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To t	he Commissioner of Patents and Tradem	documents or copy thereof.	
1.		ess of receiving party(ies):	
	Ability it i mande	Name: NATIONAL SEMICONDUCTOR CORPORATION	
		Internal Address: M/S D3-579	
Addi	tional name(s) of conveying party(ies) attached?	Street Address: 2900 Semiconductor Drive	
	Yes X No	City, State and Zip: Santa Clara, CA 95051-8090	
3.	Nature of Conveyance:	Additional Name(s) & address(es) attached?	
<b>X</b>	Assignment Merger Security Agreement Change of Name Other	Yes X No	
	Execution Date: May 11, 1998		
<u> </u>	Application number(s) or patent number(s):		
	If this document is being filed together with a new application, the execution date of the application is: May 11, 1998		
	A. Patent Application No.(s) NEW	B. Patent No.(s)	
	Additional numbers attached?	Yes X No	
5.	Name and address of party to whom correspondence conce document should be mailed:	6. Total number of applications and patents involved: 1	
	Name: Mark A. Dalla Valle	7. Total fee (37 CFR 3.41):\$\\\\\$40.00	
	Internal Address: Limbach & Limbach L.L.P. Street Address: 2001 Ferry Building City, State, ZIP: San Francisco, California 94111 Telephone: (415) 433-4150 Facsimile: (415) 433-8716	X Enclosed Charge any deficiencies in the enclosed fee to Deposit Account No. 12-1420 Authorized to be charged to deposit account	
	Attorney Docket No. NSC1-C0810 [NS3599-NP]	8. Deposit account number: 12-1420	
	,	(Attach duplicate copy of this page if paying by deposit account)	
	DO NOT	USE THIS SPACE	
9.	Statement and signature.		
	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.	
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3571	Mark A. Dalla Valle, Reg. No. 34, 147	Signature Nay 12, 1998 Date	
b.l. F	And the second of the second o	per of pages including cover sheet, attachments and document: 3	
<u> </u>	Total Hand	or pages microaring cover street, actualinates and accument.	
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Attorney Docket No.NSC1-C0810 [NS3599-NP]

## ASSIGNMENT

WHEREAS, WE, Wong Hee and Abhijit Phanse, hereinafter referred to as "ASSIGNORS", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: CONTROL LOOP FOR ADAPTIVE EQUALIZATION OF A DATA SIGNAL Application Execution Date:  $\underline{\text{May}} 11$ , 1998 Filing Date: HEREWITH Application No.: NEW ; WHEREAS, NATIONAL SEMICONDUCTOR CORPORATION, a corporation of the State of Delaware, 2900 Semiconductor Drive, M/S D3-579, Santa Clara, California 95051-8090, hereinafter referred to as "ASSIGNEE", is desirous of acquiring the entire right, title and interest in the said invention and application and in any Letters Patent which may be granted on the same; NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to Assignors by Assignee, receipt of which is hereby acknowledged, Assignors has sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee, and Assignee's successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in Whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignors had this assignment and transfer not been made, to the full end and term of any Letters Patent. Assignors further agree that they will, without charge to said Assignee, but at Assignee's expense. cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said Assignee, or Assignee's successors and assigns. IN TESTIMONY WHEREOF, Assignor has hereunto signed his/her name to this assignment on the dates personally appeared ////// yidence to be the person of personally known to me or proved to me on the basis of satisfactory gvidence to be the person of whose name of (is/a) subscribed to the within instrument and acknowledged to me that he/ste/they executed the same in his he/their authorized capacity(hes), and that by his/her/their signature (x) on the instrument the person (x) or the entity upon behalf of which the person (x) acted, executed the instrument. JENIFER L GRIFFIN Commission # 1156297 Notary Public - California

Santa Clara County My Comm. Expires Sep 21, 2001

IN TESTIMONY WHEREOF, Assignor has hereur indicated below.	nto signed his\her name to this assignment on the dates
Dated: May 11, 98	Abhijit Phanse
State of California	IBMISTO IMMISO
County of Santa Clara	
within instrument and acknowledged to me that (n	personally known to me or proved be the person (a) whose name (a) (is also subscribed to the leave that on the instrument the person (a), or the entity upon the instrument.
JENIFER L. GRIFFIN Commission # 1156297 Notary Public - California Santa Clara County My Comm. Expires Sep 21, 2001	WITHESS my hand and official seal.  Signature of Notary