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FORM PTO-1619A OIPE Co.  Expires 06/30/99 OMB 0651-0027  JAN 27 2000  JAN 27 2000  JAN 27 2000  JAN 27 2000	10127	VER SHEET	U.S. Department of Commerce Patent and Trademark Office PATENT			
TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).						
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Conveying Party(ies)	Mark if additiona	al names of conveying partie	es attached Execution Date			
Name (line 1) Du, Tan			Month Day Year 12/27/99			
			12/21/99			
Name (line 2)			Execution Date			
Second Party Name (line 1)	Month Day Year					
Name (line 2)						
Receiving Party	Receiving Party Mark if additional names of receiving parties attached					
Name (line 1) Texas Instruments Incorp	porated		If document to be recorded is an assignment and the receiving party is not			
Name (line 2) A Corporation of Delawa	re		domiciled in the United States, an appointment			
Address (line 1) 7839 Churchill Way, M/S	A Corporation of Delaware  domiciled in the United States, an appointment of a domestic representative is attached.					
/839 CHUICHIII Way, M/S	3333		(Designation must be a separate document from			
Address (line 2)			Assignment.)			
Address (line 3) Dallas	Texas/USA State/Country	75251 Zip C	Sado			
Domestic Representative Name and	d Address	for the first Receiving Party				
Name						
Address (line 1)						
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> PATENT REEL: 010563 FRAME: 0038

FORM PTO Expires 06/30/99 OMB 0651-0027	-1619B	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT			
Correspond	ent Name and Address	Area Code and Telephone Numb	<b>ver</b> (972) 917-5633			
Name	W. Daniel Swayze, Jr.					
Address (line 1)	Texas Instruments Incorpo	rated				
Address (line 2)	P.O. Box 655474 M/S 3999					
Address (line 3)	Dallas, Texas 75265					
Address (line 4)	USA					
Pages	Enter the total number of paincluding any attachments.	iges of the attached conveyance do	cument # 1			
Application Number(s) Mark if additional numbers attached						
	e Patent Application Number or the Fe ent Application Number(s)	Patent Number (DO NOT ENTER BOTH num Pa	bers for the same property). Itent Number(s)			
09/451,697						
If this document is being filed together with a <u>new</u> Patent Application, enter the date the patent application was signed by the first named executing inventor.						
•	eration Treaty (PCT)	PCT PCT	PCT			
<u>only</u>	r PCT application number if a U.S. Application Number	r PCT PCT	PCT			
has not been assigned.  Number of Properties  Enter the total number of properties involved. # 1						
Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00						
Method of Payment: Enclosed Deposit Account X  Deposit Account						
	payment by deposit account or if add	itional fees can be charged to the account.) Deposit Account Number:	# 20-0668			
L		Authorization to charge additional fees:	Yes No X			
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. Charges to deposit account are authorized, as indicated herein.						
	Bachand, Reg. No. 25,107	Proband Tuchand	01/17/2000			
Name	of Person Signing	Signature	Date			

PATENT

REEL: 010563 FRAME: 0039

## **ASSIGNMENT**

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as list∈d, having invented certain new and useful improvements as below entitled, for which application for United Stat∈s Letters Patent is made, the said application having been filed in the United States Patent and Trademark Office on 11/30/99 and assigned the serial number 09/451,697; and

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the state of Delaware, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in and to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED, as assignee of my entire right, title and interest.

I also hereby sell and assign to **TEXAS INSTRUMENTS INCORPORATED**, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said **TEXAS INSTRUMENTS INCORPORATED**, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said **TEXAS INSTRUMENTS INCORPORATED**, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year:

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year:					
TITLE OF INVENTION	METHOD AND CIRCUIT FOR MODELING A VOICE COIL ACTUATOR OF A MASS DATA STORAGE DEVICE				
SIGNATURE OF INVENTOR and NAME	Tan Du				
DATE	12/27 199				
RESIDENCE (City, County, State)	Plano, Collin County, Texas				
DATE APPLICATION EXECUTED	12/27/49				

After recording, return Assignment to:

Texas Instruments Incorporated 7839 Churchill Way, M/S 3999 Dallas, TX 75251

> PATENT REEL: 010563 FRAME: 0040