

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																				
NATURE OF CONVEYANCE:	ASSIGNMENT																				
CONVEYING PARTY DATA																					
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Adam B. Glass</td> <td>05/15/2013</td> </tr> <tr> <td>Austin Nicholas Donnelly</td> <td>05/08/2013</td> </tr> <tr> <td>Sergery Legtchenko</td> <td>05/08/2013</td> </tr> <tr> <td>Shobana M. Balakrishnan</td> <td>05/16/2013</td> </tr> <tr> <td>David T. Harper III</td> <td>05/08/2013</td> </tr> <tr> <td>Antony Ian Taylor Rowstron</td> <td>05/13/2013</td> </tr> <tr> <td>Eric C. Peterson</td> <td>05/09/2013</td> </tr> <tr> <td>David Alex Butler</td> <td>05/13/2013</td> </tr> <tr> <td>Stephen Heil</td> <td>05/13/2013</td> </tr> </tbody> </table>		Name	Execution Date	Adam B. Glass	05/15/2013	Austin Nicholas Donnelly	05/08/2013	Sergery Legtchenko	05/08/2013	Shobana M. Balakrishnan	05/16/2013	David T. Harper III	05/08/2013	Antony Ian Taylor Rowstron	05/13/2013	Eric C. Peterson	05/09/2013	David Alex Butler	05/13/2013	Stephen Heil	05/13/2013
Name	Execution Date																				
Adam B. Glass	05/15/2013																				
Austin Nicholas Donnelly	05/08/2013																				
Sergery Legtchenko	05/08/2013																				
Shobana M. Balakrishnan	05/16/2013																				
David T. Harper III	05/08/2013																				
Antony Ian Taylor Rowstron	05/13/2013																				
Eric C. Peterson	05/09/2013																				
David Alex Butler	05/13/2013																				
Stephen Heil	05/13/2013																				
RECEIVING PARTY DATA																					
<table border="1"> <tr> <td>Name:</td> <td>Microsoft Corporation</td> </tr> <tr> <td>Street Address:</td> <td>One Microsoft Way</td> </tr> <tr> <td>City:</td> <td>Redmond</td> </tr> <tr> <td>State/Country:</td> <td>WASHINGTON</td> </tr> <tr> <td>Postal Code:</td> <td>98052</td> </tr> </table>		Name:	Microsoft Corporation	Street Address:	One Microsoft Way	City:	Redmond	State/Country:	WASHINGTON	Postal Code:	98052										
Name:	Microsoft Corporation																				
Street Address:	One Microsoft Way																				
City:	Redmond																				
State/Country:	WASHINGTON																				
Postal Code:	98052																				
PROPERTY NUMBERS Total: 1																					
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13899497</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13899497																
Property Type	Number																				
Application Number:	13899497																				
CORRESPONDENCE DATA																					
Fax Number: <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 425-882-8080 Email: mkey@zetelaw.com Correspondent Name: MICROSOFT CORPORATION Address Line 1: ONE MICROSOFT WAY Address Line 4: REDMOND, WASHINGTON 98052																					

OP \$40.00 13899497

ATTORNEY DOCKET NUMBER:	338526.01
NAME OF SUBMITTER:	MacLane C. Key
Signature:	/MacLane C. Key/
Date:	05/21/2013
<p>Total Attachments: 18</p> <p>source=338526_01_Assignment_Balakrishnan#page1.tif</p> <p>source=338526_01_Assignment_Balakrishnan#page2.tif</p> <p>source=338526_01_Assignment_Butler#page1.tif</p> <p>source=338526_01_Assignment_Butler#page2.tif</p> <p>source=338526_01_Assignment_Donnely#page1.tif</p> <p>source=338526_01_Assignment_Donnely#page2.tif</p> <p>source=338526_01_Assignment_Glass#page1.tif</p> <p>source=338526_01_Assignment_Glass#page2.tif</p> <p>source=338526_01_Assignment_Harper#page1.tif</p> <p>source=338526_01_Assignment_Harper#page2.tif</p> <p>source=338526_01_Assignment_Heil#page1.tif</p> <p>source=338526_01_Assignment_Heil#page2.tif</p> <p>source=338526_01_Assignment_Legtchenko#page1.tif</p> <p>source=338526_01_Assignment_Legtchenko#page2.tif</p> <p>source=338526_01_Assignment_Peterson#page1.tif</p> <p>source=338526_01_Assignment_Peterson#page2.tif</p> <p>source=338526_01_Assignment_Rowstron#page1.tif</p> <p>source=338526_01_Assignment_Rowstron#page2.tif</p>	

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, ASSIGNOR's 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).

<table border="1"> <tr> <td>Inventor's Signature <i>Shobana Balakrishnan</i></td> <td>Date 05-14-2013</td> </tr> <tr> <td>Printed Name in English Shobana M. BALAKRISHNAN</td> <td>Printed Name in Native Language (If other than English)</td> </tr> </table>		Inventor's Signature <i>Shobana Balakrishnan</i>	Date 05-14-2013	Printed Name in English Shobana M. BALAKRISHNAN	Printed Name in Native Language (If other than English)
Inventor's Signature <i>Shobana Balakrishnan</i>	Date 05-14-2013				
Printed Name in English Shobana M. BALAKRISHNAN	Printed Name in Native Language (If other than English)				

PATENT ASSIGNMENT

I David Alex BUTLER ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LOW COST STORAGE FOR RARELY READ DATA" ("APPLICATION"),

which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on 5-21-13 and given Application No. 13/899,497 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

☐ was filed on _____ and was given Application No
_____ by the following Office


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"));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

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, ASSIGNOR's 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).

Inventor's Signature 	Date 13 th May 2013
Printed Name in English David Alex BUTLER	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

I Austin Nicholas DONNELLY ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LOW COST STORAGE FOR RARELY READ DATA" ("APPLICATION"), which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on 5-21-13 and given Application No. 13/899,497 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

☐ was filed on _____ and was given Application No. _____ by the following Office "_____";


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"));

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known:

Application No.	Filing Date	Office

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, ASSIGNOR's 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).

Inventor's Signature 	Date 8 / May / 2013
Printed Name in English Austin Nicholas DONNELLY	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

I Adam B. CLASS ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LOW COST STORAGE FOR RARELY READ DATA" ("APPLICATION"), which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on 5-21-13 and given Application No. 13/899,497 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

☐ was filed on _____ and was given Application No. _____ by the following Office _____

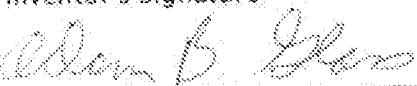
Microsoft Corporation, a Washington Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom,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

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known:

Application No.	Filing Date	Office

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, ASSIGNOR's 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).

Inventor's Signature 	Date 5/15/13
Printed Name in English Adam B. GLASS	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

I David. T. HARPER III ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LOW COST STORAGE FOR RARELY READ DATA" ("APPLICATION"),

which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on 5-21-13 and given Application No. 13/899,497 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

☐ was filed on _____ and was given Application No
_____ by the following Office
"_____".

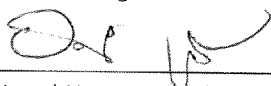
Microsoft Corporation, a Washington Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom,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

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

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, ASSIGNOR's 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).

Inventor's Signature 	Date 5/8/13
Printed Name in English David. T. HARPER III	Printed Name in Native Language (if other than English)

PATENT ASSIGNMENT

I Stephen HEIL ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LOW COST STORAGE FOR RARELY READ DATA" ("APPLICATION"), which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on 5-21-13 and given Application No. 13/899,497 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

☐ was filed on _____ and was given Application No. _____ by the following Office "_____";

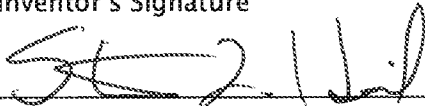
Microsoft Corporation, a Washington Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom,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

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known:

Application No.	Filing Date	Office

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, ASSIGNOR's 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).

Inventor's Signature 	Date May 13, 2013
Printed Name in English Stephen HEIL	Printed Name in Native Language (If other than English)

PATENT ASSIGNMENT

I Sergey LEGTCHENKO ("ASSIGNOR") am the original inventor or an original joint inventor of subject matter ("INVENTION") disclosed and/or claimed in a patent application entitled "LOW COST STORAGE FOR RARELY READ DATA" ("APPLICATION"),

which:

☒ will be filed. ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S legal representatives, of the Law and Corporate Affairs Department, Microsoft Corporation, One Microsoft Way, Redmond, Washington 98052 (ASSIGNEE'S LEGAL REPRESENTATIVES), to insert here in parentheses (filed on 5-21-13 and given Application No. 13/899,497 by the following Office USPTO) this APPLICATION's Application No., filing date, and Office, when known;

☐ was filed on _____ and was given Application No
_____ by the following Office
" _____ ".

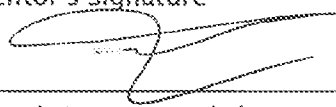
Microsoft Corporation, a Washington Corporation, on behalf of itself and its successors and assigns ("ASSIGNEE"), is entitled to, and is desirous of acquiring, the entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and all other applications and patents derived therefrom,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

ASSIGNOR hereby authorizes, and requests, ASSIGNEE'S LEGAL REPRESENTATIVES to insert the Application No., filing date, and Office into the following table for any APPLICATION DERIVATIVES after they are known;

Application No.	Filing Date	Office

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, ASSIGNOR's 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).

Inventor's Signature 	Date 8 th May 2013
Printed Name in English Sergey LECTCHENKO	Printed Name in Native Language (if other than English)

СЕРГЕЙ ЛЕГЧЕНКО

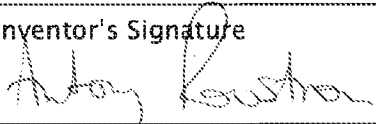
For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

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).

Inventor's Signature 		Date 5-9-2013
Printed Name in English Eric C. PETERSON		Printed Name in Native Language (if other than English)

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, ASSIGNOR's 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).

Inventor's Signature 	Date 13 / 5 / 2013
Printed Name in English Antony Ian Taylor ROWSTRON	Printed Name in Native Language (if other than English)