

PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 70%;">Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Jianhua Yang</td><td>10/13/2011</td></tr><tr><td>Muhammad Shakeel Qureshi</td><td>10/13/2011</td></tr><tr><td>Gilberto Medeiros Ribeiro</td><td>10/13/2011</td></tr><tr><td>R. Stanley Williams</td><td>10/13/2011</td></tr></tbody></table>		Name	Execution Date	Jianhua Yang	10/13/2011	Muhammad Shakeel Qureshi	10/13/2011	Gilberto Medeiros Ribeiro	10/13/2011	R. Stanley Williams	10/13/2011
Name	Execution Date										
Jianhua Yang	10/13/2011										
Muhammad Shakeel Qureshi	10/13/2011										
Gilberto Medeiros Ribeiro	10/13/2011										
R. Stanley Williams	10/13/2011										
RECEIVING PARTY DATA											
Name:	Hewlett-Packard Development Company, L.P.										
Street Address:	11445 Compaq Center Drive West										
City:	Houston										
State/Country:	TEXAS										
Postal Code:	77070										
PROPERTY NUMBERS Total: 1											
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;">Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>13281438</td></tr></tbody></table>		Property Type	Number	Application Number:	13281438						
Property Type	Number										
Application Number:	13281438										
CORRESPONDENCE DATA											
Fax Number:	(970)778-4063										
Phone:	(541)715-8443										
Email:	terri.tuma@hp.com										
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
Correspondent Name:	Hewlett-Packard Company										
Address Line 1:	3404 E. Harmony Road MS 35										
Address Line 2:	Intellectual Property Administration										
Address Line 4:	Fort Collins, COLORADO 80528										
NAME OF SUBMITTER:	Michael Dryja										
Total Attachments: 2 source=674 asgn executed#page1.tif source=674 asgn executed#page2.tif											

CH \$40.00 13281438

HEWLETT-PACKARD COMPANY
Intellectual Property Administrator
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

ATTORNEY DOCKET NO. 82775055

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:

Field-programmable analog array with memristors

Filing Date: _____ Application No.: _____

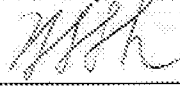
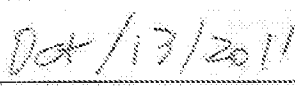

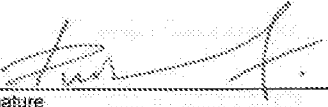
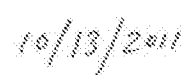
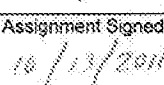
and the invention(s) and improvement(s) set forth therein, and any and all continuations, continuations-in-part (C-I-P's), divisionals, and renewals of and substitutes for said application for said Letters Patent, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefore; and any reissues, or reexaminations, or extensions of said Letters Patent.

I/we additionally authorize HPDC to file applications in my/our name for Letters Patent in any country, to be held and enjoyed by HPDC, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, and transfer not been made;

AND I/we hereby covenant that I/we have full right to convey the entire interest herein assigned, and that I/we have not executed and will not execute any agreement in conflict herewith, and I/we further covenant and agree that I/we will, each time a request is made, and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said invention(s) or improvement(s), said application and said Letters Patent, to HPDC, its successors, assigns, nominees or legal representatives, and I/we agree to communicate to HPDC, or to its nominee, all known facts respecting said invention(s) or improvement(s), said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers, to execute all disclaimers and divisionals, continuations, C-I-P's, reissue and foreign applications, to make all rightful oaths and declarations, and generally to do everything possible to aid HPDC, its successors, assigns, nominees and legal representatives to obtain and enforce, for its or their own benefit, proper patent protection for said invention(s) or improvement(s) in any and all countries provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by HPDC;

AND I/we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to HPDC, as assignee of the entire right, title and interest, any and all Letters Patent for said invention(s) or improvement(s), including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

I/we further authorize and direct the attorneys of record to insert the serial number and filing date of said application now identified by the attorney docket number and title set forth above as soon as the same shall have been made known to them by the United States Patent and Trademark Office.


	
_____ Inventor's Signature	_____ Date Assignment Signed
Jianhua Yang	
_____ Inventor's Typed Name	_____ Date Application Signed
	
_____ Inventor's Signature	_____ Date Assignment Signed
Muhammad Shakeel Qureshi	
_____ Inventor's Typed Name	_____ Date Application Signed

HEWLETT-PACKARD COMPANY
Intellectual Property Administrator
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

PATENT APPLICATION

ATTORNEY DOCKET NO. 82775055

ASSIGNMENT OF PATENT APPLICATION (cont.)

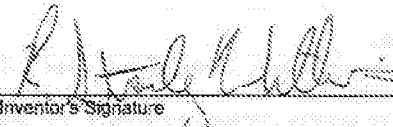


Inventor's Signature
Gilberto Medeiros Ribeiro

Inventor's Typed Name
10-13-2011

Date Assignment Signed
10-13-2011

Date Application Signed



Inventor's Signature
R Stanley Williams

Inventor's Typed Name
10-13-2011

Date Assignment Signed
10-13-2011

Date Application Signed

Inventor's Signature

Date Assignment Signed

Inventor's Typed Name

Date Application Signed

Inventor's Signature

Date Assignment Signed

Inventor's Typed Name

Date Application Signed

Inventor's Signature

Date Assignment Signed

Inventor's Typed Name

Date Application Signed

Inventor's Signature

Date Assignment Signed

Inventor's Typed Name

Date Application Signed