502132647 11/16/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Alexander Govyadinov	10/28/2010
Pavel Kornilovich	10/28/2010
Erik Torniainen	10/28/2010
David P. Markel	10/28/2010

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:	13698056

CORRESPONDENCE DATA

Fax Number: 9707784063

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: (541)715-8443

Email: pto.assignments@hp.com

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: Terri Walker

Total Attachments: 4

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> PATENT REEL: 029316 FRAME: 0159

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

Rev 10/08 (Assignment)

PATENT APPLICATION

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each) have agreed and DEVELOPMENT COMPANY, L.P., a Texas Limited Partnersh Texas. (hereinafter HPDC), in furtherance of my/our obtisubsidianes and affiliates, and do hereby assign and transfer title and interest, including the right of priority, in, to and under entitled: FLUID EJECTION ASSEMBLY WITH CIRCULATION PUMP	gations to the Hewlett-Packard Company and its o HPDC, its successors and assigns, the entire right
Filing Date: October 28, 2010	PCT/US2010/054458
and the invention(s) and improvement(s) set forth therein, and P's), divisionals, and renewals of and substitutes for said application of the United States and of countries foreign thereto is reissues, or reexaminations, or extensions of said Letters Patent reissues, or reexaminations, or extensions of said Letters Patent fersions in held and enjoyed by HPDC, its successors, assigns, nominees terms for which said Letters Patent respectively may be grant same would have been held and enjoyed by me/us had this asset. AND I/we hereby covenant that I/we have full right to we have not executed and will not execute any agreement in a that i/we will, each time a request is made, and without undue necessary or desirable to perfect the title to said invention(s). Patent, to HPDC, its successors, assigns, nominees or legal HPDC, or to its nominee, all known facts respecting said inventions. C-I-P's, reissue and foreign applications, to mak do everything possible to aid HPDC, its successors, assigns enforce, for its or their own benefit, proper patent protection for countries provided the expenses which may be incurred by mead by HPDC; AND I/we hereby authorize and request the Commissional any official of any country or countries foreign to the tapplications as aforesaid, to issue to HPDC, as assignee of the Patent for said invention(s) or improvement(s), including any able issued and granted on or as a result of the application aforest I/we further authorize and direct the attorneys of recamplication now identified by the attorney docket number and been made known to them by the United States Patent and Traintentor's Signature.	If any and all continuations, continuations-in-part (C-I cation for said Letters Patent, and any and all Letters which may be granted thereon or therefore, and any int. In my/our name for Letters Patent in any country, to be or legal representatives, to the full end of the term of ed, reissued or extended, as fully and entirely as the signment, and transfer not been made; convey the entire interest herein assigned, and that it conflict herewith, and I/we further covenant and agreed delay, execute and deliver all such papers as may be or improvement(s), said application and said Letters representatives, and I/we agree to communicate to inton(s) or improvement(s), said application and said virul papers, to execute all disclaimers and divisionals let all rightful oaths and declarations, and generally to, in minnees and legal representatives to obtain and or said invention(s) or improvement(s) in any and all elus in lending such cooperation and assistance are found of Patents and Trademarks of the United States United States whose duty it is to issue patents on the entire right, title and interest, any and all Letters which may said, in accordance with the terms of this assignment, and title set forth above as soon as the same shall have
Alexander Govyadinov Inventor's Typed Name	Oata Andiisation Giannel
incomo a i spaciada	care abhuranni kodiren
Inventor's Signature	Cala Assignment Signed
Pavel Kornilovich	
Invertor's Typed Name	Date Application Signed

Page 1 of 2

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

PATENT APPLICATION

ATTORNEY DOCKET NO. _____ 201005057-1

ASSIGNMENT OF PATENT APPLICATION

IWe, 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,

subsidiaries and annates, and on nereby assign and transit title and interest, including the right of priority, in, to and und entitled:	
FLUID EJECTION ASSEMBLY WITH CIRCULATION PUMI	3
Filing Date:	Application No.:
held and enjoyed by HPDC, its successors, assigns, nomine terms for which sald Letters Patent respectively may be grassme would have been held and enjoyed by me/us had this in AND I/we hereby coverant that I/we have full right we have not executed and will not execute any agreement in that I/we will, each time a request is made, and without under necessary or desirable to perfect the title to said inventions? Patent, to HPDC, its successors, assigns, nominees or leg HPDC, or to its nominee, all known facts respecting said in Letters Patent, to testify in any legal proceedings, to sign all continuations, C-I-P's, reissue and foreign applications, to make the continuations, C-I-P's, reissue and foreign applications, to make everything possible to aid HPDC, its successors, assignenforce, for its or their own benefit, proper patent protection countries provided the expenses which may be incurred by paid by HPDC. AND I/we hareby authorize and request the Committed any official of any country or countries foreign to the applications as aforesaid, to issue to HPDC, as assigned to Patent for asid invention(a) or improvement(s), including an be issued and granted on or as a result of the application aformation now identified by the attorney docket number as been made known to them by the United States Patent and	plication for said Letters Patent, and any and all Letters of which may be granted thereon or therefore; and any tent. In my/our name for Letters Patent in any country, to be as or legal representatives, to the full end of the term or inted, reissued or extended, as fully and entirely as the assignment, and transfer not been made; to convey the entire interest herein assigned, and that the conflict herewith, and I/we further covenant and agree as delay, execute and deliver all such papers as may be as or improvement(s), said application and said Letters all representatives, and I/we agree to communicate to vention(s) or improvement(s), said application and said lawful papers, to execute all disclaimers and divisionals, take all rightful oaths and declarations, and generally to prove the continuous of the said invention(s) or improvement(e) in any and all me/us in lending such cooperation and assistance are estimated. States whose duty it is to issue patents on the entire right, title and interest, any and all Letters y and all Letters Patent of the United States which may ressaid, in accordance with the terms of this assignment, and title set forth above as soon as the same shall have trademark Office.
Inventor's Signature	Date Assignment Signed
Alexander Govyadinov Inventor's Typed Name	Date Application Signed
Inventor's Signature	のそんして 28, 2010 Date Assignment Signed
Pavel Kornštovich	October 28, 2010
Inventor's Typed Name	Date Application Signed

Rev 10/09 (Assignment)

Page 1 of 2

HEMLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 36 Fort Collins, Colorado 80528

PATENT APPLICATION

	ATTORNEY	DOCKET NO.	201005057-1
mart.	APPLICATION	(fenet)	

ASSIGNMENT OF PATE Inventor's Signature Erix Torniainen Inventor's Typed Name Inventor's Signature **Date Assignment Signed** David P Markel 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 Date Assignment Signed Inventor's Signature Inventor's Typed Name Date Application Signed

Rev (C/OS (Assignment)

Page 2 of 2

PATENT REEL: 029316 FRAME: 0162 HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35 Fart Calins. Calansdo 80525

PATENT APPLICATION

ASSIGNMENT OF PATENT APPLICATION (cont.)

Inventor's Signature	Date Assignment Signed
Erik Tomseinen	
nventor's Typed Name	Date Application Signed
Dam & Ware	10-28-10
inventor's Signature	Date Assignment Signed
David P Markei	10-28-10
invertor's Typed Name	Date Application Signed
inventor's Signature	Data Assignment Signed
inventor's Typed Name	Osta Application Signed
inventor's Signature	Date Assignment Signed
Inventor's Typed Name	Cate 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	Oate Apolication Nigned

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PATENT REEL: 029316 FRAME: 0163

RECORDED: 11/16/2012

Hay 1026 (Assignment)