## 505440426 04/23/2019

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5487227

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY D	ΑΤΑ		
		Name	Execution Date
MIKO ARNAB SAKHYA	SINGHA BO	DSE	04/02/2012
SIMON CLARKE			03/30/2012
DAVID CHARLES OLIVER			03/30/2012
MALGORZATA ANNA MALACZEK			03/30/2012
RECEIVING PARTY DA	TA		
Name:	MICROSOFT CORPORATION		
Street Address:	ONE MICROSOFT WAY		
City:	REDMOND		
State/Country:	WASHING	TON	
Postal Code:	98052		
PROPERTY NUMBERS Total: 1 Property Type		Number	7
Property Type		Number	
Application Number:	162	258123	_
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PATENT REEL: 048967 FRAME: 0712

## RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 334986-US-CNT (1777.248US2)	Patent and Trademark Office				
To the Director of the U.S. Patent and Trademark Office: H	Please record the attached original documents or copy thereof.				
<ol> <li>Name of conveying party(ies):</li> <li>Miko Arnab Sakhya Singha Bose, Simon Clarke, David Charles Oliver, Malgorzata Anna Malaczek</li> <li>Additional name(s) of conveying party(ies) attached?</li> <li>[ ]Yes [X]No</li> <li>Nature of conveyance:</li> <li>[X] Assignment [ ] Merger</li> <li>[ ] Security Agreement [ ] Change of Name</li> </ol>	<ul> <li>Please record the attached original documents or copy thereof.</li> <li>2. Name and address of receiving party(ies):</li> <li>Name: Microsoft Corporation</li> <li>Street Address: One Microsoft Way</li> <li>City: <u>Redmond</u> State: <u>WA</u> Zip: <u>98052</u></li> <li>Country: <u>United States of America</u></li> <li>Additional name(s) &amp; address(es) attached? []Yes [X]No</li> </ul>				
[ ] Other Execution Date: <u>April 2, 2012, March 30, 2012, March 30, 2012, March 30, 2012</u>					
<ul><li>4. Application number(s) or patent number(s):</li><li>If this document is being filed together with a new applicat</li></ul>	ion, the execution date of the application is:				
<ul><li>A. Patent Application No.(s)</li><li>Serial No. 16/258,123</li><li>Additional numbers attached? [ ]Yes [X]No</li></ul>	B. Patent No.(s)				
	6. Total number of applications and patents involved: $1$				
5. Name and address of party to whom correspondence concerning document should be mailed:	7. Total fee (37 CFR 3.41): $\frac{0.00}{0.00}$				
Name: Joshua E. Garfield Address: Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 Minneapolis, Minnesota 55402	<ul> <li>[]Enclosed</li> <li>[]Authorized to be charged to deposit account 19- 0743</li> <li>8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743</li> </ul>				
DO NOT USE THIS SPACE					
9. Statement and signature. To the best of my knowledge and belief, the foregoing info of the original document.	rmation is true and correct and any attached copy is a true copy				
Joshua E. Garfield/Reg. No. 58,416 Name of Person Signing	/Joshua E. Garfield/       April 23, 2019         Signature       Date         Cotal number of pages including cover sheet: 5				
Mail documents to be recorded with required cover sheet in Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450	nformation to:				

I/WE, Miko Arnab Sakhya Singha Bose, Simon Clarke, David Charles Oliver, and Malgorzata Anna Malaczek ("ASSIGNOR"), have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "Cache Management" ("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. 13/439873, filed 04/05/2012) this APPLICATION's Application No. and filing date, when known;

 $\Box$  was filed on \_\_\_\_\_\_ and was given Application No. \_\_\_\_\_;

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).

Amer base	04/02/2012
Inventor's Signature	Date
Miko Arnab Sakhya Singha Bose	
Printed Name in English	Printed Name in Native Language (if other than English)
Inventor's Signature	Date
Simon Clarke	
Printed Name in English	Printed Name in Native Language (if other than English)
Inventor's Signature	Date
David Charles Oliver	
Printed Name in English	Printed Name in Native Language (if other than English)
Inventor's Signature	Date
	Duit
Malgorzata Anna Malaczek	
Printed Name in English	Printed Name in Native Language (if other than English)

I/WE, Miko Arnab Sakhya Singha Bose, Simon Clarke, David Charles Oliver, and Malgorzata Anna Malaczek ("ASSIGNOR"), have invented subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "Cache Management" ("APPLICATION"), which:

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Inventor's Signature	Date
Miko Arnab Sakhya Singha Bose	
Printed Name in English	Printed Name in Native Language (if other than English)

Inventor's Signature

Simon Clarke Printed Name in English

30/2012

Date

SINON CLARKE

Printed Name in Native Language (if other than English)

Inventor's Signature

David Charles Oliver Printed Name in English

3/30/2012 Date David Charles Oliver

Printed Name in Native Language (if other than English)

hards

Inventor's Signature

3/30/2012

Date

Malgorzata Anna Malaczek Printed Name in English

MAŁGORZATA MAŁACZEK

Printed Name in Native Language (if other than English)