PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5658268

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ROBERT ULICHNEY	02/26/2015
MATTHEW D. GAUBATZ	02/26/2015
STEPHEN POLLARD	03/02/2015

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:	16458479

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.

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Correspondent Name: HP INC.

Address Line 1: 3390 E. HARMONY ROAD MS 35 Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	85755824
NAME OF SUBMITTER:	HEATHER MULKEY
SIGNATURE:	/Heather Mulkey/
DATE SIGNED:	08/07/2019

Total Attachments: 4

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> **PATENT** REEL: 049994 FRAME: 0189

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

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RECORD ID:	84111553
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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

subsidiaries and affilia	ates, agree to assign and tr	ansfer and hereby as	ssign and	xas, (hereinafter HPDC), and to transfer to HPDC, its successors a and under an application for Pate	ınd
RECURSIVE HALFT	ONING AND GRAY VALU	E SUBSTITUTION			
Filing Date: 27 Fe	ebruary 2015	Applicat	ion No.:	PCT/US2015/017960	
divisionals, and renew	vals of and substitutes for :	said application for sa	aid Patent,	nuations, continuations-in-part (C-I-P , and any and all other Patent of a r reexaminations, or extensions of s	any
by HPDC, its success Patent respectively m	ors, assigns, nominees or le	egal representatives, to extended, as fully and	o the full e	t in any country, to be held and enjoyend of the term or terms for which so the same would have been held a	aid
executed and will not time a request is made perfect the title to said nominees or legal rep- said invention(s) or im- papers, to execute al rightful oaths and dec- and legal representative improvement(s) in an	execute any agreement in co a, and without undue delay, of invention(s) or improvement resentatives, and I/we agree provement(s), said application I disclaimers and divisionals larations, and generally to do wes to obtain and enforce, fo	onflict herewith, and IA execute and deliver all t(s), said application a to communicate to HI on and said Patent, to s, continuations, C-I-P to everything possible r its or their own benefit	we further and said Parent PDC, or to testify in a reissue to aid HP fit, proper p	herein assigned, and that I/we have covenant and agree that I/we will, ears as may be necessary or desirable atent, to HPDC, its successors, assignits nominee, all known facts respectantly legal proceedings, to sign all law and foreign applications, to make IDC, its successors, assigns, nomine patent protection for said invention(sie incurred by me/us in lending signs.	e to ins, ing vful all ees or
applications as afores invention(s) or improve	aid, to issue to HPDC, as a	ssignee of the entire r	right, title a	es whose duty it is to issue patents and interest, any and all Patent for s result of the application aforesaid	aid
I/we further auth application for Patent, known to them.	orize and direct the attorne now identified by the Record	lys of record to inser ID and title set forth a	t the filing above, as s	date and application number of soon as the same shall have been ma	aid ade
IN WITNESS WH	EREOF, I/we hereunto set	my/our hand(s) and	seal(s):		
2 Mrs.			7	1/26/2015	
Inventor's Signature	Mary.		Date	1-1211	
Robert	Ulichney				
First/Middle Name	Last Name				
Inventor's Signature			Date		
Matthew D.	Gaubatz				
First/Middle Name	Last Name	· · · · · · · · · · · · · · · · · · ·			
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PATENT REEL: 049994 FRAME: 0190 HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528

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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

subsidiaries at	nd affiliates, agre	e to assign and tr	ansfer and hereby	assign and t	as, (hereinafter HPDC), and to its transfer to HPDC, its successors and and under an application for Paten
RECURSIVE I	HALFTONING AI	YD GRAY VALUE	SUBSTITUTION		
Filling Date:	27 February	2015	Applic	ation No.:	PCT/US2015/017960
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by HPDC, its s Patent respect	successors, assign	is, nominees or le	gal representatives xtended, as fully a	, to the full e	in any country, to be held and enjoyed nd of the term or terms for which said the same would have been held and
executed and a time a request perfect the title nominees or le said invention(; papers, to exe rightful caths a and legal repre improvement(s	will not execute an is made, and with to said invention(gal representative s) or improvement soute all disclaime and declarations, a resentatives to obta	y agreement in co out undue delay, e s) or improvement s, and live agree (s), sald applicatio rs and divisionals and generally to di in and enforce, for countries provide	inflict herewith, and xecute and deliver (s), said application to communicate to in and said Patent, continuations, C- proverything possit its or their own be	I/we further of all such pape and said Par HPDC, or to to testify in a I-P's, reissue ble to aid HPI nefit, proper p	herein assigned, and that I/we have no covenant and agree that I/we will, each its as may be necessary or desirable to tent, to HPDC, its successors, assigns its nominee, all known facts respecting try legal proceedings, to sign all lawful and foreign applications, to make a DC, its successors, assigns, nomineed teatent protection for said invention(s) of the incurred by me/us in lending successors.
applications as invention(s) or	aforesaid, to issu	e to HPDC, as as which may be iss	signee of the entire	e right, title a	is whose duty it is to issue patents or nd interest, any and all Patent for sain result of the application aforesaid, in
	Patent, now identif				date and application number of said oon as the same shall have been made
in Witne	ESS WHEREOF, I/A	ve hereunto set r	my/our hand(s) ar	nd seal(s):	
Inventor's Signal	ture			Date	
Robert		Ulichney			
First/Middle Name	,,,,	Last Name	luum		۶ ۴
الله ۱۸۷۷ Inventor's Signal	der J	2. <u>Doel</u>	<u> </u>	OZ Date	26/2015
Matthew D.		Gaubatz			
First/Middle Nam	ę	Last Name			
Rev 8/2014 (Assignm	ent)		Page 1 of 2		

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Rev 8/2014 (Assignment)

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E. Harmony Road Stop 35 Collins, Colorado 80528		RECORD ID:	84111553	
	ACCIONISCENT OF NATION		imas	

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

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RECURSIVE	HALFTONING AND GRAY VALUE SUB	STITUTION	
Filing Date:	27 February 2015	Application No.:	PCT/US2015/017960
- divisionals, an	tion(s) and improvement(s) set forth there id renewals of and substitutes for said ag ato which may be granted thereon or there	collication for said Patent.	and any and all other Patent of any
Patent respect	ionally authorize HPDC to file applications successors, assigns, nominees or legal relively may be granted, relissued or extenders had this assignment, and transfer not be	orssentatives, to the full elect, as fully and entirely as	nd of the term or terms for which said
executed and time a request perfect the titls nominees or is said invention(papers, to exergitful oaths and legal represents cooperation and	hereby covenant that I/we have full right to will not execute any agreement in conflict his made, and without undue delay, execute to said invention(s) or improvement(s), saigal representatives, and I/we agree to cons) or improvement(s), said application and soute all disclaimers and divisionals, continued and declarations, and generally to do ever sentatives to obtain and enforce, for its or in any and all countries provided the dissistance are paid by HPDC;	erewith, and I/we further or and deliver all such paper id application and said Paternicate to HPDC, or to a said Paterni, to testify in a nuafions, C-I-P's, reissue ything possible to aid HPD their own benefit, proper paperses which may be	covenant and agree that I/we will, each is as may be necessary or desirable to ent. to HPDC, its successors, assigns, its nominee, all known facts respecting my legal proceedings, to sign all lawful and foreign applications, to make all DC, its successors, assigns, nominees atent protection for said invention(s) or incurred by me/us in lending such
applications as invention(s) or	hereby authorize and request the official aforesaid, to issue to HPDC, as assigned improvement(s) which may be issued at the terms of this assignment.	of the entire right, title ar	nd interest, any and all Patent for said
i/we furth application for known to them	er authorize and direct the attorneys of a Patent, now identified by the Record ID and	ecord to insert the filing I title set forth above, as so	date and application number of said on as the same shall have been made
IN WITNE	ESS WHEREOF, I/we hereunto set my/ou	r hand(s) and seal(s):	
Inventor's Signa	lure	Date	
Robert	Ulichney		
First/Middle Nam	e Last Name	——————————————————————————————————————	
Inventor's Signal	ure	Date	
Matthew D.	Gaubatz		
First/Middle Nam	e Last Name		

Page 1 of 2

PATENT REEL: 049994 FRAME: 0192 HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35

PATENT APPLICATION

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Inventor's Signature		Date	
Stephen	Pollard		
First/Middle Name	Last Name		
inventor's Signature		Date	
First/Middle Name	Last Name	· · · · · · · · · · · · · · · · · · ·	
Inventor's Signature		Date	
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