PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the Serial No. previously recorded on Reel 022809 Frame 0344. Assignor(s) hereby confirms the correct Serial No. as 12/482,312 and the incorrect Serial No. as 12/582,312.

CONVEYING PARTY DATA

Name	Execution Date
Steven Ross Bentley	06/02/2009
Nhan Xuan Bui	05/28/2009
Reed Alan Hancock	05/28/2009
Eiji Ogura	05/28/2009
Kazuhiro Tsuruta	05/28/2009
Keisuke Tanaka	05/28/2009

RECEIVING PARTY DATA

Name:	International Business Machines Corporation		
Street Address:	New Orchard Road		
City:	Armonk		
State/Country:	NEW YORK		
Postal Code:	10504		

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	12482312	

CORRESPONDENCE DATA

Fax Number: (520)770-2243

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

Phone: 520-770-8700

reena.mendez@quarles.com Email:

Correspondent Name: Dale F. Regelman Address Line 1: Quarles & Brady LLP

Address Line 2: One S. Church Avenue, Ste. 1700 Tucson, ARIZONA 85701-1621 Address Line 4:

PATENT

REEL: 024731 FRAME: 0106

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ATTORNEY DOCKET NUMBER:	480973.00287			
NAME OF SUBMITTER:	Dale F. Regelman			
Total Attachments: 16 source=Coversheet_from_original_recorded_submission#page1.tif source=Coversheet_from_original_recorded_submission#page2.tif source=TUC920080119US1_Assign#page1.tif				
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TO: DALE F. REGELMAN COMPANY: QUARLES & BRADY LLP

PATENT	ASSIGN	IMFNT
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Electronic Version v1.1 06/10/2009 Stylesheet Version v1.1 500882847

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date		
Steven Ross Bentley	06/02/2009		
Nhan Xuan Bui	05/28/2009		
Reed Alan Hancock	05/28/2009		
Eiji Ogura	05/28/2009		
Kazuhiro Tsuruta	05/28/2009		
Keisuke Tanaka	05/28/2009		

RECEIVING PARTY DATA

Name:	International Business Machines Corporation
Street Address:	New Orchard Road
City:	Armonk
State/Country:	NEW YORK
Postal Code:	10504

PROPERTY NUMBERS Total: 1

Property Type	Number		
Application Number:	12582312		

CORRESPONDENCE DATA

Fax Number: (520)770-2243

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Phone: 520-770-8700

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Correspondent Name: Dale F. Regelman
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ATTORNEY DOCKET NUMBER: TUC920080119US1

PATENT

REEL: 024731 FRAME: 0108

USPTO 6/12/2009 7:11:01 PM PAGE 5/005 Fax Server

TO:DALE F. REGELMAN COMPANY:QUARLES & BRADY LLP

NAME OF SUBMITTER:	Dale F. Regelman
Total Attachments: 14	
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ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: APPARATUS AND METHOD TO ADJUST THE ORIENTATION OF A READ HEAD TO CORRECT FOR DYNAMIC SKEW

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: 12/482,312 (insert series code and serial number here if/when available)

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned Inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned Inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned Inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

Page 1 of 7

	Exe	cuted by Inventor 1	of 6	
	_			
Signature:	Stock !	Sentley	Date:	06/02/09
	Steven Ross Bentley		_	

Executed by Inventor 2 of 6

Signature: _

Nhan Xuan Bui

Executed	hv	Inventor	3	of 6
LACCUICU	v	IMICHIOL	~	UI U

Signature:

Reed Alan Hancock

Executed by Inventor 4 of 6				
Signature:	Date:			
Eiji Ogura				

Page 5 of 7

Executed by Invent	tor 5 of 6
Signature: <u>Languago Tsuraza</u> Kazuhiro Tsuruta	Date: May 28, 2009
Kazuhiro Tsuruta	Pate /

Executed by Inventor 6 of 6				
Signature:	Date:			
Keisuke Tanaka				

Page 7 of 7

ASSIGNMENT

Whereas, the undersigned Inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") in:

Title of the Invention: APPARATUS AND METHOD TO ADJUST THE ORIENTATION OF A READ HEAD TO CORRECT FOR DYNAMIC SKEW

and further identified by the IBM Docket Number provided above in the header of this Assignment, for which an application for a United States Patent was executed concurrently herewith or was filed having:

Serial Number: __12/482,312 (insert series code and serial number here if/when available)

Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned Inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned Inventor ("ASSIGNOR") hereby sells, assigns, and otherwise transfers to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned Inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned Inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Each undersigned Inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned Inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent application Serial Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

Page 1 of 7

	IBM DOCKET NUMBER: TUC920080119USI
·	Executed by Inventor 1 of 6
Signature:	Date:
Stever	Ross Bentley

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Executed by Inventor 2 of 6 Signature: ______ Date: ______ Date: ______

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IBM DOCKET NUMBER: TUC920080119US
Executed by Inventor 3 of 6
Date:

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REEL: 024731 FRAME: 0121

	IBM DOCKET NUMBER: TUC926		
		Executed by Inventor 5 of 6	
Signature:		Date:	
	Kazubiro Tsuruta		

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		IE	BM DOCKET NUMBER: TUC920080119US1
Executed by Inventor 6 of 6			
Signature:	Kewake	Joseph	Date: Hey 28, 2019

Keisuke Tanaka

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RECORDED: 07/23/2010 REEL: 024731 FRAME: 0123