U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

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WEI WU SHIH-YUAN WANG MICHAEL RENNE TY TAN DAVID A. FATTAL CHARLES M. SANTOR! RAYMOND G. BEAUSOLEIL	HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P. 20555 SH 249 Houston, TX 77070			
Additional name(s) of conveying party(ies) attached? ☐Yes ☒No	Additional name(s) and address(es) attached? Tyes XNo			
Nature of Conveyance:				
	Name Security Agreement Joint			
Other				
Confirmation No.: 1458 B. Patent N  Additional numbers attached? NO  5. Name and address of party to whom correspondence concerning document should be mailed:  Records Manager	n, execution date of the application is: July 26, 2007			
Intellectual Property Administration HEWLETT-PACKARD COMPANY	X Authorization to be charged to deposit account.			
P.O. Box 272400 Fort Collins, Colorado 80527-2400	Authorization to be charged to deposit account.      Deposit Account Number: 08-2025			
9. Statement and signature.	o. Deposit Account recitives. <u>vorevec</u>			
To the best of my knowledge and belief, the foregoing inforceopy of the original document.  J. Michael Johnson	mation is true and correct and any attached copy is a true  July 31, 2007			
Name of Person Signing Signature Date				
Total number of pages including coversheet, attachments, and documents:5				
Mail Stop Assignment Recordation Services, Director of	t) should be faxed to (571) 273-0140, or mailed to: the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450			
Page 1 of 1				

Rev 10/06a (RecdAsgn)

PATENT REEL: 019637 FRAME: 0581 HEWLETT-PACKARD COMPANY Intellectual Property Administrator P.O. Box 272400 Fort Collins, Colorado 80527-2400 PATENT APPLICATION

ATTORNEY DOCKET NO.

200701511

## ASSIGNMENT OF PATENT APPLICATION

I/We, 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, title and interest, including the right of priority, in, to and under an application for Letters Patent of the United States

OPTICAL WAVEGUIDE RING RESONATOR WITH AN INTRACAVITY ACTIVE ELEMENT 2007 July 26, 11/829,048 Filling Date: Application No.: 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 Letters Patent, and any and all Letters Patent of the United States and of countries foreign thereto which may be granted thereon or therefore; and any reissues, or reexaminations, or extensions of said Letters Patent. I/we additionally authorize HPDC to file applications in my/our name for Letters 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 Letters 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 Letters 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 Letters 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 Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States 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 Letters Patent for said invention(s) or improvement(s), including any and all Letters Patent of the United States 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 serial number and filing date of said application now identified by the attorney docket number and title set forth above as soon as the same shall have been made known to them by the United States Patent and Trademark Office.

TR WITNESS WHEREO	F, I/we hereunto set my/our hand(s)	and seal(s):	12007
Coni			<u> </u>
Inventor's Signature (Seal)		Date Assignment Signe	
Wei W⊔			<del> </del>
Inventor's Typed Name		Date Application Signer	<b>1</b>
State of	)		
	) ss.:	•	
County of	; )	•	
Before me this day of	personally appeared	₩u ieW	who is personally
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		My Commission Ex	pires:
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REEL: 019637 FRAME: 0582

HEWLETT-PACKARD COMPANY Intellectual Property Administrator P.O. Box 272400 Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. \_\_\_\_\_\_ 200701511

IN WITNESS WHEREOF, IN	ve hereunto set my/our hand(s)	7/26/07	
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nventor's Signature (3eal)	•	<u>.</u>	
Shih-Yuan Wang		7/26/07	
Inventor's Typed Name		Date Application Signed	
State of	) ) ss.:		
County of	)		
Before me this day of	, personally appeared	Shih-Yuan Wang	who is personally
known or proved to me on the basis assignment to be his/her free act and o	of satisfactory evidence to be the	e person who acknowledged the for	regoing instrument of
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Michael Renne Ty Tan Inventor's Typed Name		Date Application Signed	
Illiventors Typeo Hame			
State of	) ) ss.:		
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Before me thisday of	, personally appeared	Michael Renne Ty Tan	who is personally
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David A. Fattal Inventor's Typed Name		Date Application Signed	
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Before me thisday of	, personally appeared	David A. Fattal	who is personally toregoing instrument of
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HEWLETT-PACKARD COMPANY Intellectual Property Administrator P.O. Box 272400 Fort Collins, Colorado 80527-2400

### PATENT APPLICATION

200701511 ATTORNEY DOCKET NO. \_

# ASSIGNMENT OF PATENT APPLICATION (cont.)

Ca I make	re hereunto set my/our hand(s)	7/30/07
Inventor's Signature (Seal)		Date Assignment Signed
inventor's dignature (deal)		~ (- m
Charles M. Santori		7/30/07 Date Application Signed
Inventor's Typed Name		Date Application Signed
State of	. )	
	) ss.:	
County of	) 	Charles M. Santori who is personally
Before me this day of	, personally appeared	Charles M. Santori who is personally the person who acknowledged the foregoing instrument of
assignment to be his/her free act and of	leed.	and position that the same same same same same same same sam
		Notary Public
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State of	)	
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230.8		Notary Public
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**PATENT REEL: 019637 FRAME: 0584**  HEWLETT-PACKARD COMPANY Intellectual Property Administrator P.O. Box 272400 Fort Collins, Colorado 80527-2400 PATENT APPLICATION

ATTORNEY DOCKET NO. \_\_\_\_

200701511

# ASSIGNMENT OF PATENT APPLICATION (cont.)

to the	acroll	Date Assignment Signed	<i></i>
Inventor's Signature (Seal)		Date Assignment Signed	
Daywood C. Banyaniail		O 7/30/0 Date Application Signed	7
Raymond G. Beausoleil Inventor's Typed Name		Date Application Signed	<u>L</u>
mventois Typed Harrie		<b></b>	
State of	)		
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Before me this day of	, personally appeared	Raymond G. Beausoleil	who is personally
known or proved to me on the ba	sis of satisfactory evidence to be	the person who acknowledged the f	pregoing instrument of
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Inventor's Signature (Seal)		Date Assignment Signed	
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Inventor's Typed Name		Date Application of the	
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**RECORDED: 07/31/2007**