

Notice of Allowability	Application No.	Applicant(s)	
	11/622,496	RAO, G.R. MOHAN	
	Examiner	Art Unit	
	AJAY K. ARORA	2892	

-- 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 11/13/12.
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 10-16 & 18-24. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

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

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

/AJAY K. ARORA/
Primary Examiner, Art Unit 2892

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/13/2012 has been entered.

Reasons for Allowance

1. Claims 10-16 and 18-24 are allowed. The following is an examiner's statement of reasons for allowance:

2. Claims 10-16 and 18-24 are allowed because the prior art of record does not teach or suggest, singularly or in combination, at least the limitations of base claim 10 which requires "at least one well region disposed in said single drift layer, said well region having a graded concentration of dopants and a second static unidirectional electric drift field to aid the movement of minority carriers from said surface layer to said

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substrate” (see last 3 lines of claim 10). Base claim 18 recites similar limitations (see last 3 lines of claim 18).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJAY K. ARORA whose telephone number is (571)272-8347. The examiner can normally be reached on Mon through Fri, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao X. Le can be reached on (571) 272-1708. 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.

/AJAY K. ARORA/
Primary Examiner, Art Unit 2892

Search Notes 	Application/Control No. 11622496	Applicant(s)/Patent Under Reexamination RAO, G.R. MOHAN
	Examiner AJAY K ARORA	Art Unit 2892

SEARCHED			
Class	Subclass	Date	Examiner
257	655	12/16/2011	AKA

SEARCH NOTES		
Search Notes	Date	Examiner
Revised EAST search history report	12/16/2011	AKA
Revised EAST search history report	8/10/2012	AKA
Revised EAST search history	11/19/2012	AKA
Inventor search	11/19/2012	AKA
.clm. interference search	11/19/2012	AKA

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
257	655	12/16/2011	AKA

	/A. K. A./ Primary Examiner.Art Unit 2892
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Issue Classification 	Application/Control No. 11622496	Applicant(s)/Patent Under Reexamination RAO, G.R. MOHAN
	Examiner AJAY K ARORA	Art Unit 2892

ORIGINAL						INTERNATIONAL CLASSIFICATION													
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED								
257		655				H	0	1	L	21 / 02 (2006.01.01)									
CROSS REFERENCE(S)																			
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																		
257	611	E33.048																	
438	510																		

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
-	1	-	17												
-	2	8	18												
-	3	9	19												
-	4	10	20												
-	5	11	21												
-	6	12	22												
-	7	13	23												
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-	9	-	25												
1	10														
2	11														
3	12														
4	13														
5	14														
6	15														
7	16														

NONE		Total Claims Allowed:	
		14	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/AJAY K ARORA/ Primary Examiner.Art Unit 2892	12/04/2012	1	5b
(Primary Examiner)	(Date)		

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(unidirectional WITH field WITH drift) AND ((gradient OR grading OR graded) WITH dop\$3).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/19 14:46
L2	0	(unidirectional WITH field WITH drift) AND ((gradient OR grading OR graded) WITH dop\$3).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/19 14:46
L3	0	((GR) near2 (RAO)).INV.	US-PGPUB; USPAT	OR	ON	2012/11/19 14:48
L4	0	((GR) near2 (RAO)).INV.	EPO; JPO; DERWENT	OR	ON	2012/11/19 14:48
L5	0	(("G.R.") near2 (RAO)).INV.	EPO; JPO; DERWENT	OR	ON	2012/11/19 14:49
L6	89	(mohan near2 RAO).INV.	EPO; JPO; DERWENT	OR	ON	2012/11/19 14:49
L7	245	(mohan near2 RAO).INV.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/19 14:49
L8	2	l7 and (grad\$3 WITH dop\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/19 14:50
S1	2	("20070158790").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/04/08 11:10
S2	58	("20020074585" "20040063288" "4001864" "4347654" "4866000" "5130262" "5213988" "5329144" "5480816" "5496746" "5569612" "5575862" "5797999" "6211028" "6452086" "6472715" "6670544" "6683343" "6696314" "6706550" "6713813" "6737722" "6744117" "6747883" "6753202" "6754093" "6756616" "RE37441").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/08 11:19
S3	1096	(graded OR gradation) WITH (dopant OR	US-PGPUB;	OR	ON	2008/04/08

		doping) WITH concentration	USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB			11:47
S4	805	S3 AND ("257" OR "438").clas.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/08 11:47
S5	253	(graded OR gradation) WITH (dopant OR doping) WITH concentration WITH (semiconductor OR silicon)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/08 11:49
S6	7	S5 SAME (carrier WITH (movement OR mobility))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/08 11:51
S7	48	S5 AND (((carrier OR electron OR hole) WITH (movement OR mobility)) SAME ((emitter WITH collector) OR (source WITH drain)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/04/08 11:55
S8	58	("20020074585" "20040063288" "4001864" "4347654" "4866000" "5130262" "5213988" "5329144" "5480816" "5496746" "5569612" "5575862" "5797999" "6211028" "6452086" "6472715" "6670544" "6683343" "6696314" "6706550" "6713813" "6737722" "6744117" "6747883" "6753202" "6754093" "6756616" "RE37441").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/18 12:16
S10	13	S8 AND ("dopant concentration" OR "concentration of dopant")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/18 12:17
S11	0	S8 AND (dop\$3 WITH (concentrat\$3 OR amount OR quantity) WITH (variable OR varying OR grad\$3)) AND ((doping OR dopant) WITH well) AND ((carrier OR charge) WITH (moving OR movement OR mobile OR mobility))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/18 12:22
S12	1136	(graded OR gradation) WITH (dopant OR doping) WITH concentration	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/18 12:22
S13	86	S12 AND (dop\$3 WITH (concentrat\$3 OR amount OR quantity) WITH (variable OR varying OR grad\$3)) AND ((doping OR dopant) WITH well) AND ((carrier OR	US-PGPUB; USPAT; USOCR; EPO; JPO;	OR	ON	2008/07/18 12:22

		charge) WITH (moving OR movement OR mobile OR mobility))	DERWENT; IBM_TDB			
S14	29	("20020068409" "6303450" "6437406" "6458665" "6483158" "6489223" "6509241").PN. OR ("6743684").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2008/07/18 13:13
S15	34	uniform\$2 WITH dop\$3 WITH drift WITH epitaxial	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:19
S16	2	("5637898").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/07/23 15:26
S17	0	(non-uniform\$2 OR nonuniform\$2 OR grad43 OR grading OR gradient) WITH (dopant OR doping) WITH well WITH carrier WITH (movement OR mobility) WITH ((away WITH active WITH surface) OR (towards WITH substrate))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:40
S18	4	(non-uniform\$2 OR nonuniform\$2 OR grad\$3 OR grading OR gradient) WITH (dopant OR doping) WITH well WITH carrier WITH (movement OR mobility) WITH ((away WITH active WITH surface) OR (towards WITH substrate))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:40
S19	4	("4001864").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/07/23 15:43
S20	58	("20020074585" "20040063288" "4001864" "4347654" "4866000" "5130262" "5213988" "5329144" "5480816" "5496746" "5569612" "5575862" "5797999" "6211028" "6452086" "6472715" "6670544" "6683343" "6696314" "6706550" "6713813" "6737722" "6744117" "6747883" "6753202" "6754093" "6756616" "RE37441").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:57
S21	92	S15 S19 S20	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:58
S22	39	S21 AND ((non-uniform\$2 OR nonuniform\$2 OR grad\$3 OR grading OR gradient) WITH (dopant OR doping))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:58
S23	60	S21 AND well	US-PGPUB; USPAT; USOCR;	OR	ON	2008/07/23 15:59

			EPO; JPO; DERWENT; IBM_TDB			
S24	39	S22 AND well	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 15:59
S25	2	S22 AND (well WITH carrier WITH (movement OR mobility) WITH ((away WITH active WITH surface) OR (towards WITH substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 16:00
S26	3	S22 AND (well WITH (carrier OR movement OR mobility) WITH ((away WITH active WITH surface) OR (towards WITH substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 16:00
S27	2	("20030042511").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/07/23 16:05
S28	2	S21 AND (substrate WITH carrier WITH away WITH ((active WITH surface) OR (towards NEAR2 substrate) OR (direction NEAR4 substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 17:17
S29	3	S21 AND (substrate WITH (carrier OR holes OR electron OR majority OR charge) WITH away WITH ((active WITH surface) OR (towards NEAR2 substrate) OR (direction NEAR4 substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 17:18
S30	30	S21 AND ((non-uniform\$2 OR nonuniform\$2 OR grad\$3 OR grading OR gradient) WITH (dopant OR doping) WITH substrate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 17:26
S31	253	(grad\$3 OR grading OR gradient) NEAR2 (dopant OR doping) NEAR4 substrate	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 17:33
S32	5	dopant WITH concentration WITH donor WITH acceptor WITH optimiz\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:02
S33	2	10/182,784	US-PGPUB; USPAT; USOCR;	OR	ON	2008/07/23 18:06

			EPO; JPO; DERWENT; IBM_TDB			
S34	0	S20 AND (dopant WITH concentration WITH donor WITH acceptor)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:22
S35	0	S20 AND (dopant WITH donor WITH acceptor)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:22
S36	5	(dopant WITH donor WITH acceptor WITH optimiz\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:26
S37	5	(dopant WITH donor WITH acceptor WITH (optimiz\$ OR optimization OR optimal))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:27
S38	487	(donor WITH acceptor WITH (optimiz\$ OR optimization OR optimal))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:27
S39	14	S38 AND semiconductor.ab.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:28
S40	0	(layer WITH dopant WITH wafer WITH transfer\$4 WITH ((another OR second OR alternate) NEAR1 wafer)) AND (wafer NEAR1 bond\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:49
S41	0	(dopant WITH wafer WITH transfer\$4 WITH ((another OR second OR alternate) NEAR1 wafer)) AND (wafer NEAR1 bond\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:49
S42	0	(dopant WITH transfer\$4 WITH ((another OR second OR alternate) NEAR1 wafer)) AND (wafer NEAR1 bond\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:50
S43	0	(dopant WITH transfer\$4 WITH ((another OR second OR alternate) NEAR1 wafer))	US-PGPUB; USPAT; USOCR;	OR	ON	2008/07/23 18:50

			EPO; JPO; DERWENT; IBM_TDB			
S44	14807	wafer NEAR1 bond\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:51
S45	33	S44 AND (dopant WITH transfer\$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/07/23 18:51
S46	579	(257/655,269).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/07/24 09:14
S47	539	(257/655).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/01/02 21:01
S48	695	VLSI AND ((graded OR gradation OR gradient) WITH (dopant OR doping OR impurit\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/24 11:04
S49	62	S48 AND (((carrier OR electron OR hole) WITH (movement OR mobility)) SAME ((emitter WITH collector) OR (source WITH drain)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/24 11:05
S50	4	S48 AND (well WITH carrier WITH (movement OR mobility) WITH ((away WITH active WITH surface) OR (towards WITH substrate)))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/24 11:06
S51	4	("4001864").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/05/24 11:10
S52	2	("6831292").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/05/24 11:36
S53	2	("5029277").PN.	US-PGPUB; USPAT; USOCR;	OR	OFF	2009/05/24 12:17

			EPO; JPO; DERWENT; IBM_TDB			
S54	551	(257/655).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/05/24 12:52
S55	564	(257/655).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/12/22 10:12
S56	2	("6831292").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/12/22 10:14
S57	10	(US-20040072395-\$ or US-20010046753-\$ or US-20010050382-\$ or US-20020093281-\$ or US-20030042511-\$).did. or (US-6743684-\$ or US-5359221-\$ or US-5637898-\$ or US-5627092-\$ or US-5029277-\$).did. or (US-20020093281-A-\$).did.	US-PGPUB; USPAT; DERWENT	OR	ON	2009/12/22 10:26
S58	0	S57 AND drift WITH aid\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/22 10:27
S59	7	(drift WITH aid\$3) WITH dopant WITH concentration	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/22 10:27
S60	173	((graded OR gradient OR gradation) NEAR2 (dop\$3 OR impurity)) WITH between WITH substrate AND (active OR source OR drain OR source/drain)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 12:45
S61	74	S60 AND CMOS	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 13:43
S62	5	(complementary WITH error WITH function WITH gradient)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 19:12
S64	55	CMOS AND (exponential WITH gradient)	US-PGPUB; USPAT;	OR	ON	2010/08/01 19:13

			USOCR; EPO; JPO; DERWENT; IBM_TDB			
S65	712	CMOS AND (linear WITH gradient)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 19:14
S66	12	S64 AND S65	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 19:14
S67	0	S66 AND S62	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 19:15
S68	7	(grad\$3 WITH (dop\$3 OR donor)) SAME ((dopant OR donor) WITH (sweep\$3 OR mov\$3 OR attract\$3) WITH substrate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 19:58
S69	4	(grad\$3 WITH (dop\$3 OR donor)) SAME ((dopant OR donor) WITH driv\$3 WITH (toward OR into OR deep\$2) WITH substrate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 20:00
S70	16	(layer WITH (dopant OR donor) WITH concentration WITH minority WITH substrate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/01 20:02
S71	3377	((graded OR gradation OR gradient) NEAR3 (dopant OR doping OR impurity OR donor OR acceptor)) AND (semiconductor OR CMOS OR FET OR "field effect" OR NMOS OR PMOS).ab.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 04:28
S72	371	S71 AND (drift WITH field)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 04:29
S73	0	S71 AND (minority WITH carrier WITH into WITH substrate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 04:29
S74	114	S71 AND (minority WITH carrier WITH substrate)	US-PGPUB; USPAT;	OR	ON	2010/08/02 04:30

			USOCR; EPO; JPO; DERWENT; IBM_TDB			
S75	33	S72 AND S74	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 04:30
S76	88	S71 AND (drift WITH layer WITH (graded OR gradation OR gradient) WITH (dopant OR doping OR impurity OR donor OR acceptor))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 04:47
S77	7	S76 AND (drift WITH layer WITH between WITH substrate)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 04:48
S78	8028	photodiode WITH CMOS	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 05:13
S79	0	S78 AND S76	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 05:14
S80	0	S78 AND S77	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 05:14
S81	7	S71 AND S77	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 05:14
S82	98	S71 AND S78	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 05:20
S83	9	S72 AND S78	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 05:20
S84	2	("20020084430").PN.	US-PGPUB; USPAT;	OR	OFF	2010/08/02 05:26

			USOCR; EPO; JPO; DERWENT; IBM_TDB			
S85	172	(drift WITH layer WITH epitaxial) AND S71	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 07:16
S86	47	S71 AND (linear AND exponential)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 08:04
S87	3	S86 AND "complimentary error function"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 08:04
S88	8	S86 AND donor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/08/02 08:38
S89	583	(257/655).OCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/08/02 10:21
S90	593	(257/655).OCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/01/11 11:40
S91	598	(257/655).OCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/04/10 20:57
S92	1	("4481522").PN.	USPAT; USOCR	OR	OFF	2011/12/16 08:02
S93	456	(257/655).OCLS.	USPAT; USOCR	OR	OFF	2011/12/16 09:45
S94	0	(single WITH static WITH drift) AND ((gradient OR grading OR graded) WITH dop\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/10 00:21
S95	22	(static WITH drift) AND ((gradient OR grading OR graded) WITH dop\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/08/10 00:21

S96	1	(unidirectional WITH field WITH drift) AND ((gradient OR grading OR graded) WITH dop\$3)	US-PGPUB; OR USPAT; EPO; JPO; DERWENT; IBM_TDB	ON	2012/08/10 00:24
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11/ 19/ 2012 2:57:22 PM
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<i>Index of Claims</i> 	Application/Control No. 11622496	Applicant(s)/Patent Under Reexamination RAO, G.R. MOHAN
	Examiner AJAY K ARORA	Art Unit 2892

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

☒ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	08/02/2010	04/10/2011	12/16/2011	08/10/2012	11/19/2012			
	1	-	-	-	-	-			
	2	-	-	-	-	-			
	3	-	-	-	-	-			
	4	-	-	-	-	-			
	5	-	-	-	-	-			
	6	-	-	-	-	-			
	7	-	-	-	-	-			
	8	-	-	-	-	-			
	9	-	-	-	-	-			
	10	✓	✓	✓	✓	=			
	11	✓	✓	✓	✓	=			
	12	✓	✓	✓	✓	=			
	13	✓	✓	✓	✓	=			
	14	✓	✓	✓	✓	=			
	15	✓	✓	✓	✓	=			
	16	✓	✓	✓	✓	=			
	17	✓	-	-	-	-			
	18	✓	✓	✓	✓	=			
	19	✓	✓	✓	✓	=			
	20	✓	✓	✓	✓	=			
	21	✓	✓	✓	✓	=			
	22	✓	✓	✓	✓	=			
	23	✓	✓	✓	✓	=			
	24	✓	✓	✓	✓	=			
	25	✓	-	-	-	-			

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)

70653 7590 12/12/2012
LAW OFFICES OF EUGENE M. CUMMINGS, P.C.
ONE NORTH WACKER DRIVE
SUITE 4130
CHICAGO, IL 60606

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.

ELECTRONIC FILING

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.

Francisca M.A. Hubbard	(Depositor's name)
<i>[Signature]</i>	(Signature)
March 12, 2013	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/622,496	01/12/2007	G.R. Mohan Rao	0299-0001.01	3086

TITLE OF INVENTION: SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$885	\$300	\$0	\$1185	03/12/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
ARORA, AJAY	2892	257-371000

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.

Eugene M. Cummings, P.C.
1 P.C.
2
3

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

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

(A) NAME OF ASSIGNEE

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

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

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

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

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

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 504199 (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 *[Signature]*
Typed or printed name David M. Mundt

Date March 12, 2013
Registration No. 41,207

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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Electronic Patent Application Fee Transmittal

Application Number:	11622496			
Filing Date:	12-Jan-2007			
Title of Invention:	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS			
First Named Inventor/Applicant Name:	G.R. Mohan Rao			
Filer:	David Michael Mundt/Francisca Hubbard			
Attorney Docket Number:	0299-0001.01			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	885	885
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300

Dell Ex. 1016

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1185

Electronic Acknowledgement Receipt

EFS ID:	15191627
Application Number:	11622496
International Application Number:	
Confirmation Number:	3086
Title of Invention:	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
First Named Inventor/Applicant Name:	G.R. Mohan Rao
Customer Number:	70653
Filer:	David Michael Mundt/Francisca Hubbard
Filer Authorized By:	David Michael Mundt
Attorney Docket Number:	0299-0001.01
Receipt Date:	12-MAR-2013
Filing Date:	12-JAN-2007
Time Stamp:	15:32:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1185
RAM confirmation Number	3028
Deposit Account	504199
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 1.21 (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)	IssueFee.pdf	169875 03bcbf9d7d2927752ec0c60b4ff01d078e7f afc1	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31843 3959a4d0703527cbda6bd4c321ef249fa66 5b73d	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			201718		
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/622,496	04/16/2013	8421195	0299-0001.01	3086

70653 7590 03/27/2013
LAW OFFICES OF EUGENE M. CUMMINGS, P.C.
ONE NORTH WACKER DRIVE
SUITE 4130
CHICAGO, IL 60606

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 0 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):

G.R. Mohan Rao, McKinney, TX;

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.

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PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	8,421,185
	Issue Date	04/16/2013
	First Named Inventor	RAC, G.R. MOHAN
	Title	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
	Attorney Docket Number	GRTD-32611

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

25883

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) 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

☐ Firm or Individual Name:

Address:

City:

State:

Zip:

Country:

Telephone:

Email:

I am the:

☐ Inventor, having ownership of the patent.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____

SIGNATURE of Inventor or Patent Owner

Signature	<i>Philip W. Johnson</i>	Date	5/20/2015
Name	Philip W. Johnson, Jr.	Telephone	204-728-8244
Title and Company	PRASIDENT		GREENTHREAD, LLC

NOTE: Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, 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 1480, Alexandria, VA 22313-1480. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

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

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Greenthread, LLC

Application No./Patent No.: 8,421,195

Filed/Issue Date: April 16, 2013

Titled:

SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS

Greenthread, LLC

, 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 035630, Frame 0391, 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.

2. 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.

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 302.06]

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

Philip W. John Jr.
Signature

5/20/2015
Date

Philip W. John Jr.
Printed or Typed Name

PRESIDENT
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 1480, Alexandria, VA 22313-1480. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

If you need assistance in completing the form, call 1-800-PTO-5199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	22481607
Application Number:	11622496
International Application Number:	
Confirmation Number:	3086
Title of Invention:	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
First Named Inventor/Applicant Name:	G.R. Mohan Rao
Customer Number:	70653
Filer:	Gregory Michael Howison/Heather Hamilton
Filer Authorized By:	Gregory Michael Howison
Attorney Docket Number:	0299-0001.01
Receipt Date:	01-JUN-2015
Filing Date:	12-JAN-2007
Time Stamp:	17:54:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	GRT32611POAEXE.pdf	642022 12e9c8c605e84c992a66f6dbf27d21bbf40e0f93	no	1

Warnings:

Information:

2	Assignee showing of ownership per 37 CFR 3.73	GRT32611STMT373bEXE.pdf	602530	no	1
			7949fff2285221279cfa919f38bd9ff17abdb5ae		
Warnings:					
Information:					
Total Files Size (in bytes):				1244552	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</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
11/622,496	01/12/2007	G.R. Mohan Rao	0299-0001.01

70653
EUGENE M. CUMMINGS, P.C.
55 W. MONROE
SUITE 3500
CHICAGO, IL 60603

CONFIRMATION NO. 3086
POWER OF ATTORNEY NOTICE



Date Mailed: 06/08/2015

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/01/2015.

- 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.

/sleutchit/



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
11/622,496	01/12/2007	G.R. Mohan Rao	GRTD-32611

25883
HOWISON & ARNOTT, L.L.P.
P.O. BOX 741715
DALLAS, TX 75374-1715

CONFIRMATION NO. 3086
POA ACCEPTANCE LETTER



Date Mailed: 06/08/2015

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/01/2015.

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.

/sleutchit/

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**PATENT - POWER OF ATTORNEY
OR
REVOCATION OF POWER OF ATTORNEY
WITH A NEW POWER OF ATTORNEY
AND
CHANGE OF CORRESPONDENCE ADDRESS**

Patent Number	8,421,195
Issue Date	04-16-2013
First Named Inventor	G.R. Mohan Rao
Title	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
Attorney Docket No.	GRTD.01.01.DV1

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

40672

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

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

☒ The address associated with the above-identified Customer Number.

OR

☐ The address associated with the Customer Number identified in the box at right:

OR

☐ Firm or
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Applicant.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/95) submitted herewith or filed on 06-01-2015

SIGNATURE of Applicant or Patent Owner		Date	3/20/2020
Signature	Philip W. John, Jr.	Telephone	
Name	PRESIDENT		
Title and Company	of GREENTHREAD, LLC		

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☒ A 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 update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 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

EFS ID:	38951953
Application Number:	11622496
International Application Number:	
Confirmation Number:	3086
Title of Invention:	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
First Named Inventor/Applicant Name:	G.R. Mohan Rao
Customer Number:	25883
Filer:	Bill Naifeh/April Reasoner
Filer Authorized By:	Bill Naifeh
Attorney Docket Number:	GRTD-32611
Receipt Date:	24-MAR-2020
Filing Date:	12-JAN-2007
Time Stamp:	13:35:00
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA_8421195_GRTD0101DV1.pdf	2184135 12cacaad717a3a8effb040956d502574c1497c1d	no	1

Warnings:

Dell Ex. 1016

Page 376

Information:	
Total Files Size (in bytes):	2184135
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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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
11/622,496	01/12/2007	G.R. Mohan Rao	GRTD.01.01.DV1

CONFIRMATION NO. 3086

POA ACCEPTANCE LETTER

40672
BILL R. NAIFEH
PO BOX 803423
DALLAS, TX 75380



Date Mailed: 04/02/2020

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/24/2020.

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.

/mmasfaw/



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/622,496	01/12/2007	G.R. Mohan Rao	GRTD-32611

25883
MUNCK WILSON MANDALA L.L.P.
P.O. Drawer 800889
DALLAS, TX 75380

CONFIRMATION NO. 3086
POWER OF ATTORNEY NOTICE



Date Mailed: 04/02/2020

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/24/2020.

- 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).

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/mmasfaw/

**Mail Stop 8
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450**

REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

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

DOCKET NO. 2:19-cv-147		DATE FILED 4/30/2019		U.S. DISTRICT COURT Eastern District of Texas, Marshall Division	
PLAINTIFF Greenthread, LLC				DEFENDANT Samsung Electronics Co., Ltd. Samsung Semiconductor, Inc. Samsung Electronics America, Inc. Samsung Austin Semiconductor, LLC	
PATENT OR TRADEMARK NO.		DATE OF PATENT OR TRADEMARK		HOLDER OF PATENT OR TRADEMARK	
1 8,421,195 B2		4/16/2013		Greenthread, LLC	
2 9,190,502 B2		11/17/2015		Greenthread, LLC	
3 8,106,481 B2		1/31/2012		Greenthread, LLC	
4 9,647,070 B2		5/9/2017		Greenthread, LLC	
5					

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

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

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

DECISION/JUDGEMENT

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

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy



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	REQUEST ID
11/622,496	01/12/2007	G.R. Mohan Rao	GRTD.01.01.DV1	121958

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 09/28/2020 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

✕ Applicant changing to regular undiscounted fee status.

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

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Bill R. Naifeh, Reg. No. 44962/
Name:	Bill R. Naifeh
Registration Number:	44962

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

**PATENT - POWER OF ATTORNEY
OR
REVOCATION OF POWER OF ATTORNEY
WITH A NEW POWER OF ATTORNEY
AND
CHANGE OF CORRESPONDENCE ADDRESS**

Patent Number	8,421,195
Issue Date	2013-04-16
First Named Inventor	G.R. Mohan RAO
Title	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
Attorney Docket No.	GRTD60-32611

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

25883

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

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

☐ The address associated with the above-identified Customer Number.

OR

☒ The address associated with the Customer Number identified in the box at right: 25883

OR

☐ Firm or

Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Applicant.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____

SIGNATURE of Applicant or Patent Owner

Signature	<i>Philip John</i>	Date	9/24/2014
Name	Philip John	Telephone	214 728 8244
Title and Company	Manager		GreenThread, LLC

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☐ A total of _____ 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 update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 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

EFS ID:	43954488
Application Number:	11622496
International Application Number:	
Confirmation Number:	3086
Title of Invention:	SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONS
First Named Inventor/Applicant Name:	G.R. Mohan Rao
Customer Number:	40672
Filer:	Gregory Michael Howison
Filer Authorized By:	
Attorney Docket Number:	GRTD.01.01.DV1
Receipt Date:	07-OCT-2021
Filing Date:	12-JAN-2007
Time Stamp:	11:42:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	GRT32611373STMT.pdf	120620	no	3
			b2a7259e26c87f8e7a642c4b7fa9da3b56e8aa23		

Warnings:

Dell Ex. 1016

Page 384

Information:					
2	Power of Attorney	GRT32611POACHANGEADD. pdf	1027082	no	1
			8f46fd57bac53173c2e2064aa1566b991abb20f01		
Warnings:					
Information:					
Total Files Size (in bytes):				1147702	
<p>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.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

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(c)Applicant/Patent Owner: Greenthread, LLCApplication No./Patent No.: 8,421,195 Filed/Issue Date: 2013-04-16Titled: SEMICONDUCTOR DEVICES WITH GRADED DOPANT REGIONSGreenthread, LLC, a Limited Liability Company

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- 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 035630, Frame 0391, or for which a copy thereof is attached.
- 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.
2. 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.

[Page 1 of 2]

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.**

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

Dell Ex. 1016

Page 386

STATEMENT UNDER 37 CFR 3.73(c)

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.

4. 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.

5. 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.

6. 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(c)(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.

/Gregory M. Howison, Reg. #30646/

Signature

Gregory M. Howison

Printed or Typed Name

October 5, 2021

Date

30,646

Title or Registration 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.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/622,496	01/12/2007	G.R. Mohan Rao	GRTD60-32611

25883
MUNCK WILSON MANDALA L.L.P.
P.O. Drawer 800889
DALLAS, TX 75380

CONFIRMATION NO. 3086
POA ACCEPTANCE LETTER



Date Mailed: 10/15/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/07/2021.

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.

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/mbeyene/



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
11/622,496	01/12/2007	G.R. Mohan Rao	GRTD.01.01.DV1

CONFIRMATION NO. 3086

POWER OF ATTORNEY NOTICE

40672
LAW OFFICE OF BILL NAIFEH
PO BOX 803423
DALLAS, TX 75380



OC000000129114232

Date Mailed: 10/15/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/07/2021.

- 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.

/mbeyene/

AO 120 (Rev. 08/10)

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

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

DOCKET NO. 6:22-cv-00105	DATE FILED 1/27/2022	U.S. DISTRICT COURT Western District of Texas, Waco Division
PLAINTIFF GREENTHREAD, LLC		DEFENDANT INTEL CORPORATION, DELL INC., AND DELL TECHNOLOGIES INC.,
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,421,195	4/16/2013	GREENTHREAD, LLC
2 9,190,502	11/17/2015	GREENTHREAD, LLC
3 10,510,842	12/17/2019	GREENTHREAD, LLC
4 10,734,481	8/4/2020	GREENTHREAD, LLC
5 11,121,222	9/14/2021	GREENTHREAD, LLC

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

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

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

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy