FORM PTO-1619A
Expires 06/30/99
OMB 0651-0027

PERMANENTAL TRADENMENTS

10-17-2000



101488924

U.S. Department of Commerce Patent and Trademark Office PATENT

RECORDATION FORM COVER SHEET PATENTS ONLY

TO: The Comm												
Submission '	Type	10-10	-00	1 .		veyance		e 				
X New		, -			X	Assignme	ent		Securi	ty Agreer	nent	
Resubmis Document		-Recordat	tion)			License			Change	e of Nam	е	
Correction	of PTO E					Merger			Other			
Reel #	Docume	Frame # nt		_			(For Use	U.S.	. <i>Govel</i> by U.S. Go	rnment evernment A	Agencie	es)
Reel #		Frame #					Dep	artme	ntal File		Sec	cret File
Conveying P	arty(ies	s)			×	Mark if add	itional n	ames c	of convey	ing partie	s attac	hed Execution Date Month Day Year
Name (line 1)	Abhijit N	A. Phanse										09 18 2000
Name (line 2)								,,				T. Was Bata
Second Party												Execution Date Month Day Year 09 07 2000
Name (line 1)	Peter J.	Sallaway										09 07 2000
Name (line 2)												
Receiving Pa	arty	1.51.11					Ma	rk if ad	ditional r	names of r	eceivi	ng parties attached
Name (line 1)	-											
	National !	Semicondu	ictor Corpo	oration								If document to be record is an assignment and the
	National	Semicondu	ictor Corpo	oration								If document to be record is an assignment and the receiving party is not domiciled in the United
Name (line 2)	National	Semicondu	etor Corpo	oration								is an assignment and the receiving party is not
		Semicondu		oration								is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a
Name (line 2)				pration								is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached.
Name (line 2) [Address (line 1) [Address (line 2) [2900 Sen	niconducto		oration	Cal	i formia				95051		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [2900 Sen	niconducto ira City	r Drive			ifornia State/Co	ountry			95051 Zip C	ode	is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei			is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei	Zip C		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [Domestic Re	2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei	Zip C		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [Domestic Re Name [Address (line 1) [2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei	Zip C		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [Domestic Re	2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei	Zip C		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [Domestic Re Name [Address (line 1) [2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei	Zip C		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from
Name (line 2) [Address (line 1) [Address (line 2) [Address (line 3) [Domestic Re Name [Address (line 1) [Address (line 2) [2900 Sen	niconducto ira City	r Drive			Ştate/Co		or the fi	rst Recei	Zip C		is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (9651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to: Commissioner of Patents and Trademarks, Box Assignments , Washington, D.C. 20231

	IPE		
FORM PTO-1619 Expires 06/30/99 OMB 0651-0027		Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Correspondent N	Name and Address	Area Code and Telephone Number	972-680-4523
Name John	n L. Maxin		
Address (line 1) Nat	ional Semiconductor Corpora	tion	
Address (line 2) 801	East Campbell Road, Suite 5	525	
Address (line 3) Ric	hardson, TX 75080		
Address (line 4)			
	r the total number of pag uding any attachments.	es of the attached conveyance docur	ment # 3
Enter either the Pater Patent Ap 09570331	filed together with a <u>new</u> Patent	ntent Number (DO NOT ENTER BOTH numbers	t Number(s)
Enter PCT <u>only if</u> a U	application number S. Application Number een assigned.	PCT PCT PCT	PCT PCT
Number of Prope	erties Enter the tota	ıl number of properties involved. #	f 1
Fee Amount Method of Pay Deposit Accor (Enter for payment)	rment: Enclos unt nt by deposit account or if additi De	ional fees can be charged to the account.)	# 140448 Yes X No

To the best of my knowledge and belief, the foregoing information is true and correct and any

attached copy is a true copy of the original document. Charges to deposit account are authorized, as

Statement and Signature

indicated herein.
William A. Munck, Reg. No. 39,308

Name of Person Signing

PATENT

REEL: 011151 FRAME: 0102

FORM PTO-10 Expires 06/30/99 OMB 0651-0027	01 P RECOI	RDATION F CONTINE PATENT	-	ET		Department of Commer nt and Trademark Office PATENT	
Conveying Pa	AUEMO	Mark if a	dditional names of conveyin	g parties atta	ched	Execution Date	
Enter additional C	onveying Parties					Month Day Year	
Name (line 1)	hulasinath G. Manickham					09 07 2000	
Name (line 2)						Execution Date Month Day Year	
Name (line 1)							
Name (line 2)						Execution Date Month Day Year	
Name (line 1)							
Name (line 2)							
Receiving Pa	rty(ies)		Mark if additional name	es of receivin	g parties	attached	
Enter additional R	Receiving Party(ies)						
Name (line 1)					. L i	f document to be record is an assignment and the receiving party is not	
Name (line 2)] ;	domiciled in the United States, an appointment	4 - 4 !
Address (line 1)] ;	of a domestic represent is attached. (Designation must be a separate	
Address (line 2)					Į.	document from Assignment.)	
Address (line 3)	City		State/Country		Zip Code		
Name (line 1)						f document to be record s an assignment and the	
Name (line 2)						eceiving party is not lomiciled in the United States, an appointment (ofa
Address (line 1)] °	domestic representative attached. (Designation in the easeparate document	is must
Address (line 2)						Assignment.)	11011
Address (line 3)	City		State/Country		Zip Cod	e	
	lumber(s) or Patent l		Mark if additional		ached		

Patent Application Number(s)

Patent Number(s)

PTO/SB/15 (8-96)
Approved for use through 9/30/98. OMB 0651-0027
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

ASSIGNMENT OF APPLICATION

Docket Number (Optional) P04722

Whereas, I,Abhijit M. PhanseofSanta Clara, California, hereafter
referred to as applicant, have invented certain new and useful improvements in
System and Method for Mixed Mode Equalization of Signals
January of Digitals
for which an application for a United States Patent was filed on12 May 2000, Application Number09/570,331
for which an application for a United States Patent was executed on, and
Whereas, National Semiconductor Corporation of Santa Clara, California 95051 herein referred to
"assignee" whose post office address is is de-
sirous of acquiring the entire right, title and interest in the same;
Now, therefore, in consideration of the sum of \underline{two} dollars ($\underline{\$}$ $\underline{2.00}$), the receipt whereof is ac-
knowledged, and other good and valuable consideration, I, the applicant, by these presents do sell, assign
and transfer unto said assignee the full and exclusive right to the said invention in the United States and the
entire right, title and interest in and to any and all Patents which may be granted therefor in the United States,
I hereby authorize and request the Commissioner of Patents and Trademarks to issue said United States
Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof;
and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may
be granted, as fully and entirely as the same would have been held by me had this assignment and sale not
been made.
Executed this <u>Eight eenth</u> day of <u>September</u> , 2000
at National Semiconductor Corporation.
Aphanie
State of California SS: (Signature)
County of Santa Clera)
and acknowledged the foregoing instrument to be his free act and deed this 18 th
day of <u>September</u> , 2000.
Seal (Notary Public)

Burden Hour Statement: This form is estimated to take 0.1 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMM FEED FOR THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.

Committee 1223997

PATENT

REEL: 011151 FRAME: 0104

PTO/SB/15 (8-96)
Approved for use through 9/30/98. OMB 0651-0027
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

ASSIGNMENT OF APPLICATION	Docket Number (P04722
	· · · · · · · · · · · · · · · · · · ·

Whereas, I, Peter J. Sallaway of San Diego, California, hereafter
referred to as applicant, have invented certain new and useful improvements in
System and Method for Mixed Mode Equalization of Signals
for which an application for a United States Patent was filed on12 May 2000, Application Number09_/570,331 for which an application for a United States Patent was executed on, and
ioi willon arrapplication for a officed States Faterit was executed on, and
Whereas, National Semiconductor Corporation of Santa Clara, California 95051 herein referred to
"assignee" whose post office address is is de-
sirous of acquiring the entire right, title and interest in the same;
Now, therefore, in consideration of the sum of \underline{two} dollars ($\underline{\$}$ $\underline{2.00}$), the receipt whereof is ac-
knowledged, and other good and valuable consideration, I, the applicant, by these presents do sell, assign
and transfer unto said assignee the full and exclusive right to the said invention in the United States and the
entire right, title and interest in and to any and all Patents which may be granted therefor in the United States,
I hereby authorize and request the Commissioner of Patents and Trademarks to issue said United States
Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof;
and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may
be granted, as fully and entirely as the same would have been held by me had this assignment and sale not
been made.
Executed this 7th day of September ,2000
at San Diego, Califolnia
1 Mayoray
(Signature)
State of CALIF. SS: County of SAN DIEGO
Before me personally appeared saidPeter J. Sallaway
and acknowledged the foregoing instrument to be his free act and deed this
SUSAN L. BAHT JUSEUN L. BUKT
Seal SAN DISCO COUNTY (Notary Public)

Burden Hour Statement: This purp is estimated to take it from its to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.

SAN DIEGO COUNTY

PATENT

REEL: 011151 FRAME: 0105

Docket Number (Optional)

Approved for use through 9/30/98. OMB 0651-0027
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

ASSIGNMENT OF APPLICATION P04722 Thulasinath G. Manickam of San Diego, California , hereafter Whereas, I, ____ referred to as applicant, have invented certain new and useful improvements in ______ System and Method for Mixed Mode Equalization of Signals for which an application for a United States Patent was executed on _____, and Whereas, National Semiconductor Corporation of Santa Clara, California 95051 herein referred to "assignee" whose post office address is _______ is desirous of acquiring the entire right, title and interest in the same; Now, therefore, in consideration of the sum of \underline{two} dollars (\$\frac{2.00}{}), the receipt whereof is acknowledged, and other good and valuable consideration, I, the applicant, by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I hereby authorize and request the Commissioner of Patents and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. at San Diese CA State of CALIF County of SAN DIEGO Thulasinath G. Manickam Before me personally appeared said __ and acknowledged the foregoing instrument to be his free act and deed this ___ day of SEPT 200 Q SUSAN L. BAHT NOTARY PUBLIC - CALIFORNIA COMMISSION # 1149790 SAN DIEGO COUNTY My Comm. Exp. Aug. 3, 2001 (Notary Public)

Burden Hour Statement: This form is estimated to take 0.7 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner of Patents and Trademarks, Washington, DC 20231.

PATENT RECORDED: 10/10/2000 REEL: 011151 FRAME: 0106