503537314 10/23/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3583941

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ARTEM A. OKS	02/25/2010
HANUMANTHA R. KODAVALLA	03/03/2010
SRIKUMAR RANGARAJAN	02/25/2010
MICHAEL JAMES ZWILLING	02/25/2010
PER-AKE LARSON	02/23/2010
JOSE A. BLAKELEY	02/25/2010

RECEIVING PARTY DATA

Name:	MICROSOFT CORPORATION	
Street Address:	ONE MICROSOFT WAY	
City:	REMOND	
State/Country:	WASHINGTON	
Postal Code: 98052		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14921239

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.

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Correspondent Name: MICROSOFT CORPORATION

Address Line 1: ONE MICROSOFT WAY

Address Line 4: REDMOND, WASHINGTON 98052

NAME OF SUBMITTER: JEFFREY R. SADLOWSKI	
SIGNATURE:	/Jeffrey R. Sadlowski/
DATE SIGNED:	10/23/2015

Total Attachments: 12

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PATENT 503537314 REEL: 036866 FRAME: 0654

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PATENT REEL: 036866 FRAME: 0655

MS Docket No.: 328751.01

I/WE, Artem A. Oks, Per-Ake Larson, Srikumar Rangarajan, Michael James Zwilling, Jose A. Blakeley, and Hanumah Kodavalla ("ASSIGNOR"), have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "COLUMNAR STORAGE OF A DATABASE INDEX" ("APPLICATION"), which:

	will be filed without this executed PATENT ASSIGNMENT. ASSIGNOR
_	hereby authorizes, and requests, ASSIGNEE'S legal representatives, of
	the Law and Corporate Affairs Department, Microsoft Corporation, One
	Microsoft Way, Redmond, Washington 98052, who are associated with
	customer number 69316, to insert here in parenthesis (Application No.
	, filed) this APPLICATION's Application No. and
	filing date, when known;
X	was filed on 03/08/2010 and was given Application No. 12/719015
	is filed concurrently herewith;

Microsoft Corporation, a Washington Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom, such as continuing applications, in and for the United States, its territories, and all foreign countries ("APPLICATION DERIVATIVES"));

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

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lla	2/25/10
Inventor's Signature	Date "
Artem A. Oks Printed Name in English	Printed Name in Native Language (if

PATENT ASSIGNMENT MS Docket No.: 328751.01

	other than English)	
Inventor's Signature	Date	
Per-Ake Larson		
Printed Name in English	Printed Name in Native Language (if other than English)	
Inventor's Signature	 Date	
Srikumar Rangarajan		
Printed Name in English	Printed Name in Native Language (if other than English)	
Inventor's Signature	 Date	
Michael James Zwilling		
Printed Name in English	Printed Name in Native Language (if	

Inventor's Signature

Jose A. Blakeley
Printed Name in Native Language (if other than English)

Adams A. Alderalla, March 3rd 2010
Inventor's Signature

Date

Hanumantha R Kodavalla

Printed Name in English

MS Docket No.: 328751.01

Printed Name in Native Language (if

PATENT ASSIGNMENT MS Docket No.: 328751.01

	TATENT ASSIGNMENT	MIS DOCKET NO
I/WE, Artem A. Oks, Zwilling, Jose A. Blakeley, and matter ("INVENTION") disclo "COLUMNAR STORAGE OF A D	Hanumah Kodavalla ("ASSIC sed and/or claimed in a	patent application entitled
hereby author the Law and C Microsoft Way customer num , fi filing date, wh	rizes, and requests, ASSIGN Corporate Affairs Departmen r, Redmond, Washington 98 ober 69316, to insert here in led) this APPLIC	NT ASSIGNMENT. ASSIGNOR IEE'S legal representatives, of t, Microsoft Corporation, One 052, who are associated with a parenthesis (Application No. ATION's Application No. and oplication No. 12/719015
successors and assigns ("ASS entire and exclusive rights, ti (and all other applications applications, in and for the ("APPLICATION DERIVATIVES")) For good and valua acknowledged by the ASSIGNEE, the entire and the APPLICATION (and APPLICATION)	IGNEE"), is entitled to, and itle and interest in the INVE and patents derived their United States, its territories; ble consideration, the resonant of the ASSIGNOR hereby sexclusive rights, title and in ATION DERIVATIVES); xecute all instruments and the APPLICATION (and APPLICATION) and the derived therefrom, and	ention and the APPLICATION refrom, such as continuing es, and all foreign countries eceipt of which is hereby ells, assigns and transfers to interest in the INVENTION and documents required for the PLICATION DERIVATIVES), for for the purpose of protecting
Inventor's Signature	Date	
Artem A. Oks		

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Printed Name in English

<u>P</u> A	ATENT ASSIGNMENT	MS Docket No.: 328
	other than E	nglish)
nventor's Signature	Date	
Per-Ake Larson		115
Printed Name in English	Printed Nan other than I	ne in Native Language (if
Mh_ Inventor's Signature		25/20/0.
Srikumar Rangarajan		
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Michael Fred		5/2010
Michael James Zwilling	Printed Na	me in Native Language (if
Printed Name in English	Tillizo III	

MS Docket No.: 328751.01

Inventor's Signature	Date
Jose A. Blakeley	
Printed Name in English	Printed Name in Native Language (if other than English)
	-
Inventor's Signature	Date
Hanumah Kodavalla	
Printed Name in English	Printed Name in Native Language (if

	PATENT ASSIGNMENT	MS Docket No.:
Zwilling, Jose A. Blakeley, and	Hanumah Kodavalla ("ASSIC sed and/or claimed in a	Rangarajan, Michael James GNOR"), have invented subject patent application entitled FION"), which:
hereby author the Law and C Microsoft Way customer num 	rizes, and requests, ASSIGN Corporate Affairs Departmen r, Redmond, Washington 98 nber 69316, to insert here in led) this APPLIC	ENT ASSIGNMENT. ASSIGNOR IEE'S legal representatives, of it, Microsoft Corporation, One 2052, who are associated with in parenthesis (Application No. CATION's Application No. and its polication No. (22/719015);
successors and assigns ("ASS entire and exclusive rights, to and all other applications applications, in and for the ("APPLICATION DERIVATIVES"); For good and valua acknowledged by the ASSIGN the ASSIGNEE, the entire and the APPLICATION (and APPLICATION agrees to emaking and prosecution of	IGNEE"), is entitled to, and itle and interest in the INVI and patents derived the United States, its territorials; able consideration, the record or its exclusive rights, title and its ATION DERIVATIVES); execute all instruments and the APPLICATION (and AP	n, on behalf of itself and its is desirous of acquiring, the ENTION and the APPLICATION refrom, such as continuing es, and all foreign countries eceipt of which is hereby sells, assigns and transfers to nterest in the INVENTION and I documents required for the PLICATION DERIVATIVES), for
litigation regarding letters parand perfecting title to the APP		for the purpose of protecting N DERIVATIVES).
 Inventor's Signature	Date	

Page 1 of 3

Artem A. Oks

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MS Docket No.: 328751.01

	other than English)
M° Lu	2/23/2010
Inventor's Signature	Date
Per-Ake Larson	
Printed Name in English	Printed Name in Native Language (if other than English)
Inventor's Signature	Date
Srikumar Rangarajan	
Printed Name in English	Printed Name in Native Language (if other than English)
·	
Inventor's Signature	Date
Michael James Zwilling	
Printed Name in English	Printed Name in Native Language (if other than English)

Inventor's Signature

Printed Name in English

Jose A. Blakeley

	-
Date	
Printed Name in Native Langu	ago (if
	age (II
other than English)	_

Inventor's Signature

Hanumah Kodavalla

Printed Name in English

Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT MS Docket No.: 328751.01

	TATEIT ASSIGNMENT	M3 DOCKET NO
	Hanumah Kodavalla ("ASSIC sed and/or claimed in a	• • • • • • • • • • • • • • • • • • • •
hereby author the Law and C Microsoft Way customer num , fi filing date, wh X was filed on _	rizes, and requests, ASSIGN Corporate Affairs Departmen r, Redmond, Washington 98 aber 69316, to insert here in led) this APPLIC	ENT ASSIGNMENT. ASSIGNOR IEE'S legal representatives, of it, Microsoft Corporation, One 052, who are associated with a parenthesis (Application No. ATION's Application No. and opplication No. 12/719015
successors and assigns ("ASS entire and exclusive rights, ti (and all other applications applications, in and for the ("APPLICATION DERIVATIVES")) For good and valua acknowledged by the ASSIGNEE, the entire and the APPLICATION (and APPLICATION agrees to entire and exception of the ASSIGNOR agrees to entire and entire and the APPLICATION (and APPLICATION)	IGNEE"), is entitled to, and itle and interest in the INVE and patents derived the United States, its territories; ble consideration, the reOR, the ASSIGNOR hereby sexclusive rights, title and in ATION DERIVATIVES); xecute all instruments and	ENTION and the APPLICATION refrom, such as continuing es, and all foreign countries eceipt of which is hereby sells, assigns and transfers to interest in the INVENTION and documents required for the
making and prosecution of litigation regarding letters pat and perfecting title to the APP	ent derived therefrom, and	for the purpose of protecting
Inventor's Signature	Date	
Artem A. Oks Printed Name in English	 Printed Nam	ue in Native Language (if

MS Docket No.: ____328751.01 PATENT ASSIGNMENT other than English) Inventor's Signature Date Per-Ake Larson Printed Name in English Printed Name in Native Language (if other than English) Inventor's Signature Date Srikumar Rangarajan Printed Name in English Printed Name in Native Language (if other than English) Inventor's Signature Date

Page 2 of 3

Michael James Zwilling
Printed Name in English

Printed Name in Native Language (if

MS Docket No.: 328751.01

Jose' a. Blakeley Inventor's Signature	2/25/2010 Date
Jose A. Blakeley	José A. Blakeley Printed Name in Native Language (if
Printed Name in English	Printed Name in Native Language (if other than English)
	·
Inventor's Signature	Date
Hanumah Kodavalla	
TRIBUTION ROGAVANA	

RECORDED: 10/23/2015