FORM PTO-1595 1-31-92 REC	01-06	-2004	U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
12.22.03			ttorney Docket No. 10013804-1
1. Name of conveying party(ies):	1029	40332 and ad	adress of receiving party(ies):
Kenneth Smith;		HEWLETT-P	ACKARD DEVELOPMENT COMPANY, L.P.
Gadiel Seroussi;		20555 SH 2	
Jonathan Jedwab;		Houston, TX	\frac{1}{2} \\ \frac
James Davis; and			- S.S
Kenneth Eldredge			24. ■86
			7
Additional name(s) of conveying party(ies) attached	Yes X No	Additional name(s)	& address(es) attached?Yes _X No
3. Nature of Conveyance:		Additional Hamoto,	C data socios, attaches
	Marrar		Change of Name
X Assignment	Merger		Change of Name
Security Agreement	Other		
Execution Date(s): Dec.16,2003; Dec.1, 2	2003; Dec. 2, 2	2003; Dec. 8, 20	003; and Dec.18,2003
4. Application number(s) or patent number	10.	143662	12/01/2003
If this document is being filed together wi	th a new appli	cation, execution	1000
A. Patent Application No.(s)			B. Patent No.(s)
Application No.:	Date Filed:		
Confirmation No.:	dditional numb	ers attached? _N	<u>o</u>
Name and address of party to whom co concerning document should be mailed		6. Total numbe	r of applications and patents involved: 1
Records Manager	•	7. Total Fee (3	7 CFR 3.41): \$40.00
Intellectual Property Administration HEWLETT-PACKARD COMPANY		Enclo	osed
P.O. Box 272400		X Auth	orization to be charged to deposit account.
Fort Collins, Colorado 80527-2400			onzation to be charged to deposit decoding
		8. Deposit Acc	count Number: <u>08-2025</u>
	DO NOT US	E THIS SPACE	
9. Statement and signature.			
_	the foregoing	information is tru	ue and correct and any attached copy is a
true copy of the original document.			:
	Λ	Λ	
Christopher P. Kosh	nun	lm-	Dec 22, 2003
Name of Person Signing	Signature		Date
Total number	er of pages inclu	ding cover sheet, a	attachments, and document: 16
OMB No. 0651-0011 (exp. 4/94)			
	Do Not deta	ch this portion	
Mail document to be recorded with requir	II.		omicos
Dire	ctor of the US Pa	ent Recordation Seatent and Tradema	rk Office
1 FC:8021 40.00 BA		Box 1450 VA 22313-1450	

HEWLETT-PACKARD COMPANY
Intellectual Property Administrator

ATTORNEY DOCKET NO. 10013804-1

P. O. Box 272400

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, including the right of priority, in, to and under an application for Letters Patent of the United States entitled:

and assigns, the entire right application for Letters Patent	, title and interes of the United State	st, including the right of priority, in, to and under an es entitled:
MRAM WITH CONTROLLER		
	·	
Filing date:		Application No.:
continuations-in-part (C-I-P's), letters Patent, and any and al	, divisionals, and Il Letters Patent of	set forth therein, and any and all continuations, renewals of and substitutes for said application for said the United States and of countries foreign thereto which eissues, or reexaminations, or extensions of said Letters
country, to be held and enjoy the full end of the term or ter	ed by HPDC, its s rms for which said aly as the same	applications in my/our name for Letters Patent in any successors, assigns, nominees or legal representatives, to d Letters Patent respectively may be granted, reissued or would have been held and enjoyed by me/us had this
that I/we have not executed covenant and agree that I/we deliver all such papers as mimprovement(s), said applicat legal representatives, and I/vrespecting said invention(s) or legal proceedings, to sign al C-I-P's, reissue and foreign all everything possible to aid HE and enforce, for its or their or	and will not exect will, each time a lay be necessary ion and said Lette we agree to com rimprovement(s), I lawful papers, to pplications, to ma PDC, its successor wn benefit, proper ovided the expen	ull right to convey the entire interest herein assigned, and ute any agreement in conflict herewith, and I/we further request is made, and without undue delay, execute and or desirable to perfect the title to said invention(s) or its Patent, to HPDC, its successors, assigns, nominees or municate to HPDC, or to its nominee, all known facts said application and said Letters Patent, to testify in any to execute all disclaimers and divisionals, continuations, ke all rightful oaths and declarations, and generally to do its, assigns, nominees and legal representatives to obtain a patent protection for said invention(s) or improvement(s) ses which may be incurred by me/us in lending such
States and any official of any patents on applications as afor any and all Letters Patent for	country or count presaid, to issue to said invention(s) be issued and c	e Commissioner of Patents and Trademarks of the United ries foreign to the United States whose duty it is to issue o HPDC, as assignee of the entire right, title and interest, or improvement(s), including any and all Letters Patent of granted on or as a result of the application aforesaid, in
said application now identifie	d by the attorney	eys of record to insert the serial number and filing date of docket number and title set forth above as soon as the the United States Patent and Trademark Office.
IN WITNESS WHEREOF,		my/our hand(s) and seal(s):
htt htt	Da	ete Assignment Signed: 16 Dec 7003
Inventor's Signature (Seal)		// > 0 60 >
Inventor's Typed Name: Kenneth Sm	ith	Date Application Signed: 16 Dec 2003
State of) } ss.:	
County of)	
Before me this day of	. 00	ersonally appeared Kenneth Smith who is
personally known or proved to me instrument of assignment to be his/he	on the basis of satis	sfactory evidence to be the person who acknowledged the foregoing
		Notary Public
		My commission expires:

Rev 10/03 (Assign

(Use Page Two For Additional Inventor(s) Signature(s))

Page 1 of 3

When recorded please return to:

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

Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHERI	EOF, I/we hereunto se	t my/our hand(s) and seal(s):
		Date Assignment Signed:
Inventor's Signature (Sea	al)	
!nventor's Typed Name:	Gadiel Seroussi	Date Application Signad:
State of)	
County of) ss.:)	
personally known or pro	day of oved to me on the basis t to be his/her free act and	, personally appeared <u>Gadiel Seroussi</u> who is of satisfactory evidence to be the person who acknowledged the foregoing deed.
		Notary Public My commission expires:
		•
<u> </u>		Date Assignment Signed:
Inventor's Signature (Sea	al)	
Inventor's Typed Name:	Jonathan Jedwab	Date Application Signed:
State of)	
. County of) ss.:	$(\mathbf{x}_{i}) = (\mathbf{x}_{i})^{T} \cdot \mathbf{x}_{i} + (\mathbf{x}_{i})^{T} $
personally known or pro	day of	
		Notary Public My commission expires:
		Date Assignment Signed:
Inventor's Signature (Sea	il)	
Inventor's Typed Name:	James Davis	Date Application Signed:
State of)	
County of) 33.:	
personally known or pro	ved to me on the basis of to be his/her free act and o	
residence de la companya del companya de la companya del companya de la companya		Notary Public My commission expires:

(Use Page Three For Additional Inventor(s) Signature(s))

Rev 10/03 (Assign)

PATENT REEL: 014841 FRAME: 0617

Page 2 of 3

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

PATENT APPLICATION ATTORNEY DOCKET NO. 10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

Inventor's Signature (Seal)		Date Assignment Signed:
		Data Application Signed
Inventor's Typed Name: K	ennern Eldredge	Date Application Signed
State of)	
County of) ss.:)	
•		the second secon
personally known or prov	_ day of ved to me on the basis of a to be his/her free act and dee	, personally appeared <u>Kenneth Eldredge</u> who is satisfactory evidence to be the person who acknowledged the foregoing id.
		Notary Public
		My commission expires:
		Date Assignment Signed:
Inventor's Signature (Seal)	
Inventor's Typed Name:	·	Date Application Signed
State of)) ss.:	
County of)	
personally known or prov	_ day of ved to me on the basis of to be his/her free act and dee	satisfactory evidence to be the person who acknowledged the foregoing
personally known or prov	ved to me on the basis of	satisfactory evidence to be the person who acknowledged the foregoing
personally known or prov	ved to me on the basis of	satisfactory evidence to be the person who acknowledged the foregoing ed.
personally known or prov	ved to me on the basis of	satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires:
personally known or provinstrument of assignment	ved to me on the basis of to be his/her free act and dea	satisfactory evidence to be the person who acknowledged the foregoing ed. Notary Public
personally known or provinstrument of assignment	ved to me on the basis of to be his/her free act and dee	Satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires: Date Assignment Signed:
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personally known or provinstrument of assignment	ved to me on the basis of to be his/her free act and dee	Satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires: Date Assignment Signed:
Inventor's Signature (Seal) Inventor's Typed Name: State of County of	ved to me on the basis of to be his/her free act and dee))) ss.:)	Satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires: Date Assignment Signed: Date Application Signed
Inventor's Signature (Seal) Inventor's Typed Name: State of County of Before me this personally known or provi	ved to me on the basis of to be his/her free act and dee))) ss.:) day of	satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires: Date Assignment Signed: Date Application Signed , personally appeared who is satisfactory evidence to be the person who acknowledged the foregoing
Inventor's Signature (Seal) Inventor's Typed Name: State of County of Before me this personally known or provi	yed to me on the basis of to be his/her free act and dee))) ss.:) day of yed to me on the basis of	satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires: Date Assignment Signed: Date Application Signed , personally appeared who is satisfactory evidence to be the person who acknowledged the foregoing

Page 3 of 3

(Use Next Page For Additional Inventor(s) Signature(s))

Rev 10/03 (Assign2)

Rev 10/03 (Assign)

HEWLETT-PACKARD COMPANY Intellectual Property Administrator P. O. Box 272400 Fort Collins, Colorado 80527-2400

	PATEN'	T APPLICATION
ATTORNEY DO	CKET NO.	10013804-1

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 subsidieries and affiliates, and do hereby assign and transfer to HPDC, its successors

and assigns, the entire application for Letters P	right, title and interest atent of the United States	, including the right of priority, in, to and under an sentitled:
MRAM WITH CONTROL	LER	
Filing date:		Application No.:
continuations-in-part (C Letters Patent, and any	-i-P's), divisionals, and re and all Letters Patent of t	et forth therein, and any and all continuations, enewals of and substitutes for said application for said the United States and of countries foreign thereto which ssues, or reexaminations, or extensions of said Letters
country, to be held and the full end of the term	enjoyed by HPDC, its sur or terms for which said entirely as the same w	applications in my/our name for Letters Patent in any ccessors, assigns, nominees or legal representatives, to Letters Patent respectively may be granted, reissued or rould have been held and enjoyed by me/us had this
that I/we have not exe covenant and agree the deliver all such papers improvement(s), said as legal representatives, a respecting said inventic legal proceedings, to s C-I-P's, reissue and for everything possible to and enforce, for its or the covenant and enforce in the covenant a	cuted and will not execute the line and as may be necessary of a polication and said Letters and I/we agree to common(s) or improvement(s), sign all lawful papers, to eign applications, to make aid HPDC, its successors heir own benefit, proper per provided the expense	I right to convey the entire interest herein assigned, and te any agreement in conflict herewith, and I/we further request is made, and without undue delay, execute and or desirable to perfect the title to said invention(s) or a Patent, to HPDC, its successors, assigns, nominees or function to HPDC, or to its nominee, all known facts aid application and said Letters Patent, to testify in any execute all disclaimers and divisionals, continuations, all rightful oaths and declarations, and generally to do, assigns, nominees and legal representatives to obtain patent protection for said invention(s) or improvement(s) as which may be incurred by me/us in lending such
States and any official patents on applications any and all Letters Pate	of any country or countrie as aforesaid, to issue to nt for said invention(s) or h may be issued and gra	Commissioner of Patents and Trademarks of the United es foreign to the United States whose duty it is to issue HPDC, as assignes of the entire right, title and interest, improvement(s), including any and all Letters Patent of anted on or as a result of the application aforesaid, in
said application now id	entified by the attorney of	s of record to insert the serial number and filing date of docket number and title set forth above as soon as the e United States Patent and Trademark Office.
IN WITNESS WHER	EOF, I/we hereunto set m	y/our hand(s) and seal(s):
Inventor's Signature (Seal)	Date	a Assignment Signed:
Inventor's Typed Name: Kenn	eth Smith	Date Application Signed:
State of)	
County of) ss.:)	
Before me this day personally known or proved instrument of assignment to b	to me on the basis of satisfa	ctory evidence to be the person who acknowledged the foregoing
		Notary Public
		My commission expires:

(Use Page Two For Additional Inventor(s) Signature(s))

PATENT REEL: 014841 FRAME: 0619

Page 1 of 3

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

PATENT	APPLICATION
ATTORNEY DOCKET NO.	10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF, I/we hereunto	set my/our hand(s) and seal(s):
Gadrel Gerous	Date Assignment Signed: 12-01-2003 Date Application Signed: 12-01-2003
Inventor's Signature (Seal)	
Inventor's Typed Name: Gadiel Seroussi	Date Application Signed: $12-01-2005$
State of)	
County of) ss	.:
Before me this day of	, personally appeared <u>Gadiel Seroussi</u> who is s of satisfactory evidence to be the person who acknowledged the foregoing d deed.
	Alexandra Park
	Notary Public My commission expires:
	Date Assignment Signed:
Inventor's Signature (Seal)	
Inventor's Typed Name: Jonathan Jedwab	Date Application Signed:
State of)	
County of) ss	
Before me this day of personally known or proved to me on the basi instrument of assignment to be his/her free act an	, personally appeared <u>Jonathan Jedwab</u> who is s of satisfactory evidence to be the person who acknowledged the foregoing d deed.
	Notary Public
	My commission expires:
lavontorio Ciranti vo (Cool)	Date Assignment Signed:
Inventor's Signature (Seal)	
Inventor's Typed Name: James Davis	Date Application Signed:
State of)	· ·
County of	
Before me this day of personally known or proved to me on the basi instrument of assignment to be his/her free act an	, personally appeared <u>James Davis</u> who is s of satisfactory evidence to be the person who acknowledged the foregoing d deed.
	Notary Public
	My commission expires:

(Use Page Three For Additional Inventor(s) Signature(s))

Page 2 of 3

Rev 10/03 (Assign)

When recorded please return to:

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

PATENT APPLICATION
ATTORNEY DOCKET NO. 10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

		Date Assignment Signed:
Inventor's Signature (Seal)		Data Assignment digitati.
Inventor's Typed Name; Kenneth Eldre	edge	Date Application Signed
State of)) ss.:	
County of)	
Before me this day of personally known or proved to me instrument of assignment to be his/he		, personally appeared <u>Kenneth Eldredge</u> who is satisfactory evidence to be the person who acknowledged the foregoing d.
		Notary Public My commission expires:
	Market	Date Assignment Signed:
Inventor's Signature (Seal)		
Inventor's Typed Name:	. <u> </u>	Date Application Signed
State of) } ss.:	
County of)	
personally known or proved to me instrument of assignment to be his/he	on the basis of	, personally appeared who is satisfactory evidence to be the person who acknowledged the foregoing ad. Notary Public My commission expires:
Inventor's Signature (Seal)		Date Assignment Signed:
Inventor's Typed Name:		Date Application Signed
State of)	
County of) ss.:	
•	1	n
personally known or proved to me instrument of assignment to be his/he	on the basis of	, personally appeared who is satisfactory evidence to be the person who acknowledged the foregoing ad.
		Notary Public My commission expires:

HEWLETT-PACKARD COMPANY
Intellectual Property Administrator

ATTORNEY DOCKET NO. 10013804-1

Intellectual Property Administrator P. O. Box 272400 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, including the right of priority, in, to and under an application for Letters Patent of the United States entitled:

application for Letters Patent of th	e United States enti	tled:	
MRAM WITH CONTROLLER			
Filing date:		Application No.:	
and the invention(s) and imp continuations-in-part (C-I-P's), div Letters Patent, and any and all Le may be granted thereon or theref Patent.	risionals, and renew tters Patent of the U	als of and substitute. Inited States and of c	s for said application for said ountries foreign thereto which
I/we additionally authorize country, to be held and enjoyed to the full end of the term or terms extended, as fully and entirely assignment, and transfer not been	by HPDC, its success for which said Lette as the same would	sors, assigns, nomine ers Patent respectively	y may be granted, reissued or
AND I/we hereby covenant the that I/we have not executed and covenant and agree that I/we will deliver all such papers as may improvement(s), said application legal representatives, and I/we respecting said invention(s) or im legal proceedings, to sign all law C-I-P's, reissue and foreign application everything possible to aid HPDC, and enforce, for its or their own I in any and all countries provide cooperation and assistance are pages.	will not execute an I, each time a reque be necessary or de and said Letters Patragree to communication provement(s), said a wful papers, to executions, to make all its successors, assume the expenses w	ny agreement in conflect is made, and with sirable to perfect the ent, to HPDC, its suction and said Loute all disclaimers arightful oaths and designs, nominees and interprotection for said	out undue delay, execute and e title to said invention(s) or cessors, assigns, nominees or its nominee, all known facts etters Patent, to testify in any and divisionals, continuations, clarations, and generally to do egal representatives to obtain invention(s) or improvement(s)
AND I/we hereby authorize a States and any official of any coupatents on applications as afores any and all Letters Patent for said the United States which may be accordance with the terms of this	untry or countries fo aid, to issue to HPD d invention(s) or imp issued and granted	reign to the United S C, as assignee of the provement(s), includin	entire right, title and interest, g any and all Letters Patent of
l/we further authorize and dir said application now identified by same shall have been made know	y the attorney dock	et number and title s	erial number and filing date of et forth above as soon as the d Trademark Office.
IN WITNESS WHEREOF, I/we	hereunto set my/ou	ır hand(s) and seal(s):	
	Date Assi	ignment Signed:	
Inventor's Signature (Seal)			
Inventor's Typed Name: Kenneth Smith		Date Application Signe	d:
State of)) ss.:		
County of)		
Before me this day of personally known or proved to me on 1 instrument of assignment to be his/her fre	the basis of satisfactory	y appeared <u>Kenneth Sr</u> evidence to be the pers	nith who is on who acknowledged the foregoing
		N	otary Public
		М	y commission expires:

Page 1 of 3

When recorded please return to:
HEWLETT-PACKARD COMPANY

Rev 10/03 (Assign)

Intellectual Property Administration P. O. Box 272400 Fort Collins, Colorado 80527-2400

PATENT	APPLICATION	
ATTORNEY DOCKET NO.	10013804-1	

ASSIGNMENT OF PATENT APPLICATION (cont.)

	Date Assignment Signed:	
ventor's Signature (Seal)		
nventor's Typed Name: Gadiel Se	Proussi Date Application Signed:	
tate of) } ss.:	
County of)	
Before me this day of personally known or proved to natrument of assignment to be hi	, personally appeared Gadiel Seroussi who me on the basis of satisfactory evidence to be the person who acknowledged the foregoles/her free act and deed.	
	Notary Public My commission expires:	
K Soelway I.	Date Assignment Signed: 2 December 2003	
nventor's Signature (Seal)		
inventor's Typed Name: Jonatha	Date Application Signed: 2 December 23	S
LOU NICE		
COUNTY OF VANKOUVER) ss.:	
personally known or proved to	me on the basis of satisfactory evidence to be the person who acknowledged the foregoing	
personally known or proved to instrument of assignment to be h	me on the basis of satisfactory evidence to be the person who acknowledged the foregot is/her free act and deed. hirley M. Manfron otary Public B. 2445 East Hastings Street ancouver, B.C., VSK 1Y8	ng Lav
personally known or proved to instrument of assignment to be h	me on the basis of satisfactory evidence to be the person who acknowledged the foregot is/her free act and deed. hirley M. Manfron otary Public B. 2445 East Hastings Street ancouver, B.C., VSK 1Y8 slephone: 604-253-5241	ng Lav
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personally known or proved to instrument of assignment to be h SI No #3 Va Te	me on the basis of satisfactory evidence to be the person who acknowledged the foregon is/her free act and deed. hirley M. Manfron otary Public B 2445 East Hastings Street ancouver, B.C., VSK 1Y8 blephone: 604-253-5241 Date Assignment Signed:	ng Lav
nersonally known or proved to nstrument of assignment to be h SI No #5 Va Te	me on the basis of satisfactory evidence to be the person who acknowledged the foregon is/her free act and deed. hirley M. Manfron part Public B 2445 East Hastings Street ancouver, B.C., V5K 1Y8 alephone: 604-253-5241 Date Assignment Signed: Date Application Signed:	ng Lav
personally known or proved to instrument of assignment to be h SI No #3 Va Tell Inventor's Signature (Seal) Inventor's Typed Name: James D State of	me on the basis of satisfactory evidence to be the person who acknowledged the foregot is/her free act and deed. hirley M. Manfron otary Public B 2445 East Hastings Street ancouver, B.C., VSK 1Y8 slephone: 604-253-5241 Date Assignment Signed: Date Application Signed:	ng Lav
personally known or proved to instrument of assignment to be he solved to be solv	me on the basis of satisfactory evidence to be the person who acknowledged the foregot is/her free act and deed. hirley M. Manfron otary Public 3 2445 East Hastings Street Ancouver, B.C., VSK 1Y8 Blephone: 604-253-5241 Date Assignment Signed: Date Application Signed: parts and deed. My commission expires: Non-e-points My commission	is
personally known or proved to instrument of assignment to be h SI No #3 Inventor's Signature (Seal) Inventor's Typed Name: James D State of County of Before me this day of	me on the basis of satisfactory evidence to be the person who acknowledged the foregot is/her free act and deed. hirley M. Manfron otary Public 3 2445 East Hastings Street Ancouver, B.C., VSK 1Y8 Blephone: 604-253-5241 Date Assignment Signed: Date Application Signed: parts and deed. My commission expires: Non-e-points My commission	is

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

PATENT APPLICATION		
ATTORNEY DOCKET NO.	10013804-1	

ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF, I we hereu	into set my/o	ur hand(s) and seal(s):	
		Data Accianment Signed:	
Inventor's Signature (Seal)		Date Assignment Signed	
Inventor's Typed Name: Kenneth Eldredge		Date Application S	Signed
State of)		
County of) ss.:)		
Before me this day of personally known or proved to me on the instrument of assignment to be his/her free	basis of satisf	personally appeared <u>Kennet</u> actory evidence to be the	h Eldredge who is person who acknowledged the foregoing
modulinos or addigimante to be morned.			
			Notary Public My commission expires:
		Date Assignment Signed:	are a strong control of the strong control o
Inventor's Signature (Seal)			
Inventor's Typed Name:		Date Application S	Signed
State of)) ss.:		
County of	}		
Before me this day of personally known or proved to me on the instrument of assignment to be his/her free	e basis of satisf	personally appeared actory evidence to be the	who is person who acknowledged the foregoing
			Notary Public
			My commission expires:
		Date Assignment Signed:	
Inventor's Signature (Seal)			
Inventor's Typed Name:		Date Application 5	Signed
State of)) ss.:		
County of	}		
Before me this day of personally known or proved to me on the instrument of assignment to be his/her free		personally appearedactory evidence to be the	person who acknowledged the foregoing
			Notary Public My commission expires:

Page 3 of 3

(Use Next Page For Additional Inventor(s) Signature(s))

Rev 10/03 (Assign2)

ATTORNEY DOCKET NO. 10013804-1

HEWLETT-PACKARD COMPANY Intellectual Property Administrator P. O, Box 272400 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, including the right of priority, in, to and under an application for Letters Patent of the United States entitled:

application for Letters Patent of the Unit	ed States entitled:
Filing date:	Application No.:
continuations-in-part (C-I-P's), divisional etters Patent, and any and all letters F	ent(s) set forth therein, and any and all continuations, is, and renewals of and substitutes for said application for said atent of the United States and of countries foreign thereto which d any reissues, or reexaminations, or extensions of said Letters
country, to be held and enjoyed by HPI	to file applications in my/our name for Letters Patent in any DC, its successors, assigns, nominees or legal representatives, to nich said Letters Patent respectively may be granted, reissued or same would have been held and enjoyed by me/us had this e;
that I/we have not executed and will reverent and agree that I/we will, each deliver all such papers as may be ne improvement(s), said application and salegal representatives, and I/we agree respecting said invention(s) or improve legal proceedings, to sign all lawful p C-I-P's, reissue and foreign applications everything possible to aid HPDC, its standardorce, for its or their own benefit	e have full right to convey the entire interest herein assigned, and not execute any agreement in conflict herewith, and I/we further in time a request is made, and without undue delay, execute and cessary or desirable to perfect the title to said invention(s) or aid Letters Patent, to HPDC, its successors, assigns, nominees or to communicate to HPDC, or to its nominee, all known facts ment(s), said application and said Letters Patent, to testify in any apers, to execute all disclaimers and divisionals, continuations, to make all rightful oaths and declarations, and generally to do accessors, assigns, nominees and legal representatives to obtain to proper patent protection for said invention(s) or improvement(s) are expenses which may be incurred by me/us in lending such HPDC;
States and any official of any country of patents on applications as aforesaid, to any and all letters Patent for said investigations.	quest the Commissioner of Patents and Trademarks of the United or countries foreign to the United States whose duty it is to issue issue to HPDC, as assignee of the entire right, title and interest, ation(s) or improvement(s), including any and all Letters Patent of and granted on or as a result of the application aforesaid, in nment.
said application now identified by the	e attorneys of record to insert the serial number and filing date of attorney docket number and title set forth above as soon as the hem by the United States Patent and Trademark Office.
IN WITNESS WHEREOF, I/we hereu	unto set my/our hand(s) and seal(s):
	Date Assignment Signed:
Inventor's Signature (Seal)	D. A. B. M. Charle
Inventor's Typed Name: Kenneth Smith	Date Application Signed:
State of)	s.:
County of	
Before me this day of	, personally appeared Kenneth Smith who is is of satisfactory evidence to be the person who acknowledged the foregoing and deed.
	Notary Public My commission expires:

Page 1 of 3

Rev 10/03 (Assign)

(Use Page Two For Additional Inventor(s) Signature(s))

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

PATENT APPLICATION ATTORNEY DOCKET NO. ______10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

		A
nventor's Signature (Seal)	Dat	e Assignment Signed:
nventor's Typed Name: Gadiel Serous	si	Date Application Signed:
State of)) ss.:	
County of	1	
Before me this day of personally known or proved to me o instrument of assignment to be his/her	on the basis of satisfa	sonally appeared <u>Gadiel Seroussi</u> who is actory evidence to be the person who acknowledged the foregoing
		Notary Public
		My commission expires:
	_	
nventor's Signature (Seal)	Dat	te Assignment Signed:
nventor's Typed Name: Jonathan Jed	wab	Date Application Signed:
State of)	
County of) ss.:	
		resonally appeared Jonathan Jedwab who is actory evidence to be the person who acknowledged the foregoing
instrument of assignment to be his/her		
instrument of assignment to be his/her		Notary Public
Inventor's Signature (Seal)	<i>Q</i> Dat	Notary Public My commission expires: te Assignment Signed: (2/8/03)
Inventor's Signature (Seal)		te Assignment Signed: $\frac{12/8/03}{12/8/03}$
Inventor's Signature (Seal) Inventor's Typed Name: James Davis		My commission expires:
Inventor's Signature (Seal) Inventor's Typed Name: James Davis State of VIGNICE		te Assignment Signed: 12/8/03
Inventor's Signature (Seal) Inventor's Typed Name: James Davis State of Virginia Colly of Rich mond Sefore me this 8 day of De) ss.:) 2(ember , per on the basis of satisf	te Assignment Signed: 12/8/03

(Use Page Three For Additional Inventor(s) Signature(s))

Page 2 of 3

Rev 10/03 (Assign)

When recorded please return to:
HEWLETT-PACKARD COMPANY
Intellectual Property Administration

Fort Collins, Colorado 80527-2400

P. O. Box 272400

PATENT APPLICATION
ATTORNEY DOCKET NO. 10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

		D. A. A. S. C. A. Blooming	
Inventor's Signature (Seal)		Date Assignment Signed:	
Inventor's Typed Name: Kenneth Eldredg	9	Date Application	Signed
State of)		
County of) ss.: }		
-	•		
Before me this day of personally known or proved to me on instrument of assignment to be his/her from	the basis of	satisfactory evidence to be the	th Eldredge who is person who acknowledged the foregoing
			Notary Public
			My commission expires:
•			
Inventor's Signature (Seal)		Date Assignment Signed:	
Inventor's Typed Name:		Date Application	Signed
State of)		
) ss.:		
County of	}		
Before me this day of		, personally appeared	who is
personally known or proved to me on instrument of assignment to be his/her from the contract of the contract o			person who acknowledged the foregoing
			Notary Public
			My commission expires:
Inventor's Signature (Seal)		Date Assignment Signed:	
		Date Application	Signed
State of)		
) ss.:		
County of)		
Before me this day of personally known or proved to me on instrument of assignment to be his/her fre	the basis of	satisfactory evidence to be the	who is person who acknowledged the foregoing
			Notary Public
			My commission expires:

Page 3 of 3

(Use Next Page For Additional Inventor(s) Signature(s))

Rev 10/03 (Assign2)

HEWLETT-PACKARD COMPANY
Intellectual Property Administrator

ATTORNEY DOCKET NO. 10013804-1

P. O. Box 272400 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, including the right of priority, in, to and under an application for Letters Patent of the United States entitled:

application for Letters Patent of the United Stat	tes entitled:
MRAM WITH CONTROLLER	
Filing date:	Application No.:
continuations-in-part (C-I-P's), divisionals, and Letters Patent, and any and all Letters Patent o	set forth therein, and any and all continuations, I renewals of and substitutes for said application for said of the United States and of countries foreign thereto which reissues, or reexaminations, or extensions of said Letters
country, to be held and enjoyed by HPDC, its the full end of the term or terms for which sa	e applications in my/our name for Letters Patent in any successors, assigns, nominees or legal representatives, to iid Letters Patent respectively may be granted, reissued or would have been held and enjoyed by me/us had this
that I/we have not executed and will not executed and agree that I/we will, each time deliver all such papers as may be necessary improvement(s), said application and said Lett legal representatives, and I/we agree to conrespecting said invention(s) or improvement(s) legal proceedings, to sign all lawful papers, C-I-P's, reissue and foreign applications, to me everything possible to aid HPDC, its successed and enforce, for its or their own benefit, processed.	full right to convey the entire interest herein assigned, and cute any agreement in conflict herewith, and I/we further a request is made, and without undue delay, execute and y or desirable to perfect the title to said invention(s) or ters Patent, to HPDC, its successors, assigns, nominees or municate to HPDC, or to its nominee, all known facts, said application and said Letters Patent, to testify in any to execute all disclaimers and divisionals, continuations, ake all rightful oaths and declarations, and generally to do ors, assigns, nominees and legal representatives to obtain er patent protection for said invention(s) or improvement(s) nses which may be incurred by me/us in lending such
States and any official of any country or coun patents on applications as aforesaid, to issue any and all Letters Patent for said invention(s)	he Commissioner of Patents and Trademarks of the United htries foreign to the United States whose duty it is to issue to HPDC, as assignee of the entire right, title and interest, or improvement(s), including any and all Letters Patent of granted on or as a result of the application aforesaid, in
said application now identified by the attorne	neys of record to insert the serial number and filing date of by docket number and title set forth above as soon as the y the United States Patent and Trademark Office.
IN WITNESS WHEREOF, I/we hereunto se	t my/our hand(s) and seal(s):
	Date Assignment Signed:
Inventor's Signature (Seal)	
Inventor's Typed Name: Kenneth Smith	Date Application Signed:
State of)) ss.:	
County of)	
Before me this day of, personally known or proved to me on the basis of satinstrument of assignment to be his/her free act and deed.	personally appeared <u>Kenneth Smith</u> who is tisfactory evidence to be the person who acknowledged the foregoing
	Notary Public My commission expires:

Page 1 of 3

When recorded please return to:

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

PATENT APPLICATION

ATTORNEY DOCKET NO. 10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

		Date Assignment Signed:
Inventor's Signature (Seal)		
Inventor's Typed Name: Ga	diel Seroussi	Date Application Signed:
State of	}	
) ss.:	
County of)	
personally known or prove		personally appeared <u>Gadiel Seroussi</u> who is tisfactory evidence to be the person who acknowledged the foregoing
		Notary Public
		My commission expires:
		Date Assignment Signed:
Inventor's Signature (Seal)		•
Inventor's Typed Name: Jos	nathan Jedwab	Date Application Signed:
State of)	
State of County of)) ss.:)	
County of Before me this dapersonally known or prove) ay of,	tisfactory evidence to be the person who acknowledged the foregoing
County of Before me this dapersonally known or prove	ay of, ad to me on the basis of sa	itisfactory evidence to be the person who acknowledged the foregoing
County of Before me this dapersonally known or prove	ay of, ad to me on the basis of sa	atisfactory evidence to be the person who acknowledged the foregoing
County of Before me this dapersonally known or prove instrument of assignment to	ay of, ad to me on the basis of sa b be his/her free act and deed.	ntisfactory evidence to be the person who acknowledged the foregoing Notary Public
County of Before me this dapersonally known or prove	ay of, ad to me on the basis of sa b be his/her free act and deed.	ntisfactory evidence to be the person who acknowledged the foregoing. Notary Public My commission expires:
County of Before me this dapersonally known or prove instrument of assignment to	ay of, ad to me on the basis of sa be his/her free act and deed.	ntisfactory evidence to be the person who acknowledged the foregoing. Notary Public My commission expires:
County of Before me this da personally known or prove instrument of assignment to	ay of, ad to me on the basis of sa be his/her free act and deed.	Notary Public Not commission expires: Date Assignment Signed:
County of Before me this dapersonally known or prove instrument of assignment to instrument of assignment o	ay of, ad to me on the basis of sa be his/her free act and deed.	Notary Public Not commission expires: Date Assignment Signed:
Before me this dapersonally known or prove instrument of assignment to instrument of assignment of assignmen	ay of, ad to me on the basis of sa be his/her free act and deed. mes Davis) ss.: }	Notary Public Notary Public My commission expires: Date Assignment Signed: Date Application Signed: personally appeared James Davis tisfactory evidence to be the person who acknowledged the foregoing
Before me this dapersonally known or prove instrument of assignment to instrument of assignment of assignmen	nes Davis Section Paragraph Paragra	Notary Public Notary Public My commission expires: Date Assignment Signed: Date Application Signed: personally appeared James Davis tisfactory evidence to be the person who acknowledged the foregoing

Page 2 of 3

(Use Page Three For Additional Inventor(s) Signature(s))

When recorded please return to:

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

PATENT APPLICATION

ATTORNEY DOCKET NO. 10013804-1

ASSIGNMENT OF PATENT APPLICATION (cont.)

IN WITNESS WHEREOF, I we hereunto set n	ny/our hand(s) and seal(s):
Kenneth Illiese	Date Assignment Signed: 18 Dec 200 3 Date Application Signed 18 Dec 200 =
Inventor's Signatue (Sean) Inventor's Typed Name: Kenneth Eldredge	Date Application Signed 18 Dec 200 =
State of Idaho	
County of Ada) ss.:	
Before me this 18th day of Dec. 200	3 , personally appeared Kenneth Eldredge who is
personally known or proved to me on the basis of instrument of assignment to be his/her free act and dee	satisfactory evidence to be the person who acknowledged the foregoing ed. L. Chus Huffin Notery Public
	L. Chris Huffen Notary Public
	My commission expires: $3/24/09$
Inventor's Signature (Seal)	Date Assignment Stanes:
Inventor's Typed Name:	Date Assignment Signes:
State of	
) ss.:	
County of)	, personally appeared who is
personally known or proved to me on the basis of instrument of assignment to be his/her free act and dea	satisfactory evidence to be the person who acknowledged the foregoing ed. Notery Public My commission expires:
	Date Assignment Signed:
Inventor's Signature (Seal)	
Inventor's Typed Name:	Date Application Signed
State of)	
County of	
Before me this day of personally known or proved to me on the basis of instrument of assignment to be his/her free act and dec	, personally appeared who is satisfactory evidence to be the person who acknowledged the foregoing ed.
	Notery Public My commission expires:
	Date 0 10
	Page 3 of 3

Rev 10/03 (Assign2)

RECORDED: 12/22/2003