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. Name of conveying party(ies):		2. Name and add	tress of receiv	ving party(ies):	
MING C. HAO UMESHWAR DAYAL CHRISTIAN ROHRDANTZ	HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P. 11445 Compaq Center Drive West Houston, TX 77070				
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Additional name(s) of conveying party(ies) attached	? 🛛 Yes 💌 No	Additional name(s)	and address(e	s) attached?	es 🗙 No
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Execution Date(s):05/19/11, 05/19/11, 05/19/1	1, 05/19/11, 05	5/20/11, and 05/20/	11, respective	ely.	
. Application number(s) or patent number(s):	-				
If this document is being filed together with a	a new applicati	on, execution date	of the applica	ition is:	
If this document is being filed together with a A. Patent Application No.(s)	a new applicati	on, execution date	of the applica	ition is:	
		on, execution date : June 8, 2011	of the applica	ition is:	
A. Patent Application No.(s)		: June 8, 2011	of the applica	ition is:	
A. Patent Application No.(s) Application No.: 13/155,570 Confirmation No.: 3299	Date Filed	: June 8, 2011	of the applica	ition is:	
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A. Patent Application No.(s) Application No.: 13/155,570 Confirmation No.: 3299 Additional numbers attached? <u>NO</u> Name and address of party to whom corresp concerning document should be mailed: <b>Records Manager</b>	Date Filed B. Patent N	June 8, 2011 No.(s): 6. Total number (	of application CFR 3.41):	s and patents in	volved: <u>1</u>
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A. Patent Application No.(s) Application No.: 13/155,570 Confirmation No.: 3299 Additional numbers attached? <u>NO</u> Name and address of party to whom corresp concerning document should be mailed: <b>Records Manager</b> Intellectual Property Administration <b>HEWLETT-PACKARD COMPANY</b> 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528 Statement and signature. To the best of my knowledge and belief, the copy of the original document. Dan C. Hu Name of Person Signing Total number of pages inclu	Date Filed B. Patent N bondence foregoing infor Date Filed bondence	Sune 8, 2011 No.(s):  6. Total number 7. Total Fee (37EnclosedX_Authoriza 8. Deposit Account formation is true and CCCC ature et, attachments, ar t) chould be faved	of application CFR 3.41): ation to be ch unt Number: correct and a documents to (571) 273- Box 1450. Ale	s and patents in \$40.00 arged to deposit 08-2025 any attached cop June 8, 201 Date :	account.
A. Patent Application No.(s) Application No.: 13/155,570 Confirmation No.: 3299 Additional numbers attached? <u>NO</u> Name and address of party to whom corresp concerning document should be mailed: Records Manager Intellectual Property Administration HEWLETT-PACKARD COMPANY 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528 Statement and signature. To the best of my knowledge and belief, the copy of the original document. Dan C. Hu Name of Person Signing Total number of pages inclu	Date Filed B. Patent M bondence foregoing infor foregoing infor Sign iding covershee es, Director of	Sune 8, 2011 No.(s):  6. Total number 7. Total Fee (37EnclosedX_Authoriza 8. Deposit Account formation is true and CCCC ature et, attachments, ar t) chould be faved	of application CFR 3.41): ation to be ch unt Number: correct and a documents	s and patents in \$40.00 arged to deposit 08-2025 any attached cop June 8, 201 Date :	account. by is a true 1 to: 343 362 5 13

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

PATENT APPLICATION

PATENT REFERENCE:

201005029-1

#### **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 entitled:

## SELECTING SENTIMENT ATTRIBUTES FOR VISUALIZATION

Filing Date:	June 8, 2011	Appl	ication No.:	13/155,570	· • •
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and the invention(s) and improvement(s) set forth therein, and any and all continuations, continuations-in-part (C4-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.

T. C. 14

Inventor's Signature

Ming C. Hao

Inventor's Typed Name

Date Application Signed

Date Assignment Signed

Date Assignment Signed

19 May 2011

Inventor's Signature

Umeshwar Dayal

Inventor's Typed Name

Rev 06/10 (Assignment)

Page 1 of 2

TEWLETT-PACKARD COMPANY Intellectual Property Administrator	PATENT APPLICATION
3404 E. Harmony Road Mail Stop 35	004005030 4
Fort Collins; Colorado 80528	PATENT REFERENCE: 201005029-1
ASSIGNMENT OF PATENT A	PPLICATION (cont.)
	A C. M. David
duitin Robotante	19 May 2011
nventor's Signature	Date Assignment Signed
Christian Rohrdantz	Date Application Signed
nventor's Typed Name	
mand	5-19-2011
Mulling	Date Assignment Signed
inventor's Signature	
	5-19-2011
Meichun Hsu Inventor's Typed Name	<u>5-19-2-01</u> Date Application Signed
Inventor's Signature	Date Assignment Signed
Mohamed E. Dekhill	
Inventor's Typed Name	Date Application Signed
Inventor's Signature	Date Assignment Signed
Riddhiman Ghosh	Date Application Signed
Inventor's Typed Name	
Inventor's Signature	Date Assignment Signed
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HEWLETT-PACKARD COMPANY Intellectual Propeny Administrator 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528

#### PATENT APPLICATION

PATENT REFERENCE:

### 201005029-1

## ASSIGNMENT OF PATENT APPLICATION (cont.)

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Inventor's Sig	nature	 		· · ·	• • • •	Date Ass	ignment (	Signed

Christian Rohrdantz Inventor's Typed Name

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Inventor's Signature

Meichun Hsu Inventor's Typed Name

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Hiventor's Signature

Mohamed E: Dekhil Inventor's Typed Name:

Inventor's Signature

Riddhiman Ghosh Inventor's Typed Name

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Page 2 of 2

Date Application Signed

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

PATENT APPLICATION

PATENT REFERENCE

201005029-1

# ASSIGNMENT OF PATENT APPLICATION (cont.)

Inventor's Signature	Date Assignment Signed
Christian Rohrdantz Inventor's Typed Name	Date Application Signed
	Pare Application Gigited
Inventor's Signature	Date Assignment Signed
Meichun Hsu	
Inventor's Typed Name	Date Application Signed
Inventor's Signature	Date Assignment Signed
Mohamed E./Dekhil	
Inventor's Typed Name	Date Application Signed
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Inventor's Signature	Date Assignment Signed
Riddhiman Ghosh	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Inventor's Typed Name	Date Application Signed
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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
Rev 06/10 (Assignment) Page 2 of 2	

PATENT REEL: 026467 FRAME: 0087

RECORDED: 06/13/2011