FORM PTO-1	595	05-11-20	005	U.S. DEPARTMENT OF COMMERCE  Patent and Trademark Office
	9.05			Attorney Docket No. 200315159-1
	conveying party(ies):	1030004	96	address of receiving party(ies):
Brian M.		,0000		
John Nerl			HEWLETT 20555 SH	-PACKARD DEVELOPMENT COMPANY, L.P. 1249
Ronald J.			l .	TX 77070
Michael C			1	
1	. Schumacher			
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najakrishn	nan Radjassamy		ļ	
Additional name	(s) of conveying party(ies) attach	ed X_Yes No	Additional name	(s) & address(es) attached?Yes _X No
3. Nature of	Conveyance:			
<u>x</u>	Assignment	Merger		Change of Name
s	ecurity Agreement	Other		OPR.
Execution Da	ite(s): 3-16-05; 3-07-05; 3	3-07-05; 3-16-05;	3-16-05; 3-16	
4. Application	n number(s) or patent num	ber(s):		<u> </u>
If this docum	nent is being filed together	with a new appli	cation, executi	on date of the application is:
A. Patent Ap	oplication No.(s)			B. Patent No.(s)
Application N	lo.: 11/085,693	Date Filed: 03	3/21/2005	
Confirmation	No.: 4986	Additional number	ers attached? _	NO
I	address of party to whom g document should be mail	-	6. Total numb	per of applications and patents involved: 1
Records N	=	leu.	7. Total Fee (	37 CFR 3.41): \$40.00
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P.O. Box	272400		Υ Δ	thorization to be charged to deposit account.
Fort Collin	ns, Colorado 80527-2400			
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9. Statement	and signature.			
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David Rod	lack			May 6, 2005
Name of Per	rson Signing	Signature	9 ~	Date
	Total num	ber of pages includ	ing cover sheet,	attachments, and document: 8
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FORM	PTO-159	5
1-31-92	2 .	

#### RECORDATION FORM COVER SHEET

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

### **PATENTS ONLY**

Attorney Docket No. 200315159-1

1. Name of conveying party(ies):	2. Name and address of receiving party(ies):
June E. Goodwin	HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.
Vicki L. Smith	20555 SH 249 Houston, TX 77070

PATENT APPLICATION

ATTORNEY DOCKET NO. 200315159-1

HEWLETT-PACKARD COMPANY Intellectual Property Administrator P. O. Box 272400

When recorded please return to:

Fort Collins, Colorado 80527-2400

#### ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each) have agreed and hereby agree to assign to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas, (hereinafter HPDC), in furtherance of my/our obligations to the Hewlett-Packard Company and its subsidiaries and affiliates, and do hereby assign and transfer to HPDC, its successors

and assigns, the entire	right, title and interest, it ent of the United States e	ncluding the right of	of priority, in, to and under an
MEMORY MODULES AND	METHODS		
Filing date: 03/21	/2005	Application No.:	11/085,693
continuations-in-part (C-l-	P's), divisionals, and rene nd all Letters Patent of the	iwals of and substitu : United States and o	d any and all continuations utes for said application for sald f countries foreign thereto which ons, or extensions of said Letters
country, to be held and a	injoyed by HPDC, its succi or terms for which said Le antirely as the same wou	essors, assigns, nom tters Patent respectiv	name for Letters Patent in any inces or legal representatives, to rely may be granted, reissued of and enjoyed by me/us had this
that I/we have not execu- covenant and agree that deliver all such papers a improvement(s), said app- legal representatives, an respecting sald invention- legal proceedings, to sig C-I-P's, reissue and foreig everything possible to all and enforce for its or the	Ited and will not execute I/we will, each time a req as may be necessary of lication and said Letters P d I/we agree to commun (s) or improvement(s), said all lawful papers, to expn applications, to make a d HPDC, its successors, a elir own benefit, proper pates provided the expenses	any agreement in couest is made, and widesirable to perfect attent, to HPDC, its sicate to HPDC, or to application and salcecute all disclaimers if rightful oaths and assigns, nominees an ant protection for sale	tire interest herein assigned, and inflict herewith, and I/we further ithout undue delay, execute and the title to said invention(s) of its nominee, all known facts I Letters Patent, to testify in any send divisionals, continuations declarations, and generally to do d legal representatives to obtained invention(s) or improvement(s) and by me/us in lending such
States and any official of patents on applications a any and all letters Patent	eny country or countries s aforesald, to issue to HF t for sald invention(s) or in may be issued and grant	foreign to the United 'DC, as assignee of t norovement(s), includ	ts and Trademarks of the United States whose duty it is to issue the entire right, title and interest ling any and all Letters Patent of the application aforesaid, in
seld application now lifer	e and direct the attorneys on tified by the attorney doo de known to them by the l	ket number and title	e serial number and filing date o e set forth above as soon as the and Trademark Office
IN WITNESS WHERE	OF, I/wa hereunto set my/	our hand(s) and seal(	s):
Inventor's Signatura (Soal)	- Dutt A	anginnerik organiok)	
Inventor's Typed Name: Brian N	1. Johnson	Date Application Sig	gned: 3-16 - 05
State of	)		
County of	) ss : )		
Before me this day o	f, porsons	ally appeared Brian M.  ry evidence to be the po	Johnson who is seriously who is created the foregoing
			Notary Public
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Agu 12104 (Azsign)	(Use Page Ywo For Additional Inven	(orls) Signature(s))	Page 1 of 7

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P D Box 272400
Fort Collins, Colorado 80527-2400

Rev 12/04 (Assign)

PATENT APPLICATION
ATTORNEY DOCKET NO. 200315159-1

Ö

#### ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF, I/we hereunto se	t my/our hand(s) and seal(s):	
Inventor's Signature (Seal)	Date Assignment Signed: 3/7/05	
Inventor's Typed Name: John Nerl	Date Application Signed:	3/7/05
		7 7
State of Massach setts ) ss: County of Meddluses )		
County of Middle Sex		
Before me this 7 day of Munch personally known or proved to me on the basis of instrument of assignment to be his/her free act and of	, personally appeared <u>John Nerl</u> of satisfactory evidence to be the person who deed	who is acknowledged the foregoing
	SHERRI O'BRIEN Notary Public Commonwealth of Massachusetts Ay Commission Expires Dec 17, 2010	ic sion expires: (2-17-26)
	Date Assignment Signed:	
Inventor's Signature (Seal)		
Inventor s Typed Name: Ronald J. Bellomio	Date Application Signed:	
State of )		
) ss : County of		
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	Notary Public My commiss	
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	Date Assignment Signed:	
nventor's Signature (Seal)		
nventor's Typed Name: Michael C. Day	Date Application Signed:	
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Before me this day of ersonally known or proved to me on the basis of sstrument of assignment to be his/her free act and de		who is acknowledged the foregoing
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	My commission	on axiyes:
(Uso Paga Throa For Ad	lditional inventor(s) Signature(s))	
		Page 2 of 7

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ATTORNEY DOCKET NO. 200315159-1

HEWLETT-PACKARD COMPANY Intellectual Property Administration
P D Box 272400 Fort Collins, Colorado 80527-2400

#### ASSIGNMENT OF PATENT APPLICATION (cont.)

	Date Assignment Signed:	
nvantor's Signature (Seal)		
nvantor's Typed Neme: John Nerl	Date Application Signed	1:
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ventor's Signature (Seal)	Date Assignment Signad:	1/
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Bofore me this 1 day of M. Rosenship known or proved to me on its trument of assignment to be his/hor free	the basis of satisfactory evidence to be the person as act and deed  SHERRI O'BRIEN Notary Public	She Obre
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Before me this 1 day of M. sonally known or proved to me an intrument of assignment to be his/her fre	the basis of satisfactory evidence to be the person se act and door SHERRI O'BRIEN Notary Public No Commonwealth of Massachusets.	She Obre
Bofore me this day of  consily known or proved to me on a provent of assignment to be his/hor free the control of assignment to be assigned to the control of assignment to the c	SHERRI O'BRIEN Notary Public No Commonwealth of Massachusetts My Commission Expires Dec 17. 2010  Date Assignment Signed:	Stur OBru- FF Fusika commission expires: (2-(7-2)
Before me this day of  Sconally known or proved to me an intrument of assignment to be his/har free  Interior's Signature (Seei)  Interior's Typed Name: Michael C. Day	seet and deed Statistically expensed Notary Public Notary	Stur OBru- FF Fusika commission expires: (2-(7-2
Before me this day of  Isonally known or proved to me an interment of assignment to be his/her free  Interior's Signature (Seel)  Interior's Typed Name: Michael C. Day	SHERRI O'BRIEN Notary Public No Commonwealth of Messachusetta Ny Commonwealth of Messachusetta Ny Commonwealth Signed: Date Assignment Signed:	Stur OBru- FF Fusika commission expires: (2-(7-2
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Intellectual Property Administration
P O Box 272400
Fort Collins, Colorade 80527-2400

PATENT APPLICATION
ATTORNEY DOCKET NO. 200315159-1

## ASSIGNMENT OF PATENT APPLICATION (cont.)

	Date Assignment Sig	rned:
Inventor's Signature (Seal)		
Inventor's Typed Name: John N	Date A	pplication Signed:
State of	)	
County of	) ss::	
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		Notary Public
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nvantor's Signature (Scal)	Date Assignment Sign	ned:
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Before me this day of ersonally known or proved to be horizonant of assignment to be horizonant of sasignment (Seal) wenter's Signature (Seal) wenter's Typod Namu: Michael (Seal)	Date Assignment Signe	Notary Public tAy commission expires:
Before me this day of seconally known or proved to be horizonally known or proved to be horizonally known of easignment to be horizonally Signature (Seal) eventor's Typod Namu: Michael (Seal) second of the	Date App    Date App	Noting Public  Noting Public  (Ay commission expires:  2/6/2005  plication Signed: 3/16/2005
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Intellectual Proporty Administration
P O Box 272400
Fort Collins, Colorado 80527-2400

PATENT APPLICATION
ATTORNEY DOCKET NO 200315159-1

#### ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF,	I we hereunto set m	y/our hand(s) and seal(s):		
Land Carron (Paul)		Date Assignment Signed:		
Inventor's Signature (Seel)				
Inventor's Typed Name: Vicki	L. Smith	Date Application	Signed	
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Before me this day personally known or proved to instrument of assignment to be	to me on the backs of s	, porsonally appeared <u>Vick) t</u> sticlactory evidence to be the	Smith who person who acknowledged the forego	o i
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Inventor's Typed Name: Richar	d A. Schumacher	Date Application 5	signed 16 MAR 2005	
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HEWLETT-PACKAND COMPANY
Intellectual Property Administration
P O Box 272400
Fort Collins, Colorado 80527-2400

# PATENT APPLICATION ATTORNEY DOCKET NO. 200315159-1

#### ASSIGNMENT OF PATENT APPLICATION (cont.)

Inventor's Signature (Seal)  Inventor's Typad Name: June E. Goodwin  State of  Before me this	who i
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Date Assignment Signed:  [Inventor's Signatura (Seal)]  [Inventor's Typed Name:	
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(Use Next Page For Additional Inventor(s) Signature(s)) Page 12/04 (Accipaz)	ge 6 of 7

# PATENT APPLICATION ATTORNEY DOCKET NO. 200315159-1

#### ASSIGNMENT OF PATENT APPLICATION (cont.)

1 Thuitte	2	Date Assignment Signed:	3/11/05
Inventor's Signature (Seal)		Date Assignment Signes.	(1.1
Inventor's Typed Name: Vick	ci L. Smith	Date Application	Signed 3/11/65
State of	)		
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		Date Assignment Signed:	
Inventor's Signature (Seal)			
Inventor's Typed Name: Rich	ard A. Schumecher	Date Application !	Signed
State of	ŧ		
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personally known or proved instrument of assignment to t	to me on the basis of t		d A. Schumacher who is person who acknowledged the foregoing
			Notary Public
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Inventor's Signature (Seal)			
Inventor's Typed Name: 8-1	nen Rodjassamy	Date Application S	Signed
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			Notary Public
			My commission expires:
	(Use Next Page For Ac	dditional inventor(s) Signature(s))	Page 7 of 7

**RECORDED: 05/09/2005** 

Rev 12/04 (Assign2)