504440946 06/30/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT4487647

CONVEYING PARTY DATA

Name	Execution Date
VINCENT C KORTHUIS	10/28/2014
DONALD J MILLIGAN	10/29/2014
DENNIS SCHLOEMAN	10/29/2014

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
PCT Number:	US1462930

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.

Correspondent Name: HEWLETT-PACKARD COMPANY Address Line 1: 3390 E. HARMONY ROAD MS 35

Address Line 2: INTELLECTUAL PROPERTY ADMINISTRATION

Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER: 84619611

NAME OF SUBMITTER: KUBAE KIM

SIGNATURE: /Kubae Kim/

DATE SIGNED: 06/30/2017

Total Attachments: 3

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PATENT 504440946 REEL: 042879 FRAME: 0560

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

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RECORD ID:	84042091

ASSIGNMENT OF PATENT APPLICATION

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

Limited Partnershi subsidiaries and af	p having its principal pla filiates, agree to assign an	HEWLETT-PACKARD DEVELOP ice of business in Houston, Texa d transfer and hereby assign and tr cluding the right of priority, in, to a	s, (hereinafter HPDC), and to its ansfer to HPDC, its successors and
MULTI-DIRECTION	VAL SINGLE PASS PRIN	TING	
Filing Date:	29Oct2014	Application No.:	PCT/US2014/062930
divisionals, and ren	ewals of and substitutes f	orth therein, and any and all continu or said application for said Patent, in or therefore; and any reissues, or	and any and all other Patent of any
by HPDC, its succe Patent respectively	essors, assigns, nominees o	plications in my/our name for Patent in the full end of the full end of extended, as fully and entirely as the standard of the standard of t	d of the term or terms for which said
executed and will no time a request is ma perfect the title to so nominees or legal re said invention(s) or papers, to execute rightful oaths and d and legal representa- improvement(s) in	of execute any agreement in ede, and without undue dela aid invention(s) or improven apresentatives, and I/we ag- improvement(s), said applicate all disclaimers and division declarations, and generally to atives to obtain and enforce	ull right to convey the entire interest he conflict herewith, and I/we further converge to the further converge to the function of the function and said patents and said patent, to testify in an analy, continuations, C-I-P's, reissue to do everything possible to aid HPD, for its or their own benefit, proper payled the expenses which may be	ovenant and agree that I/we will, each as may be necessary or desirable to ent, to HPDC, its successors, assigns is nominee, all known facts respecting by tegal proceedings, to sign all lawfu and foreign applications, to make al C, its successors, assigns, nominees tent protection for said invention(s) or
applications as afor invention(s) or imp	esaid, to issue to HPDC, a	ne official of any country or countries s assignee of the entire right, title an e issued and granted on or as a n	d interest, any and all Patent for said
		meys of record to insert the filing cord ID and title set forth above, as so	
in witness v Umi	VHEREOF, I/we hereunto	set my/our hand(s) and seal(s):	0/28/14
Inventor's Signature		Date	· · · · · · · · · · · · · · · · · · ·
Vincent C.	KORTHUIS		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Donald J.	MILLIGAN		
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 Fort Collins, Colorado 80528

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RECORD ID:	84042091				

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:

entitled:	mile tight, the and morest modernig	and right or priority, my to date	under an approach for a broth
MULTI-DIREC	TIONAL SINGLE PASS PRINTING		
Filing Date:	29Oct2014	Application No.:	PCT/US2014/062930
divisionals, and	on(s) and improvement(s) set forth ther I renewals of and substitutes for said a to which may be granted thereon or the	application for said Patent, and	any and all other Patent of an
by HPDC, its se Patent respective	onally authorize HPDC to file applications uccessors, assigns, nominees or legal r vely may be granted, reissued or exten- us had this assignment, and transfer not	epresentatives, to the full end of ded, as fully and entirely as the	the term or terms for which sai
executed and w time a request i perfect the title nominees or leg said invention(s papers, to exec rightful oaths at and legal repre- improvement(s)	nereby covenant that I/we have full right to the full right to the full right to the full right to the full right to said invention(s) or improvement(s), so the full representatives, and I/we agree to continuous and representatives, and I/we agree to continuous and declarations, and declarations, and generally to do ever sentatives to obtain and enforce, for its continuous and all countries provided that assistance are paid by HPDC;	therewith, and I/we further cover the and deliver all such papers as said application and said Patent, in mmunicate to HPDC, or to its not disaid Patent, to testify in any le attinuations, C-I-P's, reissue and erything possible to aid HPDC, it or their own benefit, proper patent	ant and agree that I/we will, each may be necessary or desirable to HPDC, its successors, assigns minee, all known facts respecting gal proceedings, to sign all lawfur foreign applications, to make a successors, assigns, nomineed protection for said invention(s) of
applications as invention(s) or	hereby authorize and request the official aforesaid, to issue to HPDC, as assign- improvement(s) which may be issued in the terms of this assignment.	ee of the entire right, title and in	erest, any and all Patent for sai
	or authorize and direct the attorneys of Patent, now identified by the Record ID a		
IN WITNE	SS WHEREOF, I/we hereunto set my/o	our hand(s) and seal(s):	
Inventor's Signate	ure	Date	
Vincent C.	KORTHUIS		
First/Middle Name	Last Name		
Dogg	MM Mallioan	Oct	29,2014
Inventor's Signat	ye /	Date	
Donald J.	MILLIGAN		
First/Middle Name	Last Name		
Rev 8/2014 (Assignme	ent) F	Page 1 of 2	

PATENT REEL: 042879 FRAME: 0562 HEWLETT-PACKARD COMPANY intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35

PATENT APPLICATION

Mail Stop 35 Fort Collins, Colorado 80528		RECORD ID:	84042091
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Inventor's Signature	7 And Consignation	Date Date	600 29, 2014
Dennis	SCHLOEMAN		
First/Middle Name	Last Name		
inventor's Signature		Date	
First/Middle Name	Last Name		
Inventor's Signature		Date	
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First/Middle Name	Last Name		
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Inventor's Signature		Date	
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inventor's Signature		Date	
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First/Middle Name	Last Name		

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PATENT REEL: 042879 FRAME: 0563