#### 06/15/2017 504414247

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4460947

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
CONVEYING PARTY DATA	Name Execution Da

GEORGIOS PANOTOPOULOS	01/14/2015
MICHAEL RENNE TY TAN	12/10/2014
PAUL K ROSENBERG	12/10/2014
WAYNE V SORIN	12/10/2014

## **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
Application Number:	15536130

## **CORRESPONDENCE DATA**

Fax Number:

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: (970) 898-7472 Email: hpe.ip.mail@hpe.com Correspondent Name: HEWLETT PACKARD ENTERPRISE Address Line 1: 3404 E. HARMONY ROAD MS 79 Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	90450573
NAME OF SUBMITTER:	BE HENRY
SIGNATURE:	/Be Henry/
DATE SIGNED:	06/15/2017
Total Attachments: 6	

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PATENT APPLICATION

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

RECORD ID:

700218506

#### ASSIGNMENT OF PATENT APPLICATION

IWe, 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, the and interest, including the right of priority, in, to and under an application for Patient entitled.

#### BONDED FILTER SUBSTRATES

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

live additionally authorize HPDC to file applications in mylour name for Patent in any country, to be held and enjoyed by HPDC, its successors, assigns, nominees or legal representatives, to the full and 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 metus hed this assignment, and transfer not been made.

AND lives hereby covenant that twe have full right to convey the entire interest herein assigned, and that lives have not executed and will not execute any agreement in conflict herewith, and lives further covenant and agree that lives 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 HPOC, its successors, assigns, nominees or legal representatives, and lives agree to communicate to HPOC, or to its nominee, all known facts respecting said invention(s) or improvement(s), said applications of the total or one of the said invention(s) or application and said Patent, to testify in any legal proceedings, to sign all lawful papers, to associate all disclaimers and divisionals, continuations, C-LP's, release and foreign applications, to make all rightly caths and declarations, and generally to do everything possible to and HPOC, its successors, assigns, nominees and declarations, and generally to do everything possible to and HPOC. Its successors, assigns, nominees and legal representatives to column and entire for its or their own benefit, proper patent protection for said invention(s) or improvement(s) is and enforce, for its or their own benefit, proper patent protection for said invention(s) or improvement(s) is any and all countries provided the expenses which may be incurred by medies in landing such cooperation and assistance are pad by HPOC.

ANO live hereby authorize and request the official of any country or countries whose duty it is to issue patients on applications as aforesaid, to issue to HPOC, as assignee of the entire right, title and interest, any and all Patient 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 filling 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.

Page 1 of 2

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

Mathai

Last Name

Panotopoulos

Last Name

Inventor's Sugnature

Sagi Varghese

First/Middle Name

Inventor's Signature

Georgios First-Middle Name

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PATENT REEL: 042715 FRAME: 0081

HEWLETT-PACKARD COMPAN Intellectual Property Administrati 3404 E. Harmony Road			PATENT APPLICATION
Mail Stop 35		RECORD ID:	700218506
Fort Collins, Colorado 80528	 ASSIGNMENT OF DA	TENT APPLICATION (con	<b>4</b> 1
		(TEAT MTT EIGHTIGH (GOI	(a. )
Inventor's Signature		Date	
Michael Renne Ty	Tan		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Paul K.	Rosenberg		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Wayne V.	Sorin		
First/Middle Name	Last Name		
Inventor's Signature		Dale	
First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name		
Rev 8/2014 (Assignment)	Pi	age 2 of 2	

HEWLETT-PACKARD COMPANY		PATENT APPLICATION
Intellectual Property Administrator		
3404 E. Harmony Road		
Mail Stop 35	RECORD ID:	700218506
Fort Collins, Colorado 80528	1	

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### BONDED FILTER SUBSTRATES

Filing Date:	June 14, 2017	<b>Application No.:</b>	15/536130
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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 Patent, and any and all other Patent of any countries thereto which may be granted thereon or therefore; and any reissues, or reexaminations, or extensions of said Patent.

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 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 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.

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

Inventor's Signature		Date
Sagi Varghese	Mathai	
First/Middle Name	Last Name	
Inventor's Signature	<b>-</b>	$\frac{1/14/2015}{\text{Date}}$
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Georgios	Panotopoulos	
First/Middle Name	Last Name	
Rev 8/2014 (Assignment)	Page 1 of 2	

PATENT REEL: 042715 FRAME: 0083

HEWLETT-PACKARD COMPAN Intellectual Property Administrati 3404 E. Harmony Road			PATENT APPLICATION
Mail Stop 35		RECORD ID:	700218506
Fort Collins, Colorado 80528	 ASSIGNMENT OF DA	TENT APPLICATION (con	<b>4</b> 1
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First/Middle Name	Last Name		
Inventor's Signature		Dale	
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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HEWLETT-PACKARD COMPAN
Intellectual Property Administrator
3404 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

RECORD ID: 7002

700218506

PATENT APPLICATION

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Inventor's Signature			Date
Sagi Varghese	Mathai		
First/Middle Name	Last Name		
Inventor's Signature			Date
Georgios	Panotopoulos		
First/Middle Name	Last Name		
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Inventor's Signature			Date	f
Michael Renne Ty	Tan			
First/Middle Name	Last Name	· ···		
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Inventor's Signature	$\searrow$		Date	
Paul K.	Rosenberg			
First/Middle Name	Last Name	· · · · · · · · · · · · · · · · · · ·		
Man V.	Gom		12/10 Date	<u> 14</u>
Wayne V.	Sorin			
First/Middle Name	Last Name	· · · · · · · · · · · · · · · · ·		
Inventor's Signature			Date	
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