Corporation, Taipei, TAIWAN

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/409,416 11/02/2010

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

If Required, Foreign Filing License Granted: 11/07/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/282,974**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No

Title

METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

Preliminary Class

370

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Utility Patent Application Transmittal

Docket Number

1291-013.101

Address To
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First Named Inventor

Name	Richard Lee-Chee Kuo		
Mailing Address			
City	Taipei	State	
Country	Taiwan	Postal Code	
City of Residence	Taipei	State of Residence	
Country of Residence	Taiwan	Citizenship	R.O.C.

Title of Invention

METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

Assignee Information*

Name			
Company	Innovative Sonic Corporation		
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City	Taipei	State	
Country	Taiwan	Postal Code	11493

*Complete this section if applicant wants the patent application publication to include assignee information. Providing this information does not substitute for compliance with any requirement of Part 3 of 37 CFR to have an assignment recorded by the Patent Office.

Application Elements

See MPEP chapter 600 concerning utility patent application contents.

- | | |
|---|---|
| 1. ☐ USPTO Filing Fee (as calculated <i>infra</i>) | 6. ☐ Application Data Sheet (37 CFR 1.76) |
| 2. ☐ Applicant claims small entity status
See 37 CFR 1.27 | 7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (<i>Appendix</i>)
☐ Landscape Table on CD |
| 3. ☒ Specification
Total number of pages <u>18</u>
Both the claims and abstract must start on a new page
(For information on the preferred arrangement, see MPEP 608.01(a)) | 8. ☐ Nucleotide and/or Amino Acid Sequence Submission
(if applicable, items a. - c. are required)
a. ☐ Computer Readable Form (CRF)
b. Specification Sequence listing on:
i. ☐ CD-ROM or CD-R (2 copies), or
ii. ☐ Paper
c. ☐ Statements verifying identity of above copies |
| 4. ☒ Drawing(s) (35 U.S.C. 113)
Total number of sheets <u>5</u> | |
| 5. ☒ Oath or Declaration
a. ☒ Newly executed (original or copy), or ☐ Unexecuted
b. ☐ A copy from a prior application (37 CFR 1.63(d))
(for Continuation or Divisional Application)
i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s)
named in the prior application (see 37 CFR 1.63(d) and 1.33(b).) | |

Utility Patent Application Transmittal

Docket Number

1291-013,101

Accompanying Application Parts

- | | |
|---|---|
| <p>9. ☐ Assignment
a. ☐ Recordation Form Cover Sheet</p> <p>10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee)</p> <p>11. ☐ Power of Attorney ☐ No Power of Attorney</p> <p>12. ☐ English Translation Document (if applicable)</p> <p>13. ☐ Information Disclosure Statement
a. ☐ Copies of citations attached</p> <p>14. ☐ Preliminary Amendment</p> <p>15. ☐ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)</p> <p>16. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)</p> <p>17. ☐ Nonpublication Request under 35 USC 122(b)(2)(B)(i)</p> | <p>18. ☐ Certificate of Mailing
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<div style="border: 1px solid black; height: 150px; width: 100%;"></div></p> |
|---|---|

20. If a **CONTINUING APPLICATION**, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. _____ (XX/YYY,YYY)

Prior application information: Examiner _____ Art Unit: _____

Request Not To Publish*

21. ☐ Applicant hereby requests that the attached application not be published under 35 U.S.C. 122(b).

Applicant hereby certifies that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Request To Publish Early

22. ☐ Applicant hereby requests the publication of this patent application earlier than as set forth in 37 CFR 1.211(a) pursuant to 37 CFR 1.219 as provided in 37 CFR 1.215(c).

Utility Patent Application Transmittal

Docket Number

1291-013.101

Fee Calculation

Utility Patent Application Fee

Claims as Filed

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	22	- 20 =	2	x 60 =	\$120
Total Indep. Claims	4	- 3 =	1	x 250 =	\$250
Multiple Dependent Claims (check if applicable) ☐					
☐ E-Filing (small entity must be selected to get Filing Fee discount) Basic Filing Fee					\$380
Number of Specification Pages	18	Number of Drawing Sheets	5		
Total Pages	23	Application Size Fee			\$ 0

Pre-Grant Publication Fee

Early publication fee as set forth in 37 CFR 1.18(d) ☐

Processing fee for publication or republication as set forth in 37 CFR 1.17(i) ☐

Assignment Recordal Fee

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Search Fee

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TOTAL \$1620

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Saeid Mirsafian

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52,035

Signatory Capacity

Attorney for Applicant(s)

E-mail Address

sm@koslaw.com

eSign

Date Signed

10/27/2011

METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present Application claims the benefit of U.S. Provisional Patent Application Serial No. 61/409,416, filed on November 2, 2010, the entire disclosure of which is incorporated herein by reference.

FIELD

[0002] This disclosure generally relates to wireless communication networks, and more particularly, to a method and apparatus for Secondary Cell (SCell) release during handover in a wireless communication system.

BACKGROUND

[0003] With the rapid rise in demand for communication of large amounts of data to and from mobile communication devices, traditional mobile voice communication networks are evolving into networks that communicate with Internet Protocol (IP) data packets. Such IP data packet communication can provide users of mobile communication devices with voice over IP, multimedia, multicast and on-demand communication services.

[0004] An exemplary network structure for which standardization is currently taking place is an Evolved Universal Terrestrial Radio Access Network (E-UTRAN). The E-UTRAN system can provide high data throughput in order to realize the above-noted voice over IP and multimedia services. The E-UTRAN system's standardization work is currently being performed by the 3GPP standards organization. Accordingly, changes to the current body of 3GPP standard are currently being submitted and considered to evolve and finalize the 3GPP standard.

SUMMARY

[0005] According to one aspect, a method of Secondary Cell (SCell) release during handover comprises including information by a source eNB in a *HandoverPreparationInformation* message for a target eNB to control SCell release in a User Equipment (UE) during handover.

[0006] According to another aspect, a method of Secondary Cell (SCell) release during handover comprises including an indicator by a target eNB in a handover command for a User Equipment (UE) to distinguish whether or not to release all configured SCells.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 shows a diagram of a wireless communication system according to one exemplary embodiment.

[0008] FIG. 2 shows a user plane protocol stack of the wireless communication system of FIG. 1 according to one exemplary embodiment.

[0009] FIG. 3 shows a control plane protocol stack of the wireless communication system of FIG. 1 according to one exemplary embodiment.

[0010] FIG. 4 is a block diagram of a transmitter system (also known as access network) and a receiver system (also known as user equipment or UE) according to one exemplary embodiment.

[0011] FIG. 5 is a functional block diagram of a communication device according to one exemplary embodiment.

[0012] FIG. 6 shows a method of Secondary Cell (SCell) release during handover according to one exemplary embodiment.

[0013] FIG. 7 shows a method of SCell release during handover according to one exemplary embodiment.

DETAILED DESCRIPTION

[0014] The exemplary wireless communication systems and devices described below employ a wireless communication system, supporting a broadcast service. Wireless communication systems are widely deployed to provide various types of communication such as voice, data, and so on. These systems may be based on code division multiple access (CDMA), time division multiple access (TDMA), orthogonal frequency division multiple access (OFDMA), 3GPP LTE (Long Term Evolution) wireless access, 3GPP LTE-A (Long Term Evolution Advanced), 3GPP2 UMB (Ultra Mobile Broadband), WiMax, or some other modulation techniques.

[0015] In particular, The exemplary wireless communication systems devices described below may be designed to support one or more standards such as the standard offered by a consortium named "3rd Generation Partnership Project" referred to herein as 3GPP, including Document Nos. TS36.331-940, TS36.300-950, and R2-105971. The standards and documents listed above are hereby expressly incorporated herein.

[0016] An exemplary network structure of an Evolved Universal Terrestrial Radio Access Network (E-UTRAN) 100 as a mobile communication system is shown in FIG. 1 according to one exemplary embodiment. The E-UTRAN system can also be referred to as a LTE (Long-Term Evolution) system or LTE-A (Long-Term Evolution Advanced). The E-UTRAN generally includes eNode B or eNB 102, which function similar to a base station in a mobile voice communication network. Each eNB is connected by X2 interfaces. The eNBs are connected to terminals or user equipment (UE) 104 through a radio interface, and are connected to Mobility Management Entities (MME) or Serving Gateway (S-GW) 106 through S1 interfaces.

[0017] Referring to FIGS. 2 and 3, the LTE system is divided into control plane 108 protocol stack (shown in FIG. 3) and user plane 110 protocol stack (shown in FIG. 2) according to one exemplary embodiment. The control plane performs a function of exchanging a control signal between a UE and an eNB and the user plane performs a function of transmitting user data between the UE and the eNB. Referring to FIGS. 2 and 3, both the control plane and the user plane include a Packet Data Convergence Protocol (PDCP) layer, a Radio Link Control (RLC) layer, a Medium Access Control (MAC) layer and a physical (PHY) layer. The control plane additionally includes a Radio Resource Control (RRC) layer. The control plane also includes a Network Access Stratum (NAS) layer, which performs among other things including Evolved Packet System (EPS) bearer management, authentication, and security control.

[0018] The PHY layer provides information transmission service using a radio transmission technology and corresponds to a first layer of an open system interconnection (OSI) layer. The PHY layer is connected to the MAC layer through a transport channel. Data exchange between the MAC layer and the PHY layer is performed through the transport channel. The transport channel is defined by a scheme through which specific data are processed in the PHY layer.

[0019] The MAC layer performs the function of sending data transmitted from a RLC layer through a logical channel to the PHY layer through a proper transport channel and further performs the function of sending data transmitted from the PHY layer through a transport channel to the RLC layer through a proper logical channel. Further, the MAC layer inserts additional information into data received through the logical channel, analyzes the inserted additional information from data received through the transport channel to perform a proper operation and controls a random access operation.

[0020] The MAC layer and the RLC layer are connected to each other through a logical channel. The RLC layer controls the setting and release of a logical channel and may operate in one of an acknowledged mode (AM) operation mode, an unacknowledged mode (UM) operation mode and a transparent mode (TM) operation mode. Generally, the RLC layer divides Service Data Unit (SDU) sent from an upper layer at a proper size and vice versa. Further, the RLC layer takes charge of an error correction function through an automatic retransmission request (ARQ).

[0021] The PDCP layer is disposed above the RLC layer and performs a header compression function of data transmitted in an IP packet form and a function of transmitting data without loss even when an eNB providing a service changes due to the movement of a UE.

[0022] The RRC layer is only defined in the control plane. The RRC layer controls logical channels, transport channels and physical channels in relation to establishment, re-configuration and release of Radio Bearers (RBs). Here, the RB signifies a service provided by the second layer of an OSI layer for data transmissions between the terminal and the E-UTRAN. If an RRC connection is established between the RRC layer of a UE and the RRC layer of the radio network, the UE is in the RRC connected mode. Otherwise, the UE is in an RRC idle mode.

[0023] FIG. 4 is a simplified block diagram of an exemplary embodiment of a transmitter system 210 (also known as the access network) and a receiver system 250 (also known as access terminal or UE) in a MIMO system 200. At the transmitter system 210, traffic data for a number of data streams is provided from a data source 212 to a transmit (TX) data processor 214.

[0024] In one embodiment, each data stream is transmitted over a respective transmit antenna. TX data processor 214 formats, codes, and interleaves the traffic data for each data stream based on a particular coding scheme selected for that data stream to provide coded data.

[0025] The coded data for each data stream may be multiplexed with pilot data using OFDM techniques. The pilot data is typically a known data pattern that is processed in a known manner and may be used at the receiver system to estimate the channel response. The multiplexed pilot and coded data for each data stream is then modulated (i.e., symbol mapped) based on a particular modulation scheme (e.g., BPSK, QPSK, M-PSK, or M-QAM) selected for that data stream to provide modulation symbols. The data rate, coding, and modulation for each data stream may be determined by instructions performed by processor 230.

[0026] The modulation symbols for all data streams are then provided to a TX MIMO processor 220, which may further process the modulation symbols (e.g., for OFDM). TX MIMO processor 220 then provides N_T modulation symbol streams to N_T transmitters (TMTR) 222a through 222t. In certain embodiments, TX MIMO processor 220 applies beam forming weights to the symbols of the data streams and to the antenna from which the symbol is being transmitted.

[0027] Each transmitter 222 receives and processes a respective symbol stream to provide one or more analog signals, and further conditions (e.g., amplifies, filters, and upconverts) the analog signals to provide a modulated signal suitable for transmission over the MIMO channel. N_T modulated signals from transmitters 222a through 222t are then transmitted from N_T antennas 224a through 224t, respectively.

[0028] At receiver system 250, the transmitted modulated signals are received by N_R antennas 252a through 252r and the received signal from each antenna 252 is provided to a respective receiver (RCVR) 254a through 254r. Each receiver 254 conditions (e.g., filters, amplifies, and downconverts) a respective received signal, digitizes the conditioned signal to provide samples, and further processes the samples to provide a corresponding “received” symbol stream.

[0029] An RX data processor 260 then receives and processes the N_R received symbol streams from N_R receivers 254 based on a particular receiver processing technique to provide N_T

“detected” symbol streams. The RX data processor 260 then demodulates, deinterleaves, and decodes each detected symbol stream to recover the traffic data for the data stream. The processing by RX data processor 260 is complementary to that performed by TX MIMO processor 220 and TX data processor 214 at transmitter system 210.

[0030] A processor 270 periodically determines which pre-coding matrix to use (discussed below). Processor 270 formulates a reverse link message comprising a matrix index portion and a rank value portion.

[0031] The reverse link message may comprise various types of information regarding the communication link and/or the received data stream. The reverse link message is then processed by a TX data processor 238, which also receives traffic data for a number of data streams from a data source 236, modulated by a modulator 280, conditioned by transmitters 254a through 254r, and transmitted back to transmitter system 210.

[0032] At transmitter system 210, the modulated signals from receiver system 250 are received by antennas 224, conditioned by receivers 222, demodulated by a demodulator 240, and processed by a RX data processor 242 to extract the reserve link message transmitted by the receiver system 250. Processor 230 then determines which pre-coding matrix to use for determining the beamforming weights then processes the extracted message.

[0033] Turning to FIG. 5, this figure shows an alternative simplified functional block diagram of a communication device according to one exemplary embodiment. The communication device 300 in a wireless communication system can be utilized for realizing the UE 104 in FIG. 1, and the wireless communications system is preferably the LTE system, the LTE-A system or the like. The communication device 300 may include an input device 302, an output device 304, a control circuit 306, a central processing unit (CPU) 308, a memory 310, a program code 312, and a transceiver 314. The program code 312 includes the application layers and the layers of the control plane 108 and layers of user plane 110 as discussed above except the PHY layer. The control circuit 306 executes the program code 312 in the memory 310 through the CPU 308, thereby controlling an operation of the communications device 300. The communications device 300 can receive signals input by a user through the input device 302, such as a keyboard or

keypad, and can output images and sounds through the output device 304, such as a monitor or speakers. The transceiver 314 is used to receive and transmit wireless signals, delivering received signals to the control circuit 306, and outputting signals generated by the control circuit 306 wirelessly.

[0034] The LTE DownLink (DL) transmission scheme is based on Orthogonal Frequency Division Multiple Access (OFDMA), and the LTE UpLink (UL) transmission scheme is based on Single-Carrier (SC) Discrete Fourier Transform (DFT)-spread OFDMA (DFT-S-OFDMA) or equivalently, Single Carrier Frequency Division Multiple Access (SC-FDMA). LTE-Advanced (LTE-A), however, is designed to meet higher bandwidth requirements both in the DL and UL directions. In order to provide the higher bandwidth requirements, LTE-A utilizes component carrier aggregation. A user equipment (UE) with reception and/or transmission capabilities for carrier aggregation (CA) can simultaneously receive and/or transmit on multiple component carriers (CCs). A carrier may be defined by a bandwidth and a center frequency.

[0035] There are several physical control channels used in the physical layer that are relevant to CA operations. A physical downlink control channel (PDCCH) may inform the UE about the resource allocation of paging channel (PCH) and downlink shared channel (DL-SCH), about hybrid automatic repeat request (HARQ) information related to DL-SCH. The PDCCH may carry the uplink scheduling grant which informs the UE about resource allocation of uplink transmission. A physical control format indicator channel (PCFICH) informs the UE about the number of OFDM symbols used for the PDCCHs and is transmitted in every subframe. A physical Hybrid ARQ Indicator Channel (PHICH) carries HARQ ACK/NAK signals in response to uplink transmissions. A physical uplink control channel (PUCCH) carries uplink control information such as HARQ ACK/NAK signals in response to downlink transmission, scheduling request and channel quality indicator (CQI). A physical uplink shared channel (PUSCH) carries uplink shared channel (UL-SCH).

[0036] Carriers may be divided into a primary component carrier (PCC) and a secondary component carrier (SCC). The PCC refers to a carrier that is constantly activated, and the SCC refers to a carrier that may be activated or deactivated according to the traffic status. Activation means that transmission or reception of traffic data may be performed or traffic data is ready for

its transmission or reception on the concerned CC. Deactivation means that transmission or reception of traffic data is not permitted on the concerned CC. The UE uses only a single PCC or one or more SCCs along with the PCC.

[0037] A PCC is used by an eNB to exchange traffic and PHY/MAC control signaling with a UE. SCCs are additional carriers which the UE may use for traffic, only per eNB specific commands and rules received on the PCC. The PCC may be a fully configured carrier, by which major control information is exchanged between the eNB and the UE. The SCC may be a fully configured carrier or a partially configured carrier, which is allocated according to a request of the UE or according to an instruction of the eNB. The PCC may be used for entering of the UE into a network or for an allocation of the SCC. The PCC may be changed via a handover procedure.

[0038] In LTE, a Primary Cell includes the cell operating in the primary frequency in which the UE either performs the initial connection establishment procedure or initiates the connection re-establishment procedure, or the cell indicated as the primary cell in the handover procedure. The UE also uses the PCell to derive the parameters for the security functions and for upper layer system information such as NAS mobility information. A Secondary Cell (SCell) includes the cell operating on a secondary frequency which may be configured once an RRC connection is established and which may be used to provide additional radio resources. System information relevant for operation in the concerned SCell is typically provided using dedicated signaling when the SCell is added to the UE's configuration. Basically a PCell contains an uplink PCC and a downlink PCC, while an SCell configured to a UE may contain a downlink SCC or an uplink SCC along with a downlink SCC.

[0039] In the RRC_CONNECTED state, the network controls UE mobility. For network controlled mobility in the RRC_CONNECTED state, UE mobility is realized with a handover procedure, which is triggered by the network. The network may initiate handover by first configuring the UE to perform measurement reporting or initiate handover without having received measurement reports from the UE.

[0040] For UEs that support CA, E-UTRAN can change the PCell with the handover procedure using an *RRCCConnectionReconfiguration* message including the *mobilityControlInfo*. The *RRCCConnectionReconfiguration* message is the command to modify an RRC connection. It may convey information for measurement configuration, mobility control, radio resource configuration (including RBs, MAC main configuration and physical channel configuration) including any associated dedicated NAS information and security configuration. The E-UTRAN can independently add, remove or modify SCells by means of the RRC connection reconfiguration procedure using the *RRCCConnectionReconfiguration* message, either including the *mobilityControlInfo* or not.

[0041] Before sending the handover message to the UE, the source eNB firstly selects the target eNB. The source eNB may also provide the target eNB with a list of cells. The target eNB decides which serving cells are to be configured for use after handover, which may include cells other than the ones indicated by the source eNB. The target eNB generates the message containing one Pcell or at least one SCell along with one Pcell for initiating the handover. After receiving the handover message, the UE attempts to access the target PCell at the first available RACH occasion according to the defined Random Access resource selection. Upon successful completion of the handover, the UE sends a message to confirm the handover.

[0042] Currently, different eNBs do not share the same SCells for carrier aggregation such that no SCell configuration needs to be transferred to the target eNB for delta configuration. Thus, all the current SCells configured to a UE need to be released upon inter-eNB handover. If the SCells configured to a UE before inter-eNB are not released, a newly configured SCell by the new target eNB would be considered by the UE as a modification to an existing SCell with the same SCell index, which may result in inconsistent configurations between the UE and the target eNB. Therefore, all the current SCells configured to a UE should be released upon inter-eNB handover.

[0043] However, currently there is no information included in *RRCCConnectionReconfiguration* message for a UE to distinguish whether the handover is an intra-eNB or inter-eNB handover. Accordingly, the UE cannot decide whether or not to release the current SCells upon handover. As a result, the target eNB has to include a *sCellToReleaseList* with all valid SCell indexes in the

handover command for the UE to release all the potentially configured SCells even when there is actually no SCell configured to the UE.

[0044] Currently, there are 7 valid values of SCell indexes and the maximum number of SCell indexes in a *SCellToReleaseList* is only 4. The handover command cannot include all the potential SCell Indexes which may be used in the UE. Accordingly, one additional *RRCCConnectionReconfiguration* message is needed to release all the SCells in the UE. As a result, signaling overhead may be significantly increased.

[0045] According to one aspect the disclosure, to avoid the above-described signaling overhead during handover, information is included by the source eNB in the *HandoverPreparationInformation* message for the target eNB to control SCell release in a UE during an inter-eNB handover procedure. More specifically, the information indicates the SCell indexes of all the SCells configured to the concerned UE, thereby allowing the target eNB to include the *sCellToReleaseList* with the SCells configured to the UE in the *RRCCConnectionReconfiguration* message so that the UE can release the SCell(s) according to the *sCellToReleaseList*.

[0046] According to another aspect the disclosure, to avoid the above-described signaling overhead during handover, an indicator is included by the target eNB in the *RRCCConnectionReconfiguration* message for a UE to distinguish whether the handover is an intra-eNB or inter-eNB handover. The UE releases all the configured SCells if the handover is an inter-eNB handover.

[0047] The above-described exemplary embodiments are described in further detail below with reference to FIGS. 6 and 7.

[0048] Referring to FIG. 6, a method 500 for SCell release during handover according to one exemplary embodiment includes configuring at least one SCell by a source eNB to a UE at 502, and after handover decision is made at 504, including by the source eNB information in a *HandoverPreparationInformation* message at 506 for a target eNB to control SCell release in the UE during handover. The included information indicates the SCell indexes of all the SCells configured to the UE, thereby allowing the target eNB to include the *sCellToReleaseList* with the

SCells configured to the UE in a handover command, which is contained in a Handover Request Ack message sent to the Source eNB at 508. The *HandoverPreparationInformation* message may also contain a *candidateCellInfoList* for the target eNB to select as the Scell(s) to use after handover. The source eNB then sends an *RRCCConnectionReconfiguration* message including *mobilityControlInfo* and the *sCellToReleaseList* to the UE at 510. In response, the UE replies with an *RRCCConnectionReconfigurationComplete* message at 512 to complete this procedure. Based on the *sCellToReleaseList*, the UE releases the Scell(s) configured before handover at 514. The *RRCCConnectionReconfiguration* message may also include an *sCellToAddModList* to configure new Scell(s) to the UE. The *RRCCConnectionReconfiguration* message including *mobilityControlInfo* corresponds to the handover command received from the target eNB.

[0049] Referring to FIG. 7, a method 600 for SCell release during a handover according one exemplary embodiment includes configuring at least one SCell by a source eNB to a UE at 602. After handover decision is made at 604, the source eNB sends at 606 a *HandoverPreparationInformation* message containing a *candidateCellInfoList* for the target eNB to select as the Scell(s) to use after handover. The target eNB then includes an indicator in a handover command for the UE to distinguish whether or not to release all of the configured SCells. The handover command is contained in a Handover Request Ack message sent to the Source eNB at 608. The indicator may indicate whether the handover is an intra-eNB or inter-eNB handover. The source eNB then sends an *RRCCConnectionReconfiguration* message including *mobilityControlInfo* to the UE at 610. In response, the UE replies with an *RRCCConnectionReconfigurationComplete* message at 612 to complete this procedure. The UE releases all the SCells configured before handover at 614 if the indicator indicates the handover is an inter-eNB handover. The *RRCCConnectionReconfiguration* message may also include an *sCellToAddModList* to configure new Scell(s) to the UE. The *RRCCConnectionReconfiguration* message including *mobilityControlInfo* corresponds to the handover command received from the target eNB.

[0050] According to the above embodiments, all SCells in the UE are released when the handover is an inter-eNB handover. As described above, releasing all SCells when the handover is an inter-eNB handover reduces signaling overhead.

[0051] Referring back to FIG. 5, which is a functional block diagram of a communication device according to one exemplary embodiment and which may be any of the communication devices described herein, the communication device 300 includes a program code 312 stored in memory 310. The CPU 308 executes the program code 312 to perform any one or a plurality of the above-described actions, steps and/or other procedures described herein.

[0052] Various aspects of the disclosure have been described above. It should be apparent that the teachings herein may be embodied in a wide variety of forms and that any specific structure, function, or both being disclosed herein is merely representative. Based on the teachings herein one skilled in the art should appreciate that an aspect disclosed herein may be implemented independently of any other aspects and that two or more of these aspects may be combined in various ways. For example, an apparatus may be implemented or a method may be practiced using any number of the aspects set forth herein. In addition, such an apparatus may be implemented or such a method may be practiced using other structure, functionality, or structure and functionality in addition to or other than one or more of the aspects set forth herein. As an example of some of the above concepts, in some aspects concurrent channels may be established based on pulse repetition frequencies. In some aspects concurrent channels may be established based on pulse position or offsets. In some aspects concurrent channels may be established based on time hopping sequences. In some aspects concurrent channels may be established based on pulse repetition frequencies, pulse positions or offsets, and time hopping sequences.

[0053] Those of skill in the art would understand that information and signals may be represented using any of a variety of different technologies and techniques. For example, data, instructions, commands, information, signals, bits, symbols, and chips that may be referenced throughout the above description may be represented by voltages, currents, electromagnetic waves, magnetic fields or particles, optical fields or particles, or any combination thereof.

[0054] Those of skill would further appreciate that the various illustrative logical blocks, modules, processors, means, circuits, and algorithm steps described in connection with the aspects disclosed herein may be implemented as electronic hardware (e.g., a digital implementation, an analog implementation, or a combination of the two, which may be designed using source coding or some other technique), various forms of program or design code

incorporating instructions (which may be referred to herein, for convenience, as “software” or a “software module”), or combinations of both. To clearly illustrate this interchangeability of hardware and software, various illustrative components, blocks, modules, circuits, and steps have been described above generally in terms of their functionality. Whether such functionality is implemented as hardware or software depends upon the particular application and design constraints imposed on the overall system. Skilled artisans may implement the described functionality in varying ways for each particular application, but such implementation decisions should not be interpreted as causing a departure from the scope of the present disclosure.

[0055] In addition, the various illustrative logical blocks, modules, and circuits described in connection with the aspects disclosed herein may be implemented within or performed by an integrated circuit (“IC”), an access terminal, or an access point. The IC may comprise a general purpose processor, a digital signal processor (DSP), an application specific integrated circuit (ASIC), a field programmable gate array (FPGA) or other programmable logic device, discrete gate or transistor logic, discrete hardware components, electrical components, optical components, mechanical components, or any combination thereof designed to perform the functions described herein, and may execute codes or instructions that reside within the IC, outside of the IC, or both. A general purpose processor may be a microprocessor, but in the alternative, the processor may be any conventional processor, controller, microcontroller, or state machine. A processor may also be implemented as a combination of computing devices, e.g., a combination of a DSP and a microprocessor, a plurality of microprocessors, one or more microprocessors in conjunction with a DSP core, or any other such configuration.

[0056] It is understood that any specific order or hierarchy of steps in any disclosed process is an example of a sample approach. Based upon design preferences, it is understood that the specific order or hierarchy of steps in the processes may be rearranged while remaining within the scope of the present disclosure. The accompanying method claims present elements of the various steps in a sample order, and are not meant to be limited to the specific order or hierarchy presented.

[0057] The steps of a method or algorithm described in connection with the aspects disclosed herein may be embodied directly in hardware, in a software module executed by a processor, or

in a combination of the two. A software module (e.g., including executable instructions and related data) and other data may reside in a data memory such as RAM memory, flash memory, ROM memory, EPROM memory, EEPROM memory, registers, a hard disk, a removable disk, a CD-ROM, or any other form of computer-readable storage medium known in the art. A sample storage medium may be coupled to a machine such as, for example, a computer/processor (which may be referred to herein, for convenience, as a “processor”) such the processor can read information (e.g., code) from and write information to the storage medium. A sample storage medium may be integral to the processor. The processor and the storage medium may reside in an ASIC. The ASIC may reside in user equipment. In the alternative, the processor and the storage medium may reside as discrete components in user equipment. Moreover, in some aspects any suitable computer-program product may comprise a computer-readable medium comprising codes relating to one or more of the aspects of the disclosure. In some aspects a computer program product may comprise packaging materials.

[0058] While the invention has been described in connection with various aspects, it will be understood that the invention is capable of further modifications. This application is intended to cover any variations, uses or adaptation of the invention following, in general, the principles of the invention, and including such departures from the present disclosure as come within the known and customary practice within the art to which the invention pertains.

CLAIMS

What is claimed is:

1. A method of Secondary Cell (SCell) release during handover comprising:
configuring at least one SCell by a source eNB to a User Equipment (UE); and
including information by the source eNB in a *HandoverPreparationInformation* message
for a target eNB to control SCell release in the UE during handover.
2. The method of claim 1, wherein the information indicates SCell indexes of all SCells
configured to the UE, thereby allowing the target eNB to include a *sCellToReleaseList* with all
the SCells configured to the UE in a handover command.
3. The method of claim 2, wherein the handover command corresponds to an
RRCConnectionReconfiguration message including *mobilityControlInfo*.
4. The method of claim 3, wherein the *RRCConnectionReconfiguration* message is sent
from the source eNB to the UE to initiate a handover procedure.
5. The method of claim 1, wherein the *HandoverPreparationInformation* message is
sent from the source eNB to the target eNB to request a handover.
6. The method of claim 1, wherein the handover is an inter-eNB handover.
7. A method of Secondary Cell (SCell) release during handover comprising:
configuring at least one SCell by a source eNB to a User Equipment (UE); and
including an indicator in a handover command by a target eNB for the UE to distinguish
whether or not to release all the configured SCells.

8. The method of claim 7, wherein the indicator indicates whether the handover is an intra-eNB or inter-eNB handover.

9. The method of claim 8, wherein the UE releases all configured SCells if the handover is an inter-eNB handover.

10. The method of claim 7, wherein the handover command corresponds to an *RRConnectionReconfiguration* message including *mobilityControlInfo*.

11. The method of claim 10, wherein the *RRConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.

12. A communication device for use in a wireless communication system, the communication device comprising:

a control circuit;

a processor installed in the control circuit; and

a memory installed in the control circuit and coupled to the processor;

wherein the processor is configured to execute a program code stored in memory to:

configure at least one SCell by a source eNB to a User Equipment (UE); and

include information by the source eNB in a *HandoverPreparationInformation* message for a target eNB to control SCell release in the UE during handover.

13. The device of claim 12, wherein the information indicates SCell indexes of all SCells configured to the UE, thereby allowing the target eNB to include a *sCellToReleaseList* with all the SCells configured to the UE in a handover command.

14. The device of claim 13, wherein the handover command corresponds to an *RRConnectionReconfiguration* message including *mobilityControlInfo*.

15. The device of claim 14, wherein the *RRCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.

16. The device of claim 12, wherein the *HandoverPreparationInformation* message is sent from the source eNB to the target eNB to request a handover.

17. The device of claim 12, wherein the handover is an inter-eNB handover.

18. A communication device for use in a wireless communication system, the communication device comprising:

a control circuit;

a processor installed in the control circuit; and

a memory installed in the control circuit and coupled to the processor;

wherein the processor is configured to execute a program code stored in memory to:

configure at least one SCell by a source eNB to a User Equipment (UE); and

include an indicator in a handover command by a target eNB for the UE to distinguish whether or not to release all the configured SCells.

19. The device of claim 18, wherein the indicator indicates whether the handover is an intra-eNB or inter-eNB handover.

20. The device of claim 19, wherein the UE releases all configured SCells if the handover is an inter-eNB handover.

21. The device of claim 18, wherein the handover command corresponds to an *RRCConnectionReconfiguration* message including *mobilityControlInfo*.

22. The device of claim 21, wherein the *RRCConnectionReconfiguration* message is sent from the source eNB to the UE to initiate a handover procedure.

ABSTRACT

Methods and an apparatus for Secondary Cell (SCell) release during User Equipment (UE) handover comprises including information by a source eNB in a *HandoverPreparationInformation* message for a target eNB to control SCell release in the UE during handover, or including an indicator by a target eNB in a handover command for the UE to distinguish whether or not to release all configured SCells.

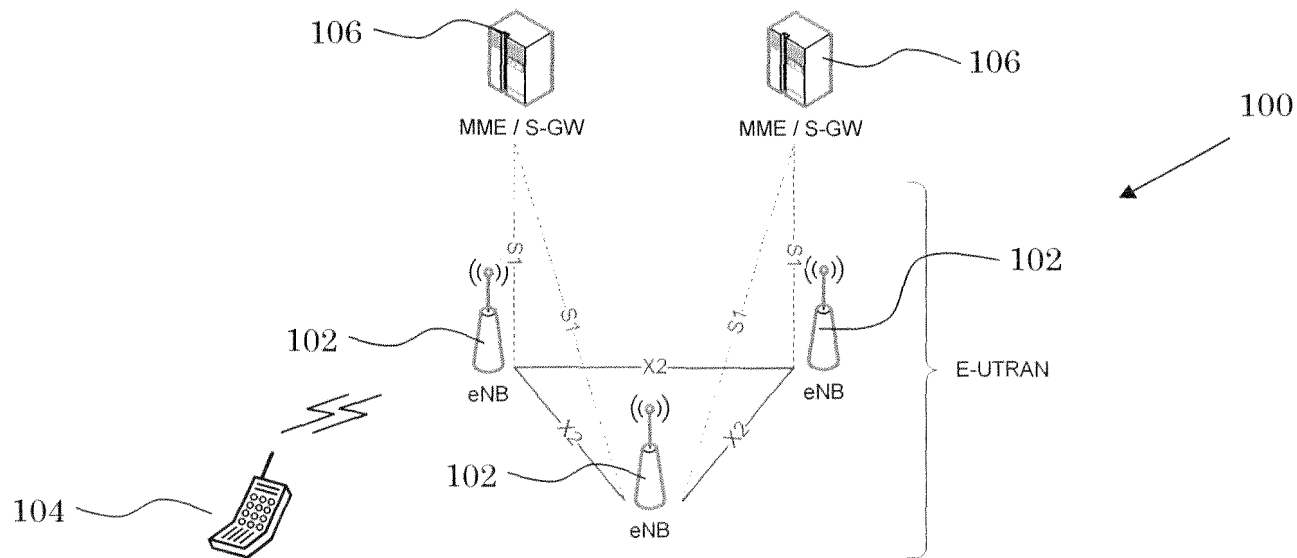


FIG. 1

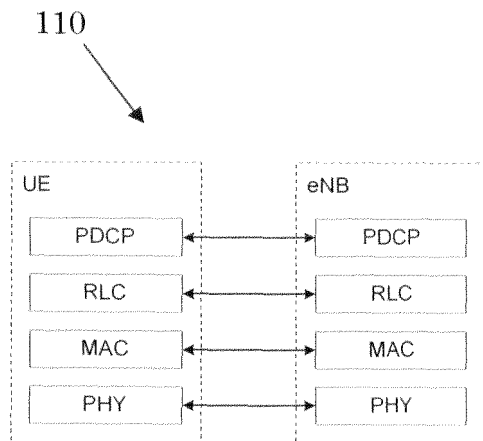


FIG. 2

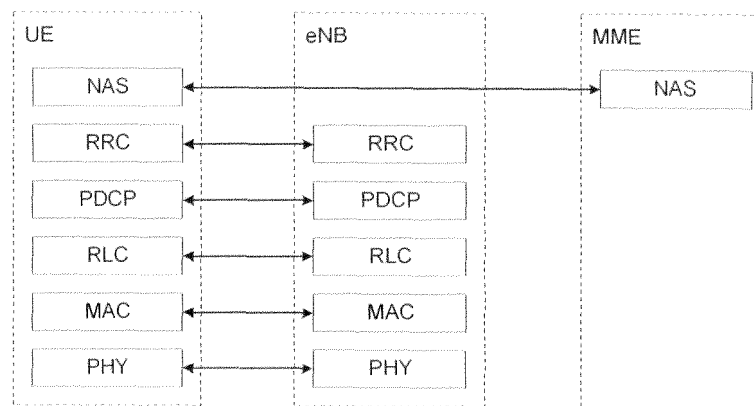


FIG. 3

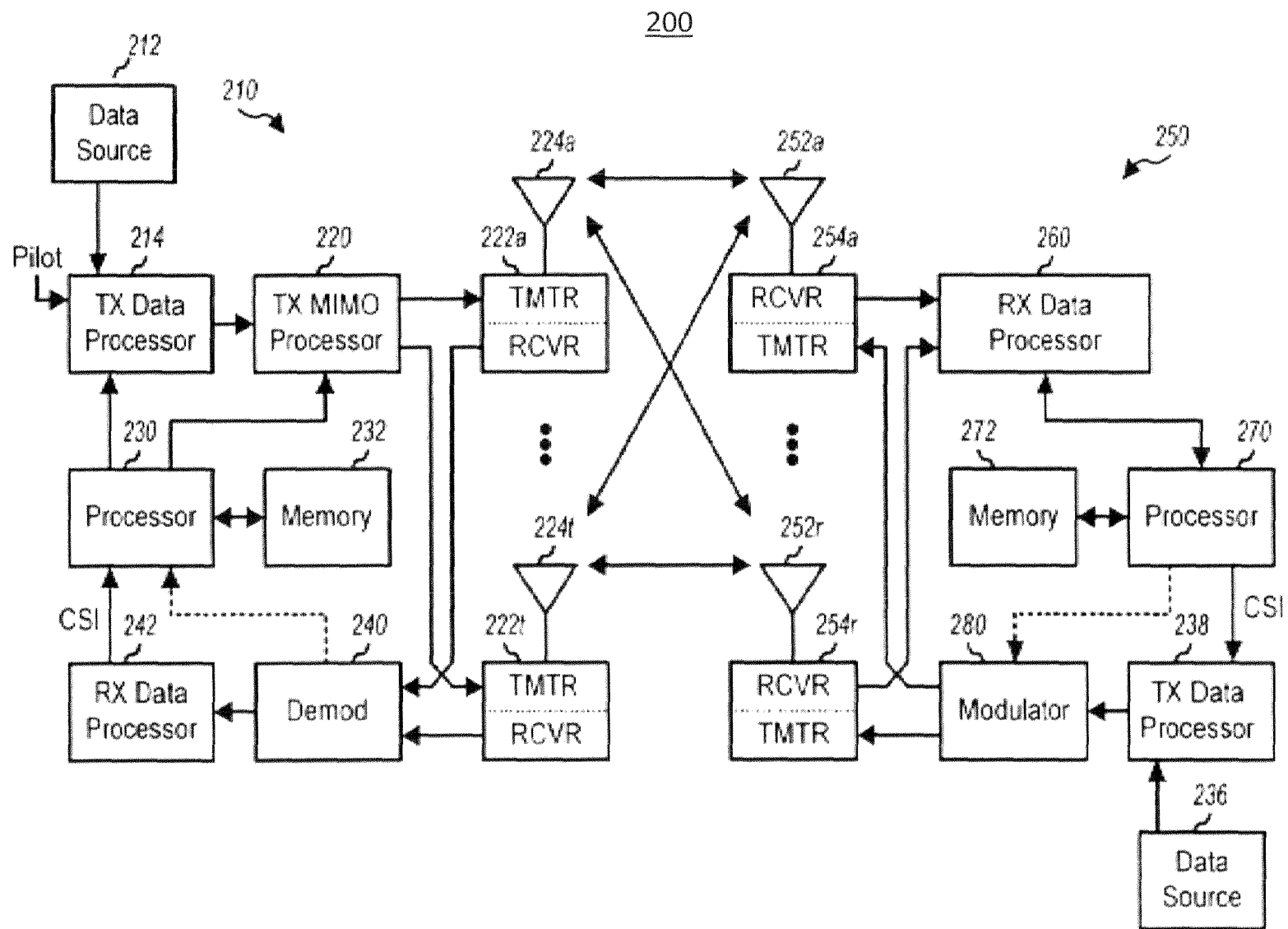


FIG. 4

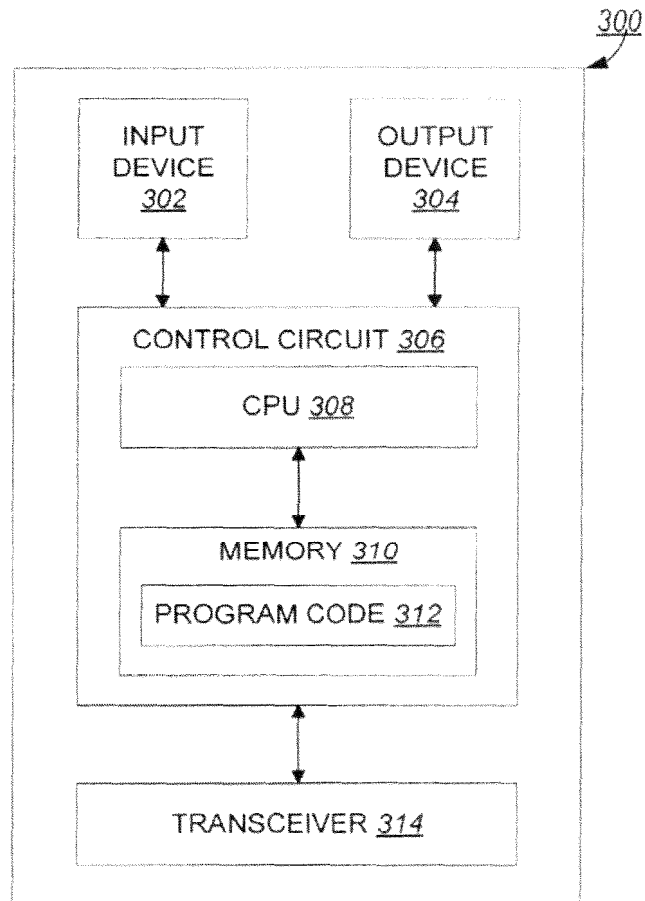


FIG. 5

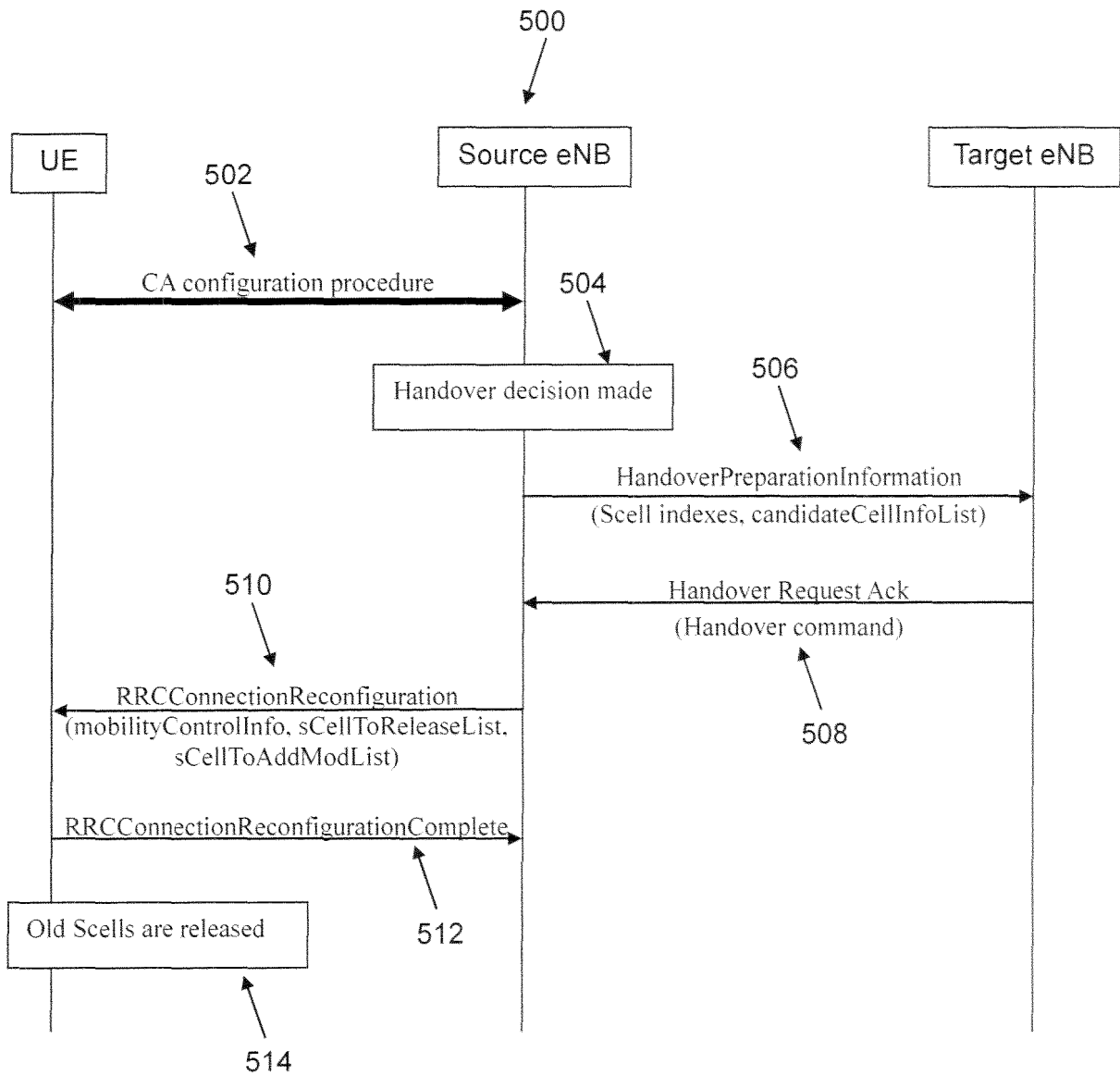


FIG. 6

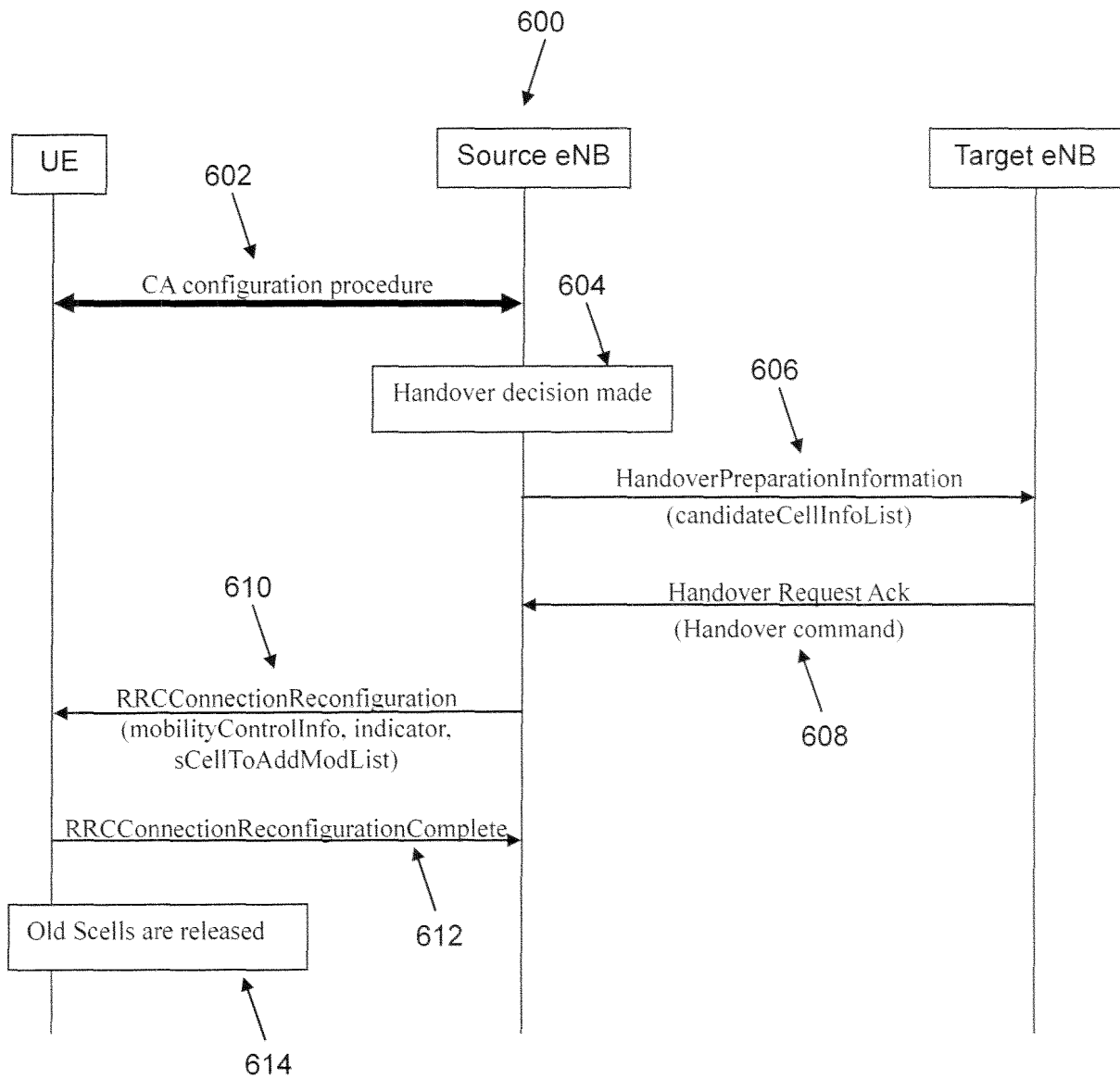


FIG. 7

Attorney Docket No.: 1291-013.101

Client Docket No.: 0990190-US

DECLARATION
Utility Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM** the specification of which

(Check One)

☒ Is attached hereto OR
☐ was filed on _____ as United States Application Serial
No. _____

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above.

I acknowledge the duty to disclose all information which is known to me to be material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Date of Filing	Priority Claimed	
			Yes	No

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date
61/409,416	November 2, 2010

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose all information which is known to me to be material to patentability as defined in Title 37, Code of Federal Regulations § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date	Status-Patented, Pending or Abandoned

Attorney Docket No.: 1291-013.101

Client Docket No.: 0990190-US

Residence, post office address, citizenship and signature of inventor(s) set forth beginning on next page.

I further declare that all statements made herein of my own knowledge are true and that all statements made on Information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the practitioners associated with Customer Number **22145**.

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RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship	
POST OFFICE ADDRESS		City	State or Country	Zip Code
INVENTOR'S SIGNATURE _____			DATE _____	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Lee-Chee Kuo
Title: METHOD AND APPARATUS FOR SECONDARY CELL RELEASE
DURING HANDOVER IN A WIRELESS COMMUNICATION
SYSTEM
Serial No.: TBD Filed: Herewith
Examiner: TBD Group Art Unit: TBD
Attorney Docket No.: 1291-013.101 (IS 0990192-US)

**CERTIFICATE OF EFS-WEB TRANSMISSION
UNDER 37 CFR § 1.8**

I hereby certify that the enclosed 4 Page Utility with Fee Transmittal; 18 Page
Specification; 5 Page Drawings; and 2 Page Declaration; are being transmitted to the United
States Patent and Trademark Office via EFS-Web on October 27, 2011.

Date: October 27, 2011



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Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM		
First Named Inventor/Applicant Name:		Richard Lee-Chee Kuo		
Filer:		Mirsafian Saeid/Sandy Kim		
Attorney Docket Number:		1291-013.101		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	380	380
Utility Search Fee	1111	1	620	620
Utility Examination Fee	1311	1	250	250
Pages:				
Claims:				
Claims in excess of 20	1202	2	60	120
Independent claims in excess of 3	1201	1	250	250
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1620

Electronic Acknowledgement Receipt

EFS ID:	11280472
Application Number:	13282974
International Application Number:	
Confirmation Number:	7758
Title of Invention:	METHOD AND APPARATUS FOR SECONDARY CELL RELEASE DURING HANDOVER IN A WIRELESS COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Richard Lee-Chee Kuo
Customer Number:	22145
Filer:	Mirsafian Saeid/Sandy Kim
Filer Authorized By:	Mirsafian Saeid
Attorney Docket Number:	1291-013.101
Receipt Date:	27-OCT-2011
Filing Date:	
Time Stamp:	15:24:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 1620
RAM confirmation Number	1934
Deposit Account	111159
Authorized User	MIRSAFIAN,SAEID

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 1.21 (Miscellaneous fees and charges)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		1291-013-101-- PackageasFiled10272011.PDF	3291520	yes	30
			1319c2699158d28137ea6339a9312ec6c85b8ecb		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal of New Application		1	4	
	Specification		5	18	
	Claims		19	21	
	Abstract		22	22	
	Drawings-only black and white line drawings		23	27	
	Oath or Declaration filed		28	29	
	Miscellaneous Incoming Letter		30	30	
	Warnings:				
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38143	no	2
			efa21fb0c0aea0b68fbb51e49dcac59e0dbb74f6		
Warnings:					
Information:					
Total Files Size (in bytes):			3329663		

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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.