

## DETAILED ACTION

### *Claim Objections*

Claim 8 is objected to because of the following informalities:

Claim 8, lines 8 and 9, replaced ", **and further**" with -- . --

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

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 –  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 8 is rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Khlal et al. (20120293253).

Khlal et al. (Figs. 1 and 2) disclose a power management system comprising: a charge pump converter (12) can be read as a boost converter operative to receive a first supply voltage (battery) via line 24 and generate a boosted supply voltage having a higher voltage than the first supply voltage; and a parallel amplifier circuit (14) can be read as an envelope amplifier operative to receive an envelope signal (V<sub>ramp</sub>) and the boosted supply voltage via line 38 and generate a second supply voltage based on the envelope signal and the boosted supply voltage, wherein the envelope amplifier is

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operative to further receive the first supply voltage via line 30 and generate the second supply voltage based on the first supply voltage and generate the second supply voltage based on the first supply voltage or the boosted supply voltage.

***Allowable Subject Matter***

Claims 3-7, 10-15, 17-19, 21-26 are allowed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is 571-272-1767. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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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.

**/Khanh Van Nguyen/**  
Primary Examiner, Art Unit 2817

<b>Notice of References Cited</b>	Application/Control No. 13/167,659	Applicant(s)/Patent Under Reexamination MATHE ET AL.	
	Examiner KHANH V. NGUYEN	Art Unit 2817	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2012/0293253	11-2012	Khlat et al.	330/127
	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**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)				
	U				
	V				
	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.



<b><i>Index of Claims</i></b>  	<b>Application/Control No.</b>  13167659	<b>Applicant(s)/Patent Under Reexamination</b>  MATHE ET AL.
	<b>Examiner</b>  KHANH V NGUYEN	<b>Art Unit</b>  2817

✓	<b>Rejected</b>
=	<b>Allowed</b>

-	<b>Cancelled</b>
÷	<b>Restricted</b>

N	<b>Non-Elected</b>
I	<b>Interference</b>

A	<b>Appeal</b>
O	<b>Objected</b>

Claims renumbered in the same order as presented by applicant
  CPA
  T.D.
  R.1.47

CLAIM		DATE							
Final	Original	11/17/2012	05/03/2013	07/22/2013					
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	2	✓	✓	-					
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	4	○	=	=					
	5	○	=	=					
	6	✓	=	=					
	7	✓	=	=					
	8	✓	✓	✓					
	9	✓	✓	-					
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	25	✓	=	=					
	26	✓	=	=					

## EAST Search History

## EAST Search History (Prior Art)

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S2	11	((("20080278136") or ("20100001793") or ("20110095827") or ("6300826") or ("6661217") or ("6792252") or ("7061313") or ("7068984") or ("7368985") or ("7679433") or ("7932780")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/05 13:45
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S6	58	("20050110562"   "20060119425"   "20070019446"   "20070024360"   "20070126408"   "20080030174"   "20080224769"   "20080237705"   "20090091305"   "3600667"   "3970953"   "4378530"   "4502152"   "4516080"   "5682303"   "5905407"   "5939867"   "6009000"   "6043707"   "6121761"   "6215290"   "6281666"   "6292378"   "6300826"   "6346798"   "6362607"	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:11



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S7	50	"330"/\$.ccls. and switcher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/09 14:47
S9	590	"330"/\$.ccls. and boost\$4 same switch\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/09 15:28
S10	57	"330"/\$.ccls. and boost\$4 same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:16
S11	3	((("5414614") or ("6055168") or ("6198645")).PN.	USPAT	OR	OFF	2012/11/12 11:39
S12	197	"330"/\$.ccls. and (envelop\$3 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:49
S13	6	((("20040208262") or ("20040266366") or ("20080252380") or ("20090167427") or ("5905407") or ("0671646")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/12 16:12
S14	2	("5905407").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 18:01
S15	36	("4152670"   "4446440"   "4523152"   "4600891"   "5329245"   "5352986"   "5543753").PN. OR ("5905407").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:04
S16	4	("5905407"   "6838931"   "7116947").PN. OR ("7755431").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:27
S17	6	((("20090289720") or ("6300826") or ("6583664")).PN.	US-PGPUB; USPAT; USOCR;	OR	OFF	2012/11/12 19:09



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S18	6	("7808323").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 19:11
S19	7	("20080074207"   "7449954"   "7679433"   "7755422").PN. OR ("7808323").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:11
S20	5	("20030146791"   "6437641"   "6621350"   "6975166"   "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:43
S21	51	("2210028"   "5142240"   "5420536"   "5442317"   "5745526"   "5883927"   "5886575"   "5898342"   "5929702"   "6028486"   "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:44
S22	229	"330"/\$.ccls. and (((step\$4 adj1 up) or boost\$3) with converter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 09:33
S23	76	"330"/\$.ccls. and ((DC adj1 DC) adj1 convert\$4) same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 12:29
S24	2	("20090160555"   "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:33
S25	11	("20020153940"   "20040251968"   "20050057308"   "6437641"   "6492867"   "6566944"   "6831519"   "6985039"   "7193470"   "7405618"   "7420415").PN. OR ("7932780").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:46
S26	86	330/10,136,207A,251,297.ccls. and (envelop\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 20:22
S27	5	("20030146791"   "6437641"   "6621350"   "6975166"   "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:32
S28	51	("2210028"   "5142240"   "5420536"   "5442317"   "5745526"   "5883927"   "5886575"   "5898342"   "5929702"   "6028486"   "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:33
S29	60	("20020171477"   "20020186079"	US-PGPUB;	OR	ON	2012/11/13



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S30	4	("20090191826"   "20090289720"   "6583664"   "7808323").PN. OR ("8030995").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:51
S31	11	((("8030995") or ("5929776") or ("7932780") or ("2009027860") or ("5905407") or ("6838931") or ("20040208262") or ("7755431") or ("7808323") or ("20090191826") or ("7932780") or ("20110273235") or ("8237499") or ("8030995")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 17:41
S32	3	((("5414614") or ("6055168") or ("6198645")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 18:11
S34	7	((Dongsu near1 Kim) or (Jinsung or Choi) or (Daehyun near1 Kang) or (Bumman near1 Kim)).in. and (envelope adj1 tracking)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:15
S35	11	Wideband with Envelope with Tracking with (Power adj1 Amplifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:16
S36	121	boost\$4 with (linear\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:20
S37	2	("6300826").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/17 18:55
S38	218	330/10,136,207A,251,297.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/04/25 18:48
S40	4	((("20050046474") or ("20050215209")).PN.	US-PGPUB; USPAT;	OR	OFF	2013/05/03 21:34



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S41	2	("20120326783").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/05/03 21:38
S42	18	((("6300826") or ("6792252") or ("7061313") or ("7679433") or ("5905407") or ("8237499") or ("20050215209") or ("20100001793") or ("7932780") or ("7932780") or ("8030995") or ("20050046474") or ("20080278136") or ("6661217") or ("7068984") or ("6838931") or ("7368985") or ("20110095827") or ("7755431")).PN.	US-PGPUB; USPAT	OR	OFF	2013/05/03 21:40
S43	2	("20090160555"   "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/05/03 21:41
S44	228	330/10,136,207A,251,297.ccls. and (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 11:42
S45	17	330/307.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 14:49
S46	1	("7876156").PN. OR ("8461931").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/15 15:18
S49	136	(envelop\$4 with (amplif\$4 or amplification)) same (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/16 09:33
S50	0	("8493141").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/16 09:51
S51	2	("20120293253").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2013/07/16 09:52



			IBM_TDB			
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"20060244513"   "6995995"			
"20060181340"   "20070014382"			
"6701141").PN.			


### EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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S48	147	330/10,136,207A,251,297,307.ccls. and (boost\$4 with (supply or voltage or power)) with (amplif\$4 or amplification)	US-PGPUB; USPAT; UPAD	OR	ON	2013/07/15 14:48

7/ 22/ 2013 2:28:16 PM

C:\Users\knguyen7\Documents\EAST\Workspaces\13167659.wsp



<p><b>Search Notes</b></p> 	<p><b>Application/Control No.</b></p> <p>13167659</p>	<p><b>Applicant(s)/Patent Under Reexamination</b></p> <p>MATHE ET AL.</p>
	<p><b>Examiner</b></p> <p>KHANH V NGUYEN</p>	<p><b>Art Unit</b></p> <p>2817</p>

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
330	10,136,207A,251,297	11/5/2012	NKV
UPDATE	ABOVE	4/25/2013	NKV
UPDATE	ABOVE	7/15/2013	NKV

SEARCH NOTES		
Search Notes	Date	Examiner

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

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appln. No.: 13/167,659

Applicant: Lennart K. Mathe et al.

Filed: June 23, 2011

Examiner: Khanh V. Nguyen

Art Unit: 2817

Customer No.: 23696

Confirm. No.: 8529

Docket No.: 101005

**FILED VIA EFS**

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

**AMENDMENT**

Sir:

In response to the Office Action dated July 26, 2013, please amend the above-identified application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Canceled)
2. (Canceled)
3. (Previously Presented) The apparatus of claim 4, wherein the envelope amplifier is operative to generate the second supply voltage based on the boosted supply voltage if the envelope signal exceeds a first threshold, or if the first supply voltage is below a second threshold, or both.
4. (Previously Presented) An apparatus comprising:
  - a boost converter operative to receive a first supply voltage and generate a boosted supply voltage having a higher voltage than the first supply voltage; and
  - an envelope amplifier operative to receive an envelope signal and the boosted supply voltage and generate a second supply voltage based on the envelope signal and the boosted supply voltage, wherein the envelope amplifier is operative to further receive the first supply voltage and generate the second supply voltage based on the first supply voltage and generate the second supply voltage based on the first supply voltage or the boosted supply voltage, and further wherein the envelope amplifier comprises
    - an operational amplifier (op-amp) operative to receive the envelope signal and provide an amplified signal,
    - a driver operative to receive the amplified signal and provide a first control signal and a second control signal,
    - a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving the first control signal, a source receiving the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage, and

an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the second supply voltage, and a source coupled to circuit ground.

5. (Original) The apparatus of claim 4, wherein the envelope amplifier further comprises

a second PMOS transistor having a gate receiving a third control signal, a source receiving the boosted supply voltage, and a drain coupled to the source of the PMOS transistor, and

a third PMOS transistor having a gate receiving a fourth control signal, a source receiving the first supply voltage, and a drain coupled to the source of the PMOS transistor.

6. (Previously Presented) The apparatus of claim 4, further comprising:

a power amplifier operative to receive the second supply voltage from the envelope amplifier and to receive and amplify an input radio frequency (RF) signal and provide an output RF signal.

7. (Previously Presented) The apparatus of claim 4, wherein the first supply voltage is a battery voltage for the apparatus.

8. (Canceled)

9. (Canceled)

10. (Previously Presented) An apparatus for wireless communication, comprising:

a power amplifier operative to receive and amplify an input radio frequency (RF) signal and provide an output RF signal; and

a supply generator operative to receive an envelope signal and a first supply voltage, to generate a boosted supply voltage having a higher voltage than the first supply voltage, and to generate a second supply voltage for the power amplifier based on the envelope signal and the boosted supply voltage, wherein the supply generator incorporates an operational amplifier (op-



amp) operative to receive the envelope signal and provide an amplified signal, a driver operative to receive the amplified signal and provide a first control signal and a second control signal, a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving a first control signal, a source receiving the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage, and an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the second supply voltage, and a source coupled to circuit ground.

11. (Original) The apparatus of claim 10, wherein the supply generator is operative to generate the second supply voltage based on the envelope signal and either the boosted supply voltage or the first supply voltage.

12. (Previously Presented) A method of generating supply voltages, comprising:  
generating a boosted supply voltage based on a first supply voltage, the boosted supply voltage having a higher voltage than the first supply voltage; and  
generating a second supply voltage based on an envelope signal and the boosted supply voltage, wherein the second supply voltage is generated by an envelope amplifier that produces the second supply voltage using an operational amplifier (op-amp) that receives the envelope signal and provides an amplified signal, a driver that receives the amplified signal and provides a first control signal and a second control signal, a P-channel metal oxide semiconductor (PMOS) transistor that receives the first control signal, a source that receives the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage and an N-channel metal oxide semiconductor (NMOS) transistor that receives the second control signal at a gate and provides a second supply voltage through a drain, and a source for circuit grounding.

13. (Original) The method of claim 12, wherein the generating the second supply voltage comprises generating the second supply voltage based on the envelope signal and either the boosted supply voltage or the first supply voltage.

14. (Previously Presented) An apparatus for generating supply voltages, comprising:  
means for generating a boosted supply voltage based on a first supply voltage, the boosted supply voltage having a higher voltage than the first supply voltage; and  
means for generating a second supply voltage based on the envelope signal and the boosted supply voltage, wherein the means for generating the second supply voltage incorporates an envelope amplifier that produces the second supply voltage using an operational amplifier (op-amp) that receives the envelope signal and provides an amplified signal, a driver that receives the amplified signal and provides a first control signal and a second control signal, a P-channel metal oxide semiconductor (PMOS) transistor that receives the first control signal, a source that receives the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage and an N-channel metal oxide semiconductor (NMOS) transistor that receives the second control signal at a gate and provides a second supply voltage through a drain, and a source for circuit grounding.
15. (Original) The apparatus of claim 14, wherein the means for generating the second supply voltage comprises means for generating the second supply voltage based on an envelope signal and either the boosted supply voltage or the first supply voltage.
16. (Canceled)
17. (Previously Presented) The apparatus of claim 18, further comprising:  
a boost converter operative to receive the first supply voltage and provide a boosted supply voltage having a higher voltage than the first supply voltage, wherein the envelope amplifier operates based on the first supply voltage or the boosted supply voltage.
18. (Previously Presented) An apparatus comprising:  
a switcher operative to receive a first supply voltage and provide a first supply current;  
an envelope amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and  
a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and



a power amplifier operative to receive a total supply current comprising the first supply current and the second supply current, wherein the switcher comprises

a current sense amplifier operative to sense the first supply current, or the second supply current, or the total supply current and provide a sensed signal,

a driver operative to receive the sensed signal and provide a first control signal and a second control signal,

a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving the first control signal, a source receiving the first supply voltage, and a drain providing a switching signal for an inductor providing the first supply current, and

an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the switching signal, and a source coupled to circuit ground.

19. (Previously Presented) The apparatus of claim 18, wherein the first supply current comprises direct current (DC) and low frequency components, and wherein the second supply current comprises higher frequency components.

20. (Canceled)

21. (Previously Presented) The apparatus of claim 22, wherein the switcher operates based on a first supply voltage, and wherein the offset is determined based on the first supply voltage.

22. (Previously Presented) An apparatus comprising:

an inductor operative to receive a switching signal and provide a supply current; and

a switcher operative to sense an input current and generate the switching signal to charge and discharge the inductor to provide the supply current, the switcher adding an offset to the input current to generate a larger supply current via the inductor than without the offset, wherein the switcher comprises

a summer operative to sum the input current and an offset current and provide a summed current,

a current sense amplifier operative to receive the summed current and provide a sensed signal, and

a driver operative to receive the sensed signal and provide at least one control signal used to generate the switching signal for the inductor.

23. (Original) The apparatus of claim 22, wherein the at least one control signal comprises a first control signal and a second control signal, and wherein the switcher further comprises

a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving the first control signal, a source receiving a first supply voltage, and a drain providing the switching signal, and

an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the switching signal, and a source coupled to circuit ground.

24. (Previously Presented) The apparatus of claim 22, further comprising:

an envelope amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal, wherein a total supply current comprises the supply current from the switcher and the second supply current from the envelope amplifier.

25. (Original) The apparatus of claim 24, further comprising:

a boost converter operative to receive the first supply voltage and provide a boosted supply voltage having a higher voltage than the first supply voltage, wherein the envelope amplifier operates based on the first supply voltage or the boosted supply voltage.

26. (Previously Presented) The apparatus of claim 22, further comprising:

a power amplifier operative to receive the supply current from the inductor and to receive and amplify an input radio frequency (RF) signal and provide an output RF signal.



### **REMARKS/ARGUMENTS**

The above identified patent application has been amended and reconsideration and reexamination are hereby requested.

Claims 3-7, 10-15, 17-19, and 21-26 are now pending in the application. Claims 1, 2, 9, 16, and 20 have been previously canceled. Claim 8 has been canceled.

#### ***Claim Objections***

The Examiner has objected to claim 8 because of an informality. The Applicant has canceled claim 8. As claim 8 has been canceled the Applicant respectfully requests that the above objection be withdrawn.

#### ***Claim Rejections – 35 U.S.C. § 102***

Claim 8 was rejected under pre-AIA 35 U.S.C. § 102(e) as being anticipated by Khlat et al. (U.S. Patent Publication No. 2012/0293253, hereinafter “Khlat”).

Claim 8 has been canceled in this response, and Applicant requests that the rejection be withdrawn.

#### ***Claim Objections/Allowable Subject Matter***

The Applicant thanks the Examiner for allowing claims 3-7, 10-15, 17-19, and 21-26.

Application No.: 13/167,659  
Amendment dated October 11, 2013  
Reply to Office Action of July 26, 2013

Docket No.: 101005  
Customer No.: 23696

9

### CONCLUSION

In light of the amendments contained herein, the Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated: 2013-10-15

By: /William Marcus Hooks/  
William M. Hooks  
Reg. No. 48,857

QUALCOMM Incorporated  
Attn: Patent Department  
5775 Morehouse Drive  
San Diego, California 92121-1714  
Telephone: (858) 658-4351  
Facsimile: (858) 658-3984



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	17131951
<b>Application Number:</b>	13167659
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	8529
<b>Title of Invention:</b>	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER
<b>First Named Inventor/Applicant Name:</b>	Lennart K. Mathe
<b>Customer Number:</b>	23696
<b>Filer:</b>	William M. Hooks/Sheryl Schoen
<b>Filer Authorized By:</b>	William M. Hooks
<b>Attorney Docket Number:</b>	101005
<b>Receipt Date:</b>	15-OCT-2013
<b>Filing Date:</b>	23-JUN-2011
<b>Time Stamp:</b>	16:09:50
<b>Application Type:</b>	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	Amendment/Req. Reconsideration-After Non-Final Reject	101005_2013-10-15_AMENDM ENT.pdf	107507 0d285236790df70f2566de08ec47673e81c b9104	no	9

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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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## NOTICE OF ALLOWANCE AND FEE(S) DUE

 23696 7590 11/22/2013  
 QUALCOMM INCORPORATED  
 5775 MOREHOUSE DR.  
 SAN DIEGO, CA 92121

EXAMINER	
NGUYEN, KHANH V	
ART UNIT	PAPER NUMBER

2843

DATE MAILED: 11/22/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529

TITLE OF INVENTION: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1780	\$300	\$0	\$2080	02/24/2014

**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.**

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE  
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**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.

23696 7590 11/22/2013  
**QUALCOMM INCORPORATED**  
 5775 MOREHOUSE DR.  
 SAN DIEGO, CA 92121

**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.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529

TITLE OF INVENTION: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1780	\$300	\$0	\$2080	02/24/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, KHANH V	2843	330-251000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(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</p> <p>_____ 3</p>
---	---

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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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 form 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.

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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.

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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 13/167,659, 06/23/2011, Lennart K. Mathe, 101005, 8529
Row 2: 23696, 7590, 11/22/2013, EXAMINER NGUYEN, KHANH V
Row 3: QUALCOMM INCORPORATED, 5775 MOREHOUSE DR., SAN DIEGO, CA 92121, ART UNIT 2843, PAPER NUMBER

DATE MAILED: 11/22/2013

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 92 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 92 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Privacy Act Statement

**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.
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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 law or regulation.



**Notices of Allowance and Fee(s) Due mailed between October 1, 2013 and  
December 31, 2013**

(Addendum to PTOL-85)

If the "Notice of Allowance and Fee(s) Due" has a mailing date on or after October 1, 2013 and before January 1, 2014, the following information is applicable to this application.

If the issue fee is being timely paid on or after January 1, 2014, the amount due is the issue fee and publication fee in effect January 1, 2014. On January 1, 2014, the issue fees set forth in 37 CFR 1.18 decrease significantly and the publication fee set forth in 37 CFR 1.18(d)(1) decreases to \$0.

If an issue fee or publication fee has been previously paid in this application, applicant is not entitled to a refund of the difference between the amount paid and the amount in effect on January 1, 2014.



<b>Notice of Allowability</b>	<b>Application No.</b> 13/167,659	<b>Applicant(s)</b> MATHE ET AL.	
	<b>Examiner</b> KHANH V. NGUYEN	<b>Art Unit</b> 2817	<b>AIA (First Inventor to File) Status</b> 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 2/22/13.  
 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 3-15,17-19,21-26. 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](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto: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: \_\_\_\_\_.

**Interim copies:**

a)  All    b)  Some    c)  None of the: Interim copies of the priority documents have been 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)  
2.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_  
3.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material  
4.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_


5.  Examiner's Amendment/Comment  
6.  Examiner's Statement of Reasons for Allowance  
7.  Other \_\_\_\_\_.

/KHANH V. NGUYEN/  
Primary Examiner, Art Unit 2817







<b>Issue Classification</b> 	<b>Application/Control No.</b> 13167659	<b>Applicant(s)/Patent Under Reexamination</b> MATHE ET AL.
	<b>Examiner</b> KHANH V NGUYEN	<b>Art Unit</b> 2817

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant																<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original						
-	1	14	17																		
-	2	15	18																		
2	3	16	19																		
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3	5	17	21																		
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8	10	22	26																		
9	11																				
10	12																				
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12	14																				
13	15																				
-	16																				

NONE		<b>Total Claims Allowed:</b>	
		22	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/KHANH V NGUYEN/ Primary Examiner.Art Unit 2817	5/3/13	1	3
(Primary Examiner)	(Date)		

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L5	591	330/10,136,207A,251,297.ccls. and ((switch\$4 or boost\$4) with suppl\$4) and (envelop\$4 or (current with sens\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/11/04 08:27
S1	2	("6893101").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/05 13:41
S2	11	((("20080278136") or ("20100001793") or ("20110095827") or ("6300826") or ("6661217") or ("6792252") or ("7061313") or ("7068984") or ("7368985") or ("7679433") or ("7932780")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/05 13:45
S3	231	330/136,251,297.ccls. and boost\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/05 14:30
S4	45	("20020135338"   "20030198300"   "20050110562"   "20060119425"   "20070019446"   "20070024360"   "20080224769"   "20090091305"   "3600667"   "3970953"   "4378530"   "4502152"   "4516080"   "5682303"   "5905407"   "6005377"   "6009000"   "6043707"   "6121761"   "6215290"   "6281666"   "6292378"   "6300826"   "6346798"   "6362607"   "6362608"   "6404175"   "6424129"   "6449174"   "6534962"   "6583664"   "6642631"   "6650096"   "6661210"   "6674274"   "6833760"   "6850045"   "6894559"   "6985039"   "7058373"   "7071662"   "7109689"   "7126315"   "7135918"   "7190150").PN. OR ("7990214").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 11:02
S5	11	("20020153940"   "20040251968"   "20050057308"   "6437641"   "6492867"   "6566944"   "6831519"   "6985039"   "7193470"   "7405618"   "7420415").PN. OR ("7932780").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:08
S6	58	("20050110562"   "20060119425"   "20070019446"   "20070024360"   "20070126408"   "20080030174"	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:11



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S7	50	"330"/\$.ccls. and switcher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/09 14:47
S9	590	"330"/\$.ccls. and boost\$4 same switch\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/09 15:28
S10	57	"330"/\$.ccls. and boost\$4 same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:16
S11	3	(("5414614") or ("6055168") or ("6198645")).PN.	USPAT	OR	OFF	2012/11/12 11:39
S12	197	"330"/\$.ccls. and (envelop\$3 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:49
S13	6	(("20040208262") or ("20040266366") or ("20080252380") or ("20090167427") or ("5905407") or ("0671646")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/12 16:12
S14	2	("5905407").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 18:01
S15	36	("4152670"   "4446440"   "4523152"   "4600891"   "5329245"   "5352986"   "5543753").PN. OR ("5905407").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:04



S16	4	("5905407"   "6838931"   "7116947").PN. OR ("7755431").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:27
S17	6	((("20090289720") or ("6300826") or ("6583664")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 19:09
S18	6	("7808323").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 19:11
S19	7	("20080074207"   "7449954"   "7679433"   "7755422").PN. OR ("7808323").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:11
S20	5	("20030146791"   "6437641"   "6621350"   "6975166"   "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:43
S21	51	("2210028"   "5142240"   "5420536"   "5442317"   "5745526"   "5883927"   "5886575"   "5898342"   "5929702"   "6028486"   "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:44
S22	229	"330"/\$.ccls. and (((step\$4 adj1 up) or boost\$3) with converter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 09:33
S23	76	"330"/\$.ccls. and ((DC adj1 DC) adj1 convert\$4) same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 12:29
S24	2	("20090160555"   "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:33
S25	11	("20020153940"   "20040251968"   "20050057308"   "6437641"   "6492867"   "6566944"   "6831519"   "6985039"   "7193470"   "7405618"   "7420415").PN. OR ("7932780").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:46
S26	86	330/10,136,207A,251,297.ccls. and (envelop\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 20:22
S27	5	("20030146791"   "6437641"   "6621350"   "6975166"   "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:32



S28	51	("2210028"   "5142240"   "5420536"   "5442317"   "5745526"   "5883927"   "5886575"   "5898342"   "5929702"   "6028486"   "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:33
S29	60	("20020171477"   "20020186079"   "20030214355"   "20040174212"   "20050242875"   "3900823"   "4320350"   "4346349"   "5142240"   "5287069"   "5757229"   "5777519"   "5786727"   "5789984"   "5793253"   "5929702"   "6043707"   "6081161"   "6112062"   "6157253"   "6239656"   "6268768"   "6297696"   "6300826"   "6362685"   "6437641"   "6515541"   "6566944"   "6583664"   "6590451"   "6617920"   "6617929"   "6661284"   "6677819"   "6735419").PN. OR ("7440733").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:36
S30	4	("20090191826"   "20090289720"   "6583664"   "7808323").PN. OR ("8030995").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:51
S31	11	((("8030995") or ("5929776") or ("7932780") or ("2009027860") or ("5905407") or ("6838931") or ("20040208262") or ("7755431") or ("7808323") or ("20090191826") or ("7932780") or ("20110273235") or ("8237499") or ("8030995")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 17:41
S32	3	((("5414614") or ("6055168") or ("6198645")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 18:11
S34	7	((Dongsu near1 Kim) or (Jinsung or Choi) or (Daehyun near1 Kang) or (Bumman near1 Kim)).in. and (envelope adj1 tracking)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:15
S35	11	Wideband with Envelope with Tracking with (Power adj1 Amplifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:16
S36	121	boost\$4 with (linear\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:20
S37	2	("6300826").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/17 18:55
S38	218	330/10,136,207A,251,297.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR;	OR	ON	2013/04/25 18:48



			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S40	4	(("20050046474") or ("20050215209")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/05/03 21:34
S41	2	(("20120326783")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/05/03 21:38
S42	18	(("6300826") or ("6792252") or ("7061313") or ("7679433") or ("5905407") or ("8237499") or ("20050215209") or ("20100001793") or ("7932780") or ("7932780") or ("8030995") or ("20050046474") or ("20080278136") or ("6661217") or ("7068984") or ("6838931") or ("7368985") or ("20110095827") or ("7755431")).PN.	US-PGPUB; USPAT	OR	OFF	2013/05/03 21:40
S43	2	(("20090160555"   "20090215413")).PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/05/03 21:41
S44	228	330/10,136,207A,251,297.ccls. and (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 11:42
S45	17	330/307.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 14:49
S46	1	(("7876156")).PN. OR ("8461931").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/15 15:18
S49	136	(envelop\$4 with (amplif\$4 or amplification)) same (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/16 09:33
S50	0	(("8493141")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/16 09:51



S51	2	("20120293253").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/16 09:52
S52	19	("20040017251"   "20040227208"   "20050093526"   "20060006850"   "20060128324"   "20060255777"   "20070014382"   "20070139975"   "20070182490"   "20070298731"   "20080111529"   "20080130330"   "5781043"   "5936357"   "6256482"   "6348781"   "6798177"   "7505742").PN. OR ("8089253").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/16 11:12
S53	2	("20120293253").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/16 17:36
S54	123	("7609114"   "20040219891"   "20040266366"   "20050032499"   "20080081572"   "20100308654"   "5486871"   "6043707"   "6070181"   "7529523"   "7646108"   "7773691"   "20100301947"   "7528807"   "20040196095"   "20050157778"   "20090174466"   "20090218995"   "20070014382"   "20090190699"   "6681101"   "6995995"   "6701141"   "5414614"   "8008970"   "20040124913"   "20080205095"   "20090004981"   "6621808"   "6728163"   "7058373"   "7411316"   "7615979"   "20110148375"   "6617930"   "8008970"   "20050093630"   "20080280577"   "20100321127"   "5532916"   "6141541"   "7859336"   "5936464"   "6256482"   "8068622"   "6198645"   "6617930"   "20020071497"   "20110235827"   "7777459"   "20050047180"   "6118343"   "20030220953"   "20030220953"   "20090167260"   "20100017553"   "20120133299"   "5646621"   "8000117"   "8164388"   "6348780"   "7782036"   "7805115"   "20090190699"   "6256482"   "6681101"   "20110148375"   "20040047329"   "20070183532"   "20120068767"   "20120139516"   "5420643"   "5822318"   "5898342"   "6559689"   "20120170334"   "20120176196"   "6204731"   "8093951"   "8174313"   "20030137286"   "20070259628"   "20110018626"   "20060181340"   "6624712"   "20090319065"   "6055168"   "20030232622"   "20050008093"   "20050122171"   "20060128324"   "20070024360"   "20080150619"   "20110084760"   "4996500"   "5311309"	US-PGPUB; USPAT	OR	OFF	2013/07/16 17:43

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"5715526"   "5905407"   "6658445"			
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"7233130"   "6624712"   "8164388"			
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"8198941"   "7994864"   "20030206603"			
"20060244513"   "6995995"			
"20060181340"   "20070014382"			
"6701141").PN.			


## EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L7	161	330/10,136,207A,251,297.ccls. and ((switch\$4 or boost\$4) with suppl\$4) with (envelop\$4 or (current with sens\$4))	US-PGPUB; USPAT; UPAD	OR	ON	2013/11/04 09:53
S39	99	330/10,136,207A,251,297.ccls. and (boost\$4 with (voltage or power)) same switch\$4	US-PGPUB; USPAT; UPAD	OR	ON	2013/04/26 09:34
S48	147	330/10,136,207A,251,297,307.ccls. and (boost\$4 with (supply or voltage or power)) with (amplif\$4 or amplification)	US-PGPUB; USPAT; UPAD	OR	ON	2013/07/15 14:48

11/4/2013 10:37:36 AM

C:\Users\knguyen7\Documents\EAST\Workspaces\13167659.wsp



<b>Search Notes</b>  	<b>Application/Control No.</b> 13167659	<b>Applicant(s)/Patent Under Reexamination</b> MATHE ET AL.
	<b>Examiner</b> KHANH V NGUYEN	<b>Art Unit</b> 2817

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
330	10,136,207A,251,297	11/5/2012	NKV

SEARCH NOTES		
Search Notes	Date	Examiner

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

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## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529
23696	7590	02/13/2014	EXAMINER	
QUALCOMM INCORPORATED			NGUYEN, KHANH V	
5775 MOREHOUSE DR.			ART UNIT	PAPER NUMBER
SAN DIEGO, CA 92121			2843	
			NOTIFICATION DATE	DELIVERY MODE
			02/13/2014	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):

us-docketing@qualcomm.com

<b>Notice of Allowability</b>	<b>Application No.</b> 13/167,659	<b>Applicant(s)</b> MATHE ET AL.	
	<b>Examiner</b> KHANH V. NGUYEN	<b>Art Unit</b> 2843	<b>AIA (First Inventor to File) Status</b> 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 2/22/13.  
 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 3-7,10-15,17-19 and 21-26. 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](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto: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. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Examiner's Amendment/Comment                  |
| 2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 7. <input type="checkbox"/> Other _____.                                  |
| 4. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____.                     |   |

/KHANH V. NGUYEN/  
Primary Examiner, Art Unit 2843

<b>Issue Classification</b> 	<b>Application/Control No.</b> 13167659	<b>Applicant(s)/Patent Under Reexamination</b> MATHE ET AL.
	<b>Examiner</b> KHANH V NGUYEN	<b>Art Unit</b> 2817


CPC		
Symbol	Type	Version

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		<b>Total Claims Allowed:</b>	
(Assistant Examiner)	(Date)	20	
/KHANH V NGUYEN/ Primary Examiner.Art Unit 2817	11/04/13	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3





<b>Issue Classification</b> 	<b>Application/Control No.</b> 13167659	<b>Applicant(s)/Patent Under Reexamination</b> MATHE ET AL.
	<b>Examiner</b> KHANH V NGUYEN	<b>Art Unit</b> 2817

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47									
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
-	1	13	17												
-	2	12	18												
2	3	14	19												
1	4	-	20												
3	5	16	21												
4	6	15	22												
5	7	17	23												
	8	18	24												
	9	19	25												
6	10	20	26												
7	11														
8	12														
9	13														
10	14														
11	15														
-	16														

NONE		<b>Total Claims Allowed:</b>	
		20	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/KHANH V NGUYEN/ Primary Examiner.Art Unit 2817	11/04/13	1	3
(Primary Examiner)	(Date)		

## 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)

QUALCOMM Incorporated  
 5775 Morehouse Drive  
 San Diego, CA 92121

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.

Sheryl Schoen	(Depositor's name)
/Sheryl Schoen/	(Signature)
21 February 2014	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529

TITLE OF INVENTION:

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$960	\$0	\$0	\$960	02/24/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS

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 William M. Hooks  
 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  
 QUALCOMM Incorporated

(B) RESIDENCE: (CITY and STATE OR COUNTRY)  
 San Diego, CA

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 credit any overpayment, to Deposit Account Number <sup>17-0026</sup> \_\_\_\_\_ (enclose an extra copy of this form).

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).

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 /William Marcus Hooks/  
 Typed or printed name William M. Hooks

Date 2014-02-21  
 Registration No. 48857

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.



## Privacy Act Statement

**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 law or regulation.



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

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	101005
		Application Number	13/167,659
Title of Invention	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

**Secrecy Order 37 CFR 5.2**

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

**Applicant Information:**

<b>Applicant 1</b>					
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
				<input type="radio"/> Party of Interest under 35 U.S.C. 118	
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Lennart	K	Mathe		
<b>Residence Information (Select One)</b>					
		<input checked="" type="radio"/> US Residency		<input type="radio"/> Non US Residency	
				<input type="radio"/> Active US Military Service	
<b>City</b>	San Diego	<b>State/Province</b>	CA	<b>Country of Residence</b>	US
<b>Citizenship under 37 CFR 1.41(b)</b>		SE			
<b>Mailing Address of Applicant:</b>					
<b>Address 1</b>		5775 Morehouse Drive			
<b>Address 2</b>					
<b>City</b>	San Diego	<b>State/Province</b>	CA		
<b>Postal Code</b>	92121	<b>Country</b>	US		
<b>Applicant 2</b>					
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
				<input type="radio"/> Party of Interest under 35 U.S.C. 118	
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Thomas	D Domenick	Marra		
<b>Residence Information (Select One)</b>					
		<input checked="" type="radio"/> US Residency		<input type="radio"/> Non US Residency	
				<input type="radio"/> Active US Military Service	
<b>City</b>	San Diego	<b>State/Province</b>	CA	<b>Country of Residence</b>	US
<b>Citizenship under 37 CFR 1.41(b)</b>		US			
<b>Mailing Address of Applicant:</b>					
<b>Address 1</b>		5775 Morehouse Drive			
<b>Address 2</b>					
<b>City</b>	San Diego	<b>State/Province</b>	CA		
<b>Postal Code</b>	92121	<b>Country</b>	US		
<b>Applicant 3</b>					
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
				<input type="radio"/> Party of Interest under 35 U.S.C. 118	
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Todd	R	Sutton		
<b>Residence Information (Select One)</b>					
		<input checked="" type="radio"/> US Residency		<input type="radio"/> Non US Residency	
				<input type="radio"/> Active US Military Service	
<b>City</b>	Del Mar	<b>State/Province</b>	CA	<b>Country of Residence</b>	US



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

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	101005
		Application Number	13/167,659
Title of Invention	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER		
Citizenship under 37 CFR 1.41(b)	US		
<b>Mailing Address of Applicant:</b>			
Address 1	5775 Morehouse Drive		
Address 2			
City	San Diego	State/Province	CA
Postal Code	92121	Country	US
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the <b>Add</b> button.			<input type="button" value="Add"/>

**Correspondence Information:**

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
<input type="checkbox"/> An Address is being provided for the correspondence information of this application.	
Customer Number	23696
Email Address	<input type="button" value="Add Email"/> <input type="button" value="Remove Email"/>

**Application Information:**

Title of the Invention	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER		
Attorney Docket Number	101005	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	6	Suggested Figure for Publication (if any)	3

**Publication Information:**

<input type="checkbox"/> Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/> <b>Request Not to Publish.</b> I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application <b>has not and will not</b> be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

**Representative Information:**

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)



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

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	101005
		Application Number	13/167,659
Title of Invention	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER		
Customer Number	23696		

**Domestic Benefit/National Stage Information:**

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

Prior Application Status		<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.			

**Foreign Priority Information:**

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

		<input type="button" value="Remove"/>	
Application Number	Country	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input checked="" type="radio"/> Yes <input type="radio"/> No
Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> button.			

**Assignee Information:**

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

<b>Assignee 1</b>			
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	QUALCOMM Incorporated		
<b>Mailing Address Information:</b>			
Address 1	5775 Morehouse Drive		
Address 2			
City	San Diego	State/Province	CA
Country	US	Postal Code	92121
Phone Number	858-845-4265	Fax Number	
Email Address	us-docketing@qualcomm.com		
Additional Assignee Data may be generated within this form by selecting the <b>Add</b> button.			

**Signature:**

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



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

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	101005		
		Application Number	13/167,659		
Title of Invention	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER				
<b>Signature</b>	/William Marcus Hooks/		Date (YYYY-MM-DD)	2014-02-18	
First Name	William M.	Last Name	Hooks	Registration Number	48857

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

## Privacy Act Statement

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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 the Freedom of Information Act requires disclosure of these records.
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 inspections 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 law or regulation.



## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	13167659			
<b>Filing Date:</b>	23-Jun-2011			
<b>Title of Invention:</b>	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER			
<b>First Named Inventor/Applicant Name:</b>	Lennart K. Mathe			
<b>Filer:</b>	William M. Hooks/Sheryl Schoen			
<b>Attorney Docket Number:</b>	101005			
Filed as Large Entity				
<b>Utility under 35 USC 111(a) Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Utility Appl Issue Fee	1501	1	960	960
<b>Extension-of-Time:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>960</b>



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	18271805
<b>Application Number:</b>	13167659
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	8529
<b>Title of Invention:</b>	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER
<b>First Named Inventor/Applicant Name:</b>	Lennart K. Mathe
<b>Customer Number:</b>	23696
<b>Filer:</b>	William M. Hooks/Sheryl Schoen
<b>Filer Authorized By:</b>	William M. Hooks
<b>Attorney Docket Number:</b>	101005
<b>Receipt Date:</b>	21-FEB-2014
<b>Filing Date:</b>	23-JUN-2011
<b>Time Stamp:</b>	18:14:55
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$960
RAM confirmation Number	5082
Deposit Account	170026
Authorized User	

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

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

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	Issue Fee Payment (PTO-85B)	101005_2014-02-21_ISS_FEE_T L.pdf	75957  0dd3da0502be00be2952e006a78365fdca6 2922b	no	2

**Warnings:****Information:**

2	Application Data Sheet	101005_2014-02-21_SADS.pdf	1451705  4a7253cd6d6e0c1fd76347c9e90e9ac0780f 52d2	no	5
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**Warnings:****Information:**

This is not an USPTO supplied ADS fillable form

3	Fee Worksheet (SB06)	fee-info.pdf	30322  62c42763fdb3fcd5f83bb851e0104b5c300 7130	no	2
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**Warnings:****Information:**

**Total Files Size (in bytes):** 1557984

**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.**

**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.**





## 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](http://www.uspto.gov)

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	04/15/2014	8698558	101005	8529

23696 7590 03/26/2014  
 QUALCOMM INCORPORATED  
 5775 MOREHOUSE DR.  
 SAN DIEGO, CA 92121

## 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 38 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):

Lennart K. Mathe, San Diego, CA;  
 Thomas Domenick Marra, San Diego, CA;  
 Todd R. Sutton, Del Mar, CA;

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](http://SelectUSA.gov).

I hereby certify that this correspondence is being filed via  
EFS-Web with the United States Patent and Trademark Office  
on April 17, 2017

PATENT  
Attorney Docket No.: 101005

KILPATRICK TOWNSEND & STOCKTON LLP

By: /William H. Gorman/  
William H. Gorman

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Lennart K. Mathe et al.

Patent No.: 8,698,558

Issued: April 15, 2014

For: LOW-VOLTAGE POWER-EFFICIENT  
ENVELOPE TRACKER

Application No.: 13/167,659

Filed: June 23, 2011

Confirmation No.: 8529

Examiner: Khanh V. Nguyen

Art Unit: 2843

REQUEST FOR CERTIFICATE OF  
CORRECTION UNDER 37 CFR § 1.323

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

Commissioner:

Pursuant to 37 CFR § 1.323, Applicant submits a Request for Certificate of Correction correcting errors in the Claims. The desired corrections are set forth on the enclosed form PTO/SB/44, and are described below.

In particular, Applicant submits that the following phrase of issued claim 12 (column 12, lines 57-59 of patent number 8,698,558) was included as the result of copy and paste error of a typographical nature: “a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and.” During prosecution of the application, the Office submitted that original dependent claim 18 was allowable if original independent claim 16 was re-written to include the subject matter of original dependent claim 18. *See Non-Final Office Action dated November 23, 2012*, pages 4-5. As indicated in the Amendment dated February 22, 2013 (hereinafter “Amendment”), Applicant attempted to incorporate the subject matter of original claims 16 and 18 to place the claims in condition for allowance. *See Amendment*, page 11. When amending original claim 18 to incorporate the subject matter of



Patent No.: 8,698,558  
Request for Certificate of Correction  
Request Dated April 17, 2017

PATENT  
Attorney Docket No.: 101005

original claim 16, Applicant inadvertently repeated the identical language “operative to receive an envelope signal and provide a second supply current based on the envelope signal; and” after the “envelope amplifier” and after the first recitation of the “power amplifier.” *See Amendment*, page 6. The resulting claim was issued as claim 12 in patent number 8,698,558.

The repeated recitation of the above-described subject matter after the first recitation of the “power amplifier” was a minor, typographical error. Applicant requests correction of this error by deleting the phrase “a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and” from claim 12 at column 12, lines 57-59, of patent number 8,698,558.

Applicant submits that the requested correction does not involve such changes in the patent as would constitute new matter or would require reexamination. For example, the subject matter of corrected claim 12 is fully supported in the original claims as filed (i.e., original claims 16 and 18). Further, the Examiner of record indicated that the combined subject matter of original claims 16 and 18 is allowable, which indicates that reexamination is not required. *See Non-Final Office Action dated November 23, 2012*, pages 4-5.

Pursuant to 37 CFR §1.20(a), a fee of \$100 will be charged via credit card. If additional fees are associated with this Request, the Commissioner is authorized to charge said fee to the undersigned’s Deposit Account No. 20-1430.

Respectfully submitted,

/Shelton W. Austin/  
Shelton W. Austin  
Registration No. 60,540

KILPATRICK TOWNSEND & STOCKTON LLP  
1100 Peachtree Street, Suite 2800  
Atlanta, GA 30309  
Tel: 858-350-6100  
Fax: 858-350-6111

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page  1  of  1

PATENT NO. : 8,698,558

APPLICATION NO.: 13/167,659

ISSUE DATE : April 15, 2014

INVENTOR(S) : Lennart K. Mathe, Thomas Domenick Marra, and Todd R. Sutton

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 12, Claim 12, Lines 57-59:

Delete "a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and"

**MAILING ADDRESS OF SENDER (Please do not use Customer Number below):**

Kilpatrick Townsend & Stockton LLP  
1100 Peachtree Street, Suite 2800  
Atlanta, Georgia 30309

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 hour 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: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*



## Privacy Act Statement

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 law or regulation.



**POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO**

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number:

15093

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b). I further authorize any of the above-identified practitioners to execute a Statement Under 37 CFR 3.73(b) on the undersigned's behalf to certify the chain of title and establish the undersigned's ownership in any and all patent applications in which rights have been assigned to the undersigned.

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number:

15093

OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone			Email


Assignee Name and Address:

QUALCOMM Incorporated  
5775 Morehouse Drive  
San Diego, California 92121

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

**SIGNATURE of Assignee of Record**

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	MAY 23, 2011
Name	Katherine Umpleby	Telephone	858 651 7170
Title	VP, Chief Patent Counsel		

63352755 v1



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.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Qualcomm Incorporated

Application No./Patent No.: 8,698,558 Filed/Issue Date: April 15, 2014

Titled: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER

Qualcomm Incorporated, a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- 1.  the assignee of the entire right, title, and interest in;
  - 2.  an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is \_\_\_\_\_ %); or
  - 3.  the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)
- the patent application/patent identified above, by virtue of either:

A.  An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 026944, Frame 0634, or for which a copy therefore is attached.

OR

B.  A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

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3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Shelton W. Austin/  
Signature

2017-04-17  
Date

Shelton W. Austin  
Printed or Typed Name

Attorney, Reg. No.: 60,540  
Title

This collection of information is required by 37 CFR 3.73(b). 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 1.11 and 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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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 law or regulation.



## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	13167659			
<b>Filing Date:</b>	23-Jun-2011			
<b>Title of Invention:</b>	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER			
<b>First Named Inventor/Applicant Name:</b>	Lennart K. Mathe			
<b>Filer:</b>	Shelton Wilkes Austin/William Gorman			
<b>Attorney Docket Number:</b>	101005			
Filed as Large Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Certificate of correction	1811	1	100	100

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>100</b>



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	28947447
<b>Application Number:</b>	13167659
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	8529
<b>Title of Invention:</b>	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER
<b>First Named Inventor/Applicant Name:</b>	Lennart K. Mathe
<b>Customer Number:</b>	23696
<b>Filer:</b>	Shelton Wilkes Austin/William Gorman
<b>Filer Authorized By:</b>	Shelton Wilkes Austin
<b>Attorney Docket Number:</b>	101005
<b>Receipt Date:</b>	17-APR-2017
<b>Filing Date:</b>	23-JUN-2011
<b>Time Stamp:</b>	17:34:00
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$100
RAM confirmation Number	041817INTEFSW17345800
Deposit Account	201430
Authorized User	Jennifer Jacobs

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

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 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	Request for Certificate of Correction	101005_Request_for_Certificate_of_Correction_Filed_April_17_2017.pdf	261636 05ac413929502102f72c281f59d7a8b64d07ca0b	no	4
<b>Warnings:</b>					
<b>Information:</b>					
2	Power of Attorney	POA.pdf	574370 205430a8e8097b37faee4f6652dcd02747ab2a16	no	1
<b>Warnings:</b>					
<b>Information:</b>					
3	Assignee showing of ownership per 37 CFR 3.73	101005_Statement_Under_373b_Filed_April_17_2017.pdf	422862 1d3ddfd70569e3d9a4960e894a42b3418fcc396	no	2
<b>Warnings:</b>					
<b>Information:</b>					
4	Fee Worksheet (SB06)	fee-info.pdf	30354 85a2acf401cb3785cd071d767232147e9d187bb8	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			1289222		



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**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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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/167,659	06/23/2011	Lennart K. Mathe	101005

**CONFIRMATION NO. 8529**

**POA ACCEPTANCE LETTER**



15093  
Kilpatrick Townsend & Stockton/Qualcomm  
Mailstop: IP Docketing - 22  
1100 Peachtree Street  
Suite 2800  
Atlanta, GA 30309

Date Mailed: 04/21/2017

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 04/17/2017.

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.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mabebe/



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**CHANGE OF  
 CORRESPONDENCE ADDRESS  
 Application**

Address to:  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Application Number	13/167,659
Filing Date	June 23, 2011
First Named Inventor	Lennart K. Mathe
Art Unit	2843
Examiner Name	KHANH V. NGUYEN
Attorney Docket Number	101005

Please change the Correspondence Address for the above-identified patent application to:

The address associated with  
 Customer Number:

15141

OR

Firm or  
 Individual Name

Address

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State

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This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

I am the:

Applicant

Attorney or agent of record. Registration Number 58,786

Registered practitioner named in the application transmittal papers who acts in a representative capacity under 37 CFR 1.34. See 37 CFR 1.33(a)(1). Registration Number \_\_\_\_\_

Signature /Alvin Fashu-Kanu/

Typed or Printed  
 Name ALVIN FASHU-KANU

Date May 2, 2017

Telephone 310-201-1530

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below.

\*Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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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# POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter.

I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

15141

OR

I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

Name Registration	Number	Name Registration	Number

Please recognize or change the correspondence address for the above-identified patent to:

The address associated with the above-mentioned Customer Number.

OR

The address associated with Customer Number:

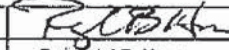
OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

I am the Applicant:

- Inventor or Joint Inventor
- Legal Representative of a Deceased or Legally Incapacitated Inventor
- Assignee or Person to Whom the Inventor is Under an Obligation to Assign
- Person Who Otherwise Shows Sufficient *Proprietary* Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

**SIGNATURE of Applicant for Patent**

Signature		Date	19 SEP 2012
Name	Raymond B. Horn	Telephone	858-651-3679
Title and Company	Vice President, Patent Counsel and QUALCOMM Incorporated		

**NOTE:** Signature - This form must be signed by the applicant or applicant's representative in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below \*.

\*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	29098046
<b>Application Number:</b>	13167659
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	8529
<b>Title of Invention:</b>	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER
<b>First Named Inventor/Applicant Name:</b>	Lennart K. Mathe
<b>Customer Number:</b>	15093
<b>Filer:</b>	Alvin Fashu-Kanu/Gayle Vinson
<b>Filer Authorized By:</b>	Alvin Fashu-Kanu
<b>Attorney Docket Number:</b>	101005
<b>Receipt Date:</b>	02-MAY-2017
<b>Filing Date:</b>	23-JUN-2011
<b>Time Stamp:</b>	20:18:53
<b>Application Type:</b>	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	101005_POA_AsFiled_02May2017.pdf	56396 e87e983787ad340e62e3198f4a095af7def80d68	no	2

### Warnings:

<b>Information:</b>	
<b>Total Files Size (in bytes):</b>	56396
<p><b>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.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> 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.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> 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.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> 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.</p>	





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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/167,659	06/23/2011	Lennart K. Mathe	101005

**CONFIRMATION NO. 8529**

**POA ACCEPTANCE LETTER**



15141  
Qualcomm Incorporated/Seyfarth Shaw LLP  
Alan M. Lenkin  
2029 Century Park East, Suite 3500  
Los Angeles, CA 90067-3021

Date Mailed: 05/08/2017

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 05/02/2017.

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.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zabraha/



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/167,659	06/23/2011	Lennart K. Mathe	101005

**CONFIRMATION NO. 8529**

**POWER OF ATTORNEY NOTICE**

15093  
Kilpatrick Townsend & Stockton/Qualcomm  
Mailstop: IP Docketing - 22  
1100 Peachtree Street  
Suite 2800  
Atlanta, GA 30309



Date Mailed: 05/08/2017

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 05/02/2017.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zabraha/





UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Patent No. 8698558
Issued Date: 15 April, 2014
Appl. No: 13/167,659
Filed.: 23 June 2011

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed .

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)

- Approved
Approved in Part
Denied

Comments:

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

This is a decision on the petition filed to correct inventorship under 37 CFR 1.324.

This is a decision on the request under 37 CFR 1.48, petition filed . In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby: Granted Dismissed

Comment:

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/ROBERT PASCAL/
Supervisory Patent Examiner, Art Unit 2842
Technology Center 2800
Phone: 571-272-1769

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 8,698,558 B2  
APPLICATION NO. : 13/167659  
DATED : April 15, 2014  
INVENTOR(S) : Lennart K. Mathe, Thomas Domenick Marra and Todd R. Sutton

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

Column 12, Claim 12, Lines 57-59:

Delete "a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and"

Signed and Sealed this  
Twenty-seventh Day of June, 2017



Joseph Matal  
*Performing the Functions and Duties of the  
Under Secretary of Commerce for Intellectual Property and  
Director of the United States Patent and Trademark Office*