			Audiney Docket No. 1709-01910
FORM P	TO-1595 7-3-00		U. S. DEPARTMENT OF COMMERCE
(Rev. 6-93) Patent and Trademark Office OMB No. 0651-0011 (exp. 4/94) 101416540			
OMB No. 0651-0011 (exp. 4/94) 101410949 To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.			
1.	Name of conveying parties(ies):		ddress of receiving party(ies):
1.	rume of conveying parties(tos).	2. Hume und	adiess of feediving purey (195).
[1. Rohit V. GAIKWAD	Wm. Marsh	Rice University
{	2. Richard G. BARANIUK	6100 Main	•
[Houston, To	exas 77005
Additio	onal name(s) of conveying party(ies):		
Attache	ed?	Additional name (a)	De addinage(ag)
}	N-4	Additional name(s) &	k address(es)
3.	Nature of conveyance:	Attached?	Yes 🔀 No
⊠ As	signment Merger	Trimeneu.	
	curity Agreement Change of Name		
	her		
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Execut	ion Date: 1. June 14, 2000 2. June 19, 1000]	
4.	Application number(s) or patent number(s): 09/510,960	i	
If this document is being filed together with a new application, the execution date of the application is:			
}		1	
j			
A.	Patent Application No.: 09/510,966	B. Patent No.	(s).
 ```	Filing Date: February 21, 2000		-)·
1	• •		
Additional numbers attached? Yes No			
5.	Name and address of monty to whom correspondence	6. Total numb	per of application and patents involved: 1
3.	Name and address of party to whom correspondence concerning document should be mailed:	0. Total nume	oer or apprication and patents involved.
l	concerning document should be mailed.		
l	Daniel J. Krueger		
ĺ	Conley, Rose & Tayon, P.C.		
i	P.O. Box 3267		
ļ	Houston, Texas 77253-3267		
ļ		7. Total fee (3	37 CFR 3.41)\$_40.00
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FC:581	40.00 DP /	8. Deposit act	count number. 05-2709
		(Attach duplicate co	py of this page if paying by deposit account)
	DO NOT U	SE THIS SPACE	b) ov any halo is balance of orbital account.
9. Statement and signature.			
	To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy if a true copy of		
1	the original document		
]	77_	1/2	2 20 2000
1	Daniel J. Krueger	n sweger	June 28, 2000
1	Name of Person Signing	Signature	Date

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments

Washington, D. C. 20231

ASSIGNMENT

WHEREAS, We, Rohit V. GAIKWAD and Richard G. BARANIUK, are joint inventors of SIGNALING TECHNIQUES IN CHANNELS WITH ASYMMETRIC POWERS AND CAPACITIES; which is the subject of United States Letters Patent Application Serial No. 09/510,966, filed February 21, 2000, Attorney File No. 1789-01910; and

WHEREAS, WM. MARSH RICE UNIVERSITY, a university doing business at 6100 Main Street, Houston, Texas, 77005, is desirous of acquiring the entire right, title and interest in and to the aforesaid invention throughout the world, and all right, title and interest in, to and under any and all Letters Patent of the United States and all other countries throughout the world;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we hereby sell, assign, transfer and set over to WM. MARSH RICE UNIVERSITY, all right, title and interest in and to the said invention throughout the world, and said application for U.S. Letters Patent, and any and all divisions, continuations, and reissues thereof, and any and all Letters Patent of the United States and foreign countries which may be granted therefor, the same to be held and enjoyed by WM. MARSH RICE UNIVERSITY for its own use and benefit, and for the use and benefit of its successors, assigns, or other legal representatives, to the end of the term or terms for which said Letters Patent of the United States or foreign countries are or may be granted or reissued, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

And we hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States on said invention or resulting from said application and from any and all divisions, continuations, and reissues thereof, to WM. MARSH RICE UNIVERSITY, as assignee of our entire interest, and hereby covenant that we have the full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith.

And we further hereby covenant and agree that we will, at any time, upon request, execute and deliver any and all papers that may be necessary or desirable to perfect the title of said invention and to such Letters Patent as may be granted therefor, to WM. MARSH RICE UNIVERSITY, its successors, assigns, or other legal representatives and that if WM. MARSH RICE UNIVERSITY, its successors, assigns or other legal representatives shall desire to file any divisional or continuation applications or to secure a reissue of such Letters Patent, or to file a disclaimer relating thereto, will upon request, sign all papers, make all rightful oaths and do all lawful acts requisite for the filing of such divisional or continuation application, or such application for reissue and the procuring thereof, and for the filing of such disclaimer, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

And we do further covenant and agree that we will, at any time upon request, communicate to WM. MARSH RICE UNIVERSITY, its successors, assigns or other legal representatives, such facts relating to said invention and Letters Patent or the file history thereof as may be known to us, and testify as to the same in any interference or other litigation when

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requested so to do, without further compensation but at the expense of said assignee, its successors, or other legal representatives. EXECUTED THIS 14thday of JUNE STATE OF COUNTY OF BEFORE ME, the undersigned authority, on this day personally appeared Rohit V. GAIKWAD, know to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed. GIVEN UNDER MY HAND and seal of office this // day of 2000.EMMAR. DECKER SANTA CLARA COUNTY () COMM. EXP. NOV. 17, 2003 EXECUTED THIS 19th Richard G. BARANIUK STATE OF TEXAS COUNTY OF HARRIS BEFORE ME, the undersigned authority, on this day personally appeared Richard G. BARANIUK, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed. GIVEN UNDER MY HAND and seal of office this 19 day of *****************

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RECORDED: 07/03/2000