PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEVEN J. SIMSKE	01/29/2015
ROBERT ULICHNEY	01/30/2015
MATTHEW D. GAUBATZ	01/30/2015

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

Property Type	Number
Application Number:	15545708

CORRESPONDENCE DATA

Fax Number: (970)778-4063

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (541)715-8443

Email: ipa.mail@hp.com

Correspondent Name: HP INC.

Address Line 1: 3390 E. HARMONY ROAD MS 35
Address Line 2: INTELLECTUAL PROPERTY

Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	84649057
NAME OF SUBMITTER:	HEATHER MULKEY
SIGNATURE:	/Heather Mulkey/
DATE SIGNED:	06/19/2018

Total Attachments: 5

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Rev 8/2014 (Assignment)

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ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each), for good and valuable consideration, the receipt of which is hereby acknowledged, and in furtherance of my/our obligations to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas, (hereinafter HPDC), and to its subsidiaries and affiliates, agree to assign and transfer and 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 Patent entitled:

	_	iding the right of priority, in, to and under an application for Patent
M-ARY CYCLIC CODING		
Filing Date: January 30, 2	2015	Application No.: PCT/US2015/013695
divisionals, and renewals of	and substitutes for	n therein, and any and all continuations, continuations-in-part (C-I-P's), said application for said Patent, and any and all other Patent of any or therefore; and any reissues, or reexaminations, or extensions of said
by HPDC, its successors, ass	signs, nominees or le granted, reissued or e	cations in my/our name for Patent in any country, to be held and enjoyed egal representatives, to the full end of the term or terms for which said extended, as fully and entirely as the same would have been held and or not been made;
executed and will not execute time a request is made, and w perfect the title to said invention nominees or legal representate said invention(s) or improvem papers, to execute all disclaining that oaths and declaration and legal representatives to o	any agreement in co vithout undue delay, o on(s) or improvemen tives, and I/we agree tent(s), said application imers and divisionals s, and generally to o btain and enforce, fo all countries provide	right to convey the entire interest herein assigned, and that I/we have not conflict herewith, and I/we further covenant and agree that I/we will, each execute and deliver all such papers as may be necessary or desirable to at(s), said application and said Patent, to HPDC, its successors, assigns, to communicate to HPDC, or to its nominee, all known facts respecting on and said Patent, to testify in any legal proceedings, to sign all lawful s, continuations, C-I-P's, reissue and foreign applications, to make all to everything possible to aid HPDC, its successors, assigns, nominees it its or their own benefit, proper patent protection for said invention(s) or ad the expenses which may be incurred by me/us in lending such
applications as aforesaid, to i	ssue to HPDC, as a so which may be is	official of any country or countries whose duty it is to issue patents on ssignee of the entire right, title and interest, any and all Patent for said issued and granted on or as a result of the application aforesaid, in
		eys of record to insert the filing date and application number of said ID and title set forth above, as soon as the same shall have been made
IN WITNESS WHEREOF,	, I/we hereunto set	my/our hand(s) and seal(s):
Inventor's Signature		Date
Steven J	Simske	
First/Middle Name R - McC Inventor's Signature	Last Name	1/30/2015
Robert	Ulichney	
First/Middle Name	Last Name	

Page 1 of 2

PATENT REEL: 046131 FRAME: 0529 HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorage 80528

PATENT.	APPI.	ICATION
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RECORD ID:	84111749

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each), for good and valuable consideration, the raceipt of which is hereby acknowledged, and in furtherance of my/our obligations to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas, (hereinafter HPDC), and to its subsidiaries and affiliates, agree to assign and transfer and 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 Patent antifiliad:

M-ARY CYCLIC CODING

Filing Date: January 30, 2015	Application No.:	PCT/US2015/013695
	(s) set forth therein, and any and all continuations,	
divisionals, and renewals of and sub-	stitutes for said application for said Patent, and ar	ly and all other Patent of any
countries thereto which may be grante	d thereon or therefore; and any reissues, or reexan	ninations, or extensions of said
Datant		

I/we additionally authorize HPDC to file applications in my/our name for 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 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 tiwe hereby covenant that tiwe 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 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 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 official of any country or countries 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 Patent for said invention(s) or improvement(s) 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 filing date and application number of said application for Patent, now identified by the Record ID and title set forth above, as soon as the same shall have been made known to them.

IN WITNESS WHEREOF, I/we hereunto set my/our hand(s) and seal(s):

Inventor's Signature			Date
Steven J	Simske		
First/Middle Name	Last Name	Character a nonlynghamatachamor (
Inventor's Signature			Date
Robert	Ulichney		
First/Middle Name	Last Name	***************************************	
Rev 8/2014 (Assignment)		Page 1 of 2	

HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35

PATENT APPLICATION

	RECORD ID:	84111749

Fort Cellins, Colorado 80528 ASSIGNMENT OF PATENT APPLICATION (cont.) Matthew D Gaubatz First/Middle Name Last Name inventor's Signature Date First/Middle Name Last Name inventor's Signature Date First/Middle Name Last Name Dale Inventor's Signature First/Middle Name Last Name Inventor's Signature First/Middle Name Last Name Inventor's Signature Oate Füst/Middle Name Last Name

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

PAT	TENT	APP	ICATION	ì

RECORD ID:	84111749
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ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each), for good and valuable consideration, the receipt of which is hereby acknowledged,

Limited Partnership having its principal place subsidiaries and affiliates, agree to assign and tro	EWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas of business in Houston, Texas, (hereinafter HPDC), and to its ansfer and hereby assign and transfer to HPDC, its successors and ling the right of priority, in, to and under an application for Patent
M-ARY CYCLIC CODING	
Filing Date: January 30, 2015	Application No.: PCT/US2015/013695
divisionals, and renewals of and substitutes for s	therein, and any and all continuations, continuations-in-part (C-I-P's), aid application for said Patent, and any and all other Patent of any therefore; and any reissues, or reexaminations, or extensions of said
by HPDC, its successors, assigns, nominees or le-	itions in my/our name for Patent in any country, to be held and enjoyed gal representatives, to the full end of the term or terms for which said xtended, as fully and entirely as the same would have been held and not been made;
executed and will not execute any agreement in co- time a request is made, and without undue delay, e- perfect the title to said invention(s) or improvement, nominees or legal representatives, and I/we agree s said invention(s) or improvement(s), said application papers, to execute all disclaimers and divisionals rightful oaths and declarations, and generally to do and legal representatives to obtain and enforce, for improvement(s) in any and all countries provide cooperation and assistance are paid by HPDC;	ght to convey the entire interest herein assigned, and that I/we have not inflict herewith, and I/we further covenant and agree that I/we will, each xecute and deliver all such papers as may be necessary or desirable to (s), said application and said Patent, to HPDC, its successors, assigns, to communicate to HPDC, or to its nominee, all known facts respecting in and said Patent, to testify in any legal proceedings, to sign all lawful, continuations, C-I-P's, reissue and foreign applications, to make all deverything possible to aid HPDC, its successors, assigns, nominees its or their own benefit, proper patent protection for said invention(s) or did the expenses which may be incurred by me/us in lending such afficial of any country or countries whose duty it is to issue patents on
	signee of the entire right, title and interest, any and all Patent for said sued and granted on or as a result of the application aforesaid, in
	ys of record to insert the filing date and application number of said ID and title set forth above, as soon as the same shall have been made
IN_WITNESS WHEREOF, I/we/rereunto set r	ny/our hand(s) and seal(s):
Itwe O. Link	29 January 2015
Investor's Signature	29 January 2015
**************************************	VOSIW
Steven J Simske	
First/Middle Name Last Name	
Inventor's Signature	Dete
Robert Ulichney	
First/Middle Name Last Name	
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PATENT APPLICATION

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ASSIGNMENT OF PATENT APPLICATION (cont.)

Inventor's Signature		Dale
Matthew D	Gaubatz	
First/Middle Name	Last Name	
Inventor's Signature		Date
:		
First/Middle Name	Last Name	
:		
inventor's Signature		Date

First/Middle Name	Last Name	
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Inventor's Signature		Date
First/Middle Name	Last Name	
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Inventor's Signature		Date
o contrast o confinence		
First/Middle Name	Last Name	
Inventor's Signature		Date
First/Middle Name	Last Name	

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