

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4672653

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT	
NATURE OF CONVEYANCE:	Corrective Assignment to correct the CONVEYANCE TYPE AND CONVEYING PARTY previously recorded on Reel 032190 Frame 0724. Assignor(s) hereby confirms the ASSIGNMENT FROM ONE OR BOTH ASSIGNORS ACCORDING TO PRIOR AGREEMENT.	
CONVEYING PARTY DATA		
Name		Execution Date
RENESAS MOBILE CORPORATION		10/01/2013
RECEIVING PARTY DATA		
Name:	BROADCOM INTERNATIONAL LIMITED	
Street Address:	122 MARY STREET	
Internal Address:	4TH FLOOR, ZEPHYR HOUSE	
City:	GRAND CAYMAN	
State/Country:	CAYMAN ISLANDS	
Postal Code:	1107	
PROPERTY NUMBERS Total: 64		
Property Type	Number	
Application Number:	13041949	
Application Number:	13045741	
Application Number:	13053871	
Application Number:	13083109	
Application Number:	13084941	
Application Number:	13094223	
Application Number:	13086681	
Application Number:	13098810	
Application Number:	13152826	
Application Number:	13160912	
Application Number:	13180033	
Application Number:	13166429	
Application Number:	13170939	
Application Number:	13183940	
Application Number:	13176941	
Application Number:	13221343	
Application Number:	13184002	

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Property Type	Number
Application Number:	13197642
Application Number:	13210180
Application Number:	13209945
Application Number:	13210201
Application Number:	13224825
Application Number:	13246462
Application Number:	13229015
Application Number:	13289482
Application Number:	13246358
Application Number:	13347375
Application Number:	13291634
Application Number:	13353755
Application Number:	13307895
Application Number:	13327225
Application Number:	13327269
Application Number:	13336856
Application Number:	13357180
Application Number:	13335488
Application Number:	13431323
Application Number:	13431370
Application Number:	13371677
Application Number:	13754326
Application Number:	13757499
Application Number:	13414550
Application Number:	13413988
Application Number:	13875872
Application Number:	13910500
Application Number:	14045994
Application Number:	13550045
Application Number:	13549849
Application Number:	13614052
Application Number:	14162852
Application Number:	13752562
Application Number:	13851353
Application Number:	61807684
Application Number:	13960143
Application Number:	14007996
Application Number:	14007268

Property Type	Number
Application Number:	14003625
Application Number:	14039600
Application Number:	14008298
Application Number:	14038142
Application Number:	14069910
Application Number:	14084085
Application Number:	14165036
Application Number:	14150117
Application Number:	13777386

CORRESPONDENCE DATA

Fax Number: (703)413-2220

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (703) 413-3000

Email: corpassignments@oblon.com

Correspondent Name: OBLON, ET AL.

Address Line 1: 1940 DUKE STREET

Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	446064US
NAME OF SUBMITTER:	JENNA HORN
SIGNATURE:	/Jenna Horn/
DATE SIGNED:	11/03/2017

Total Attachments: 72

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PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT2719493

SUBMISSION TYPE:	NEW ASSIGNMENT																												
NATURE OF CONVEYANCE:	ASSIGNMENT																												
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Application Number:	14008298
Application Number:	14038142
Application Number:	14069910
Application Number:	14084085
Application Number:	14165036
Application Number:	14150117

CORRESPONDENCE DATA

Fax Number:

Email: patent@stantonip.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: STANTON IP LAW

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Address Line 4: WEST HARTFORD, CONNECTICUT 06110

NAME OF SUBMITTER:	JERRY STANTON
Signature:	/Jerry Stanton/
Date:	02/10/2014

Total Attachments: 67

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PATENT
REEL: 032190 FRAME: 0726
PATENT
REEL: 044779 FRAME: 0501

PATENT ASSIGNMENT

and/or

4/18/2017

THIS PATENT ASSIGNMENT ("Patent Assignment") is made and entered into as of October 1, 2013 (the "Effective Date"), by and between RENESAS ELECTRONICS CORPORATION, a Japanese corporation ("REL"), and RENESAS MOBILE CORPORATION, a Japanese corporation and a wholly owned subsidiary of REL ("RMC" and, collectively with REL, "Assignors" and each individually, an "Assignor") and BROADCOM INTERNATIONAL LIMITED, a limited company incorporated in the Cayman Islands ("Assignee").

WHEREAS, Assignors and Assignee have entered into an Intellectual Property Assignment, dated as of the date hereof, pursuant to which Assignors have agreed to assign to Assignee the Patents (as defined below).

NOW, THEREFORE, in consideration of the premises and the mutual representations, warranties, covenants and agreements set forth in this Patent Assignment and in the Intellectual Property Assignment, the parties agree as follows:

1. Patents.

"Patents" means the patents and patent applications listed on Attachment A-1 hereto, and any continuations, divisionals, continuations-in-part, provisionals and other applications that claim priority from any of such patents and patent applications and any patents issuing on any of the foregoing, and any reissues, reexaminations, substitutions, renewals and extensions of any of the foregoing.

2. Assignment.

Each Assignor hereby assigns, transfers and conveys to Assignee all of its rights, title and interest in and to the Patents, and all rights, claims and privileges pertaining to the Patents, including, without limitation, rights to the underlying inventions, the right to prosecute and maintain the Patents, and the right to sue and recover damages for past, present and future infringement of any of the Patents.

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PATENT

REEL: 044779 FRAME: 0504

IN WITNESS WHEREOF, Assignors and Assignee have caused this Patent Assignment to be signed and executed by the undersigned officers thereunto duly authorized as of the Effective Date.

RENESAS ELECTRONICS CORPORATION

By: Hisao Sakata

Name: Hisao Sakata

Title: Chairman & CEO

09/30/2013

RENESAS MOBILE CORPORATION

By: Hideaki Chaki

Name: Hideaki Chaki

Title: President & CEO

09/30/2013

BROADCOM INTERNATIONAL LIMITED

By: _____

Name: _____

Title: _____

10/1/13

IN WITNESS WHEREOF, Assignors and Assignee have caused this Patent Assignment to be signed and executed by the undersigned officers thereunto duly authorized as of the Effective Date.

RENESAS ELECTRONICS CORPORATION

By: _____

Name: _____

Title: _____

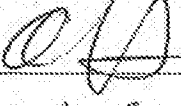
RENESAS MOBILE CORPORATION

By: _____

Name: _____

Title: _____

BROADCOM INTERNATIONAL LIMITED

By:  _____

Name: Eric Brandt

Title: Director

ACKNOWLEDGMENT

State of California

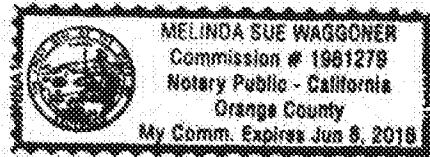
County of Orange

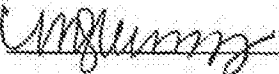
On September 24, 2013 before me, Melinda Sue Waggoner, Notary Public
(Insert name and title of the officer)

personally appeared Eric Brandt
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in
his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.



Signature  (Seal)

Attachment A-1



Patent No.	Category	Status	Proposed Title	Submission date	Invention date
RM135167	Family	ToEval	On PoS operation in RRC idle	31 Jul 2013	25 Jul 2013
RM135168	Family	ToEval	MAS COUNT failure in inter-system change	25 Jul 2013	24 Jul 2013
RM135163	Family	ToEval	RF sensitivity and data throughput improvement by re-arranging/increasing number of receiver's signal paths	5 Jul 2013	4 Jul 2013
RM135155	Family	InEval	RF current consumption saving at low power level using RF tuning in production	19 Jun 2013	19 Jun 2013
RM135154	Family	InEval	RF current consumption saving using RF test results in production	17 Jun 2013	16 Apr 2013
RM135153	Family	InEval	3GPP conformable balancing method of electrical balance duplexer	20 Jun 2013	28 Mar 2013
RM135151	Family	ToEval	Enhanced SI Transmission	20 Jun 2013	2 Jun 2013
RM135150	Family	InEval	Enhanced Harmonic Rejection Mixer	14 Jun 2013	25 Oct 2012
RM135147	Family	InEval	Power control enhancement to compensate interference level changes in TDMA scheduled HSUPA	12 Jun 2013	10 Jun 2013
RM135143	Family	ToEval	Signaling and principle for D2D link setup after discovery signal detection	9 Jun 2013	7 Jun 2013
RM135142	Family	ToEval	Enhanced security design for dual connectivity in small cells	8 Jun 2013	6 Jun 2013
RM135140	Family	ToEval	Enhanced physical layer signaling to support CA in flexible TDD system	8 Jun 2013	28 May 2013
RM135139	Family	InEval	MSS hopping algorithm in initial synchronization	7 Jun 2013	7 Jun 2013
RM135136	Family	InEval	Accuracy optimization for integrated temperature sensor that uses external NTC	31 May 2013	8 Feb 2012
RM135125	Family	ToEval	Enhanced Mobility Management behavior for establishing PS emergency sessions over existing MAS PDN connection (Revised)	30 Apr 2013	30 Apr 2013
RM135116	Family	ToEval	Restoration of HPLMN connectivity	24 Apr 2013	24 Apr 2013
RM135113	Family	ToEval	Preference indicator to split the UL and DL for macro and small cell scenario with U/DI, power imbalance issue	23 Apr 2013	8 Apr 2013
RM135107	Family	InEval	Energy saving procedure for non-overlapping scenarios	16 Apr 2013	14 Mar 2013
RM135107	Family	InEval	Integrated Multi-Lane Clock Tolerance Compensation and De-Skew mechanism for Wireline interfaces	16 Apr 2013	3 Dec 2012
RM135106	Family	ToEval	Mechanism to reduce interference between UEs in flexible TDD systems	8 Apr 2013	8 Apr 2013
RM135102	Family	ToEval	T1 Bundling Collision Handling	3 Apr 2013	2 Apr 2013
RM135085	Family	ToEval	Handling repetition length ambiguity for extreme coverage MTC	12 Mar 2013	12 Mar 2013
RM135081	Family	ToEval	ESM STATUS to network if the network request to deactivate the default bearer of the last PDN connection	6 Mar 2013	26 Feb 2013
RM135071	Family	ToEval	CRX operation for multiple T1 scheduling	1 Mar 2013	15 Feb 2013
RM135060	Family	InEval	UE mobility scheme in mixed dominant and active cells	25 Feb 2013	24 Jan 2013
RM135058	Family	ToEval	Race condition on uplink data signaling and CSFB mobile terminated call	22 Feb 2013	21 Feb 2013
RM135018	Family	ToEval	CSI measurement configuration with reduced control signaling on NCT	23 Jan 2013	23 Jan 2013
RM125079	Family	ToEval	UE initiated handover procedure with dual connection in local area network	16 Nov 2012	26 Oct 2012
RM125058	Family	ToEval	New Attach after cause #19 ESM failure	2 Nov 2012	28 Oct 2012
RM135164	Family	InDrafting	Detection of Frequency Correction Burst Transmissions in GSM Networks	9 Jul 2013	9 Jul 2013
RM135075	Family	InDrafting	Transmitter Intermodulation Cancellation for Carrier Aggregation/Fullband operation	4 Mar 2013	11 Jan 2012
RM135075	Family	InDrafting	Transmitter Intermodulation Cancellation for Carrier Aggregation/Fullband operation	4 Mar 2013	11 Jan 2012
RM135009	Family	InDrafting	Real-time recursive channel estimation for improved channel tracking capability with low-cost computational complexity	13 Jan 2013	
RM135009	Family	InDrafting	Real-time recursive channel estimation for improved channel tracking capability with low-cost computational complexity	13 Jan 2013	
RM125014	Family	InDrafting	Wake-up real-time self-calibration technique for power saving	4 Oct 2012	2 Oct 2012
RM125014	Family	InDrafting	Wake-up real-time self-calibration technique for power saving	4 Oct 2012	2 Oct 2012

RM126193	Family	Inventing	Transmitter Harmonic Cancellation for Carrier Aggregation/Multiband operation	13 Jun 2012
RM126193	WO/1	Inventing	Transmitter Harmonic Cancellation for Carrier Aggregation/Multiband operation	10 Nov 2012

PATENT

REEL: 044779 FRAME: 0566

NOTARIAL CERTIFICATE

This is to certify that Yasuhiro Mishiro an agent of Hisao Sakuta, Chairman & CEO of RENESAS ELECTRONICS CORPORATION, has stated in my presence that said Hisao Sakuta has acknowledged to have signed the attached document.

This is to certify that Yasuhiro Mishiro an agent of Hideaki Chaki, President & CEO of RENESAS MOBILE CORPORATION, has stated in my presence that said Hideaki Chaki has acknowledged to have signed the attached document.

Dated this 30th day of September, 2013.



S. Ono

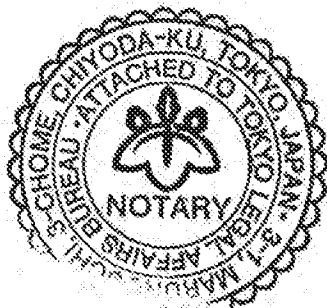
Shigekuni Ono

NOTARY

3-1, Marunouchi 3-chome,

Chiyoda-ku, Tokyo

Tokyo Legal Affairs Bureau



PATENT

REEL: 044779 FRAME: 0567

[Insert Notary Public acknowledgement]

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PATENT

REEL: 044779 FRAME: 0568

1	平成 2 5 年 登 簿 第 0184 号
2	添付書面における作成名義人ルネサスエレクトロニク
3	ス株式会社代表取締役作田久男及び同ルネサスモバイル
4	株式会社代表取締役茶木英明の代理人三代恭裕は、当職
5	の面前で、各本人が作成名義人の署名を自認していると陳
6	述した。
7	よって、これを認証する。
8	平成 2 5 年 9 月 3 0 日、本職役場において
9	東京都千代田区丸の内三丁目 3 番 1 号
10	東京法務局所属
11	公証人 大野重國
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