			Docket N	o.: ITL.0837US (P13194)	
FORM PTO-1595 (Modified)	i	02-10-2003	SHEET	U.S. DEPARTMENT OF COMMERCE	
(Rev. 03-01) OMB No. 0651-0027 (exp.5/31/2002) P08A/REV03			Y .	Patent and Trademark Office	
Tab settings → → → ▼		102361756	V	Y Y	
		ts and Trademarks:		ginal documents or copy thereof.	
1. Name of conveying pa ASHOKE RAVI, KRISHNAMURTHY S GAURAB BANERJEE	SOUMYANATH, an	FEB 0 5 2003	2. Name and address of reconnections of the Name: INTEL CORPOR	,	
GACAGE DAL BRODE	•	The state of the s	Address: 2200 MISSION	COLLEGE BLVD.	
Additional names(s) of conve	ying party(ies)	☐ Yes ABENDARY			
3. Nature of conveyance					
🛂 Assignment	☐ Me	erger			
☐ Security Agreemen	t 🗆 Ch	nange of Name	City: SANTA CLARA	State/Prov.: CA	
☐ Other			Country: U.S.A.	ZIP: 95054-1549	
Execution Date: 01-22-2	2003, 01-22-2003, 01	-22-2003	Additional name(s) & address(es)	☐ Yes ⊠ No	
4. Application number(s)	or patent numbers((s):			
If this document is bei	ng filed together wit	h a new application,	the execution date of the app	lication is: December 19, 2002	
Patent Application No.	Filing date	e	B. Patent No.(s)		
, .					
		Additional numbers	☐ Yes 🏿 No		
F N			165 2110		
Name and address of concerning document	• •	espondence	6. Total number of application	ns and patents involved:	
Name: TIMOTHY N.	TROP		7. Total fee (37 CFR 3.41):	\$ 40.00	
Registration No. 28,994			☑ Enclosed - Any excess or insufficiency should be		
Address: 8554 KATY FREEWAY, SURTE 100		credited or debited to deposit account			
02/10/2003 ECOOPER 0000006			Authorized to be charged	ged to deposit account	
01 FC:8021	40.00 DP		8. Deposit account number:		
City: HOUSTON	State/I	Prov.: TX	20-1504		
Country: U.S.A. ZIP: 77024-1841		(Attach duplicate copy of this page if paying by deposit account)			
		DO NOT L	JSE THIS SPACE		
Statement and signatu To the best of my known of the original docume	wledge and belief, t	he foregoing informa	ation is true and correct and ar	ny attached copy is a true copy	
Sanjeev K. Singh unde		(January 28, 2003	
Name of Pers	on Signing		Signature	Date	
	Total nu	mbor of pages including	cover cheef attachments and	• 	

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

REEL: 013726 FRAME: 0607

ASSIGNMENT

WHEREAS, We, ASHOKE RAVI, KRISHNAMURTHY SOUMYANATH, and GAURAB BANERJEE are joint inventors of ADAPTIVELY EXTENDING TUNABLE RANGE OF FREQUENCY IN A CLOSED LOOP, application for United States Letters Patent Serial No. 10/324,686, filed December 19, 2002; and

WHEREAS, INTEL CORPORATION, a corporation created and existing under and by virtue of the laws of the State of Delaware, 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 INTEL CORPORATION, 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 INTEL CORPORATION 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 INTEL CORPORATION, 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 INTEL CORPORATION, its successors, assigns, or other legal representatives and that if INTEL CORPORATION, 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 INTEL CORPORATION, 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 requested so to do, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

EXECUTED THIS 22 day of JANUMMY, 2003.				
Llokeluni				
Name: Ashoke Ravi				
* * * * * * * *				
EXECUTED THISZ day of January, 2003.				
Name: Krishnamurthy Soumyanath				
* * * * * * * *				
EXECUTED THIS 22 day of January, 2003.				
Gamel Baney				
Name: Gaurab Banerjee				

ITL.0837 US (P13194)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	nts: Ashoke Ravi, Krishnamurthy Soumyanath and Gaurab Banerjee		Group Art Unit:		
Serial No.:	10/324,686	§ §	Examiner:		
Filed:	December 19, 2002	8 8 8			
For:	Adaptively Extending Tunable Range of Frequency in a Closed Loop	9999	Atty. Dkt. No.:	ITL.0837US (P13194)	
	er for Patents D.C. 20231				
	ASSENT OF ASSIGNEE TO AND STATEMENT UI ESTABLISHING RIGHT OF A	NDE	R 37 CFR §3.73(b)		
	Assignee of the entire right, title and s matter. IDENTIFICATIO			take action in the PTO	
2	INTEL CORPORATION,				
	(Name of	Assign	iee)		
	2200 Mission College Blv		nta Clara, CA 9505	52	
	(Ada	lress)			
	PERSON AUTHO	RIZ	ED TO SIGN		
3. David Simon					
(Name of Person Authorized to Sign on Behalf of Assignee)					
Director of Patents					
	(Title of Person A	luthori	zed to Sign)		
I, the	e person signing below, state that I agnee.	m em	powered to sign this	s statement on behalf of	
		I b	eing deposited with the United Iail with sufficient postage of	JANUARY 28, 2003 R 1.8(a) that this correspondence is distates Postal Service as First Class on the date indicated above and is for Patents, Washington, D.C. 20231.	

BASIS OF ASSIGNEE'S INTEREST

Ownership by the Assignee is established as follows:

Assignment: Filed on December 19, 2002

COPIES OF DOCUMENTS IN CHAIN OF TITLE

A copy of the Assignment is attached.

ASSENT OF ASSIGNEE TO ADDITION OF INVENTORS

Assignee hereby assents to the correction of inventorship filed herewith.

INTEL CORPORATION

Director of Patents

Intel Corporation 2200 Mission College Blvd. P.O. Box 58119 Santa Clara, CA 95052-8119 (408) 765-8080 www.intel.com



January 6, 2003

Re: Delegation of Signature Authority-Powers of Attorney

To Whom It May Concern:

I, F. Thomas Dunlap, Jr., Senior Vice President General Counsel and Secretary of Intel Corporation, hereby delegate to sign Powers of Attorney and other patent-related documents to David Simon. Mr. Simon is the Director of Patents for Intel Corporation.

Sincerely,

F. Thomas Dunlap, Jr.

Intel Corporation

Docket No.: ITL.0837US (P13194)

FORM PTO-1595 (Modified) (Rev. 03-01)	RECORDATION FORM COVER SHEET			U.S. DEPARTMENT OF COMMERCE	
OMB No. 0651-0027 (exp.5/31/2002) P08A/REV03	PATENTS ONLY		NLY	Patent and Trademark C	
Tab settings → → ▼	▼	▼	V	▼	V
To the Honorable Commissioner of Pater	nts and Trademarks: F	Please re	ecord the attached original	inal documents or	copy thereof.
1. Name of conveying party(ies): ASHOKE RAVI and KRISHPAMURTE FEB 5 2003 Additional names(s) of conveying party(ies)	70	Nam	e and address of receive: intel corporations: 2200 MISSION C	TION	
3. Nature of conveyance:					
🖾 Assignment 🗀 N	lerger er e				
☐ Security Agreement ☐ C	Change of Name	•	SANTA CLARA	State/Prov	
Other		Cou	ntry: U.S.A.	ZIP: 9505	4-1549
Execution Date: 12-16-2002, 12-16-2002, r	espectively	Addition	al name(s) & address(es)	☐ Yes	⊠ No
	Additional numbers]Yes ⊠No		
5. Name and address of party to whom cor concerning document should be mailed:		6. Tota	I number of application	s and patents invo	lved: 1
Name: TIMOTHY N. TROP		7. Tota	I fee (37 CFR 3.41):	\$ 40.00	
Registration No. 28,994 Address: 8554 KATY FREEWAY, SUTTE 100		Enclosed - Any excess or insufficiency should be credited or debited to deposit account			
7,00,000			Authorized to be charge	ed to deposit accor	unt
		8. Dep	osit account number:		
City: HOUSTON State	e/Prov.: TX	20-1	504		
Country: U.S.A. ZIP:	77024-1841	(At	tach duplicate copy of this pa	age if paying by deposi	t account)
	DO NOT	USE THIS	SPACE		
9. Statement and signature. To the best of my knowledge and belief, of the original document. Sanjeev K. Singh under 37 CFR§10.9(b)	(.	ation is t	rue and correct and any	December 19,	
Name of Person Signing		/ Sign	ature	Date	

ASSIGNMENT

WHEREAS, We, ASHOKE RAVI and KRISHNAMURTHY SOUMYANATH, are joint inventors of ADAPTIVELY EXTENDING TUNBLE RANGE OF FREQUENCY IN A CLOSED LOOP, application for United States Letters Patent which is executed of even date herewith; and

WHEREAS, INTEL CORPORATION, a corporation created and existing under and by virtue of the laws of the State of Delaware, 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 INTEL CORPORATION, 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 INTEL CORPORATION 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 INTEL CORPORATION, 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 INTEL CORPORATION, its successors, assigns, or other legal representatives and that if INTEL CORPORATION, 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 INTEL CORPORATION, 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 requested so to do, without further compensation but at the expense of said assignee, its successors, or other legal representatives.

EXECUTED THIS 16 day of DECember, 2002

Name: Ashoke Ravi

EXECUTED THIS 16 day of December, 2002.

Name: Krishnamurthy Soumyanath

ITL0837US (P13194)

4008 Commissioner of Patents 12/19/02 Assignment Recordation Filing Fee (ITL.0837US)

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TROP, PRUNER & HU, P.C.

8554 KATY FREEWAY, SUITE 100 HOUSTON, TX 77024 (713) 468-8880 SOUTHWEST BANK P.O. BOX 27459

HOUSTON, TX 77227-7459

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12/19/02

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DATE

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PAY TO THE ORDER Commissioner of Patents Washington DC 20231

AUTHORIZED SIGNATURE

#014238# #113011258# #0003145158#

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Docket No.: ITL.0837US (P13194)

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FORM PTO-1595 (Modified) RECORDATION FO (Rev. 03-01) OMB No. 0651-0027 (exp 5/31/2002)			U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office	
P08A/REV03	PATENT	S ONLY	r atent and Trademark Office	
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To the Honorable Commissioner of Pater	nts and Trademarks: I			
Name of conveying party(ies): ASHOKE RAVI		2. Name and address of rece	eiving party(ies):	
ASHOKE RAVI, KRISHNAMURTHY SOUMYANATH, and		Name: INTEL CORPORATION		
GAURAB BANERJEE		Address: 2200 MISSION		
		Address: 2200 W1331011		
Additional names(s) of conveying party(ies)			1 2 7	
3. Nature of conveyance:				
⊠ Assignment □ N	Merger			
	_	O' CANTA CLADA	91	
Security Agreement	Change of Name	City: SANTA CLARA	State/Prov. CA	
Other		Country: U.S.A.	ZIP: 95054-1549	
Execution Date: 01-22-2003, 01-22-2003, 0	1-22-2003	Additional name(s) & address(es)	□ Yes ⊠ No	
4. Application number(s) or patent numbers				
	Additional numbers	☐ Yes 🏿 No		
		LI YES AINO		
Name and address of party to whom cor concerning document should be mailed:		6. Total number of application	ns and patents involved:	
Name: TIMOTHY N. TROP		7. Total fee (37 CFR 3.41):	\$ 40.00	
Registration No. 28,994		☑ Enclosed - Any excess or insufficiency should be		
Address: 8554 KATY FREEWAY, SUITE 100		credited or debited to d	leposit account	
		☐ Authorized to be charg	ed to deposit account	
		8. Deposit account number:		
City: HOUSTON State	Prov.: TX	20-1504		
Country: U.S.A. ZIP:	77024-1841	(Attach duplicate copy of this pa	age if paying by deposit account)	
	DO NOT U	SE THIS SPACE		
 Statement and signature. To the best of my knowledge and belief, of the original document. 	the foregoing informa	tion is true and correct and any		
Sanjeev K. Singh under 37 CFR§10.9(b)		4	January 28, 2003	
Name of Person Signing Total nu	umber of pages including o	/ Signature	Date Date	

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