PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Danny B. Lange	12/10/2012
Hung-Chih Yang	12/16/2012
Xiong Zhang	12/07/2012
Graham A. Wheeler	12/10/2012
Jason J. Joyce	12/04/2012
David M. Moore	12/03/2012
Bhalchandra Pandit	01/01/2013

RECEIVING PARTY DATA

Name:	Microsoft Corporation	
Street Address:	One Microsoft Way	
City:	Redmond	
State/Country:	WASHINGTON	
Postal Code:	98052	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13733009

CORRESPONDENCE DATA

502188058

Fax Number: 6176468646

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

Phone: 617-646-8000

Email: sappleton@wolfgreenfield.com

Correspondent Name: Edmund J. Walsh

Address Line 1: Wolf, Greenfield & Sacks, P.C.

Address Line 2: 600 Atlantic Avenue

Address Line 4: Boston, MASSACHUSETTS 02210

ATTORNEY DOCKET NUMBER: M1103.71026US00

REEL: 029592 FRAME: 0454

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NAME OF SUBMITTER: Stacey L. Appleton					
Total Attachments: 11	Total Attachments: 11				
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PATENT REEL: 029592 FRAME: 0455

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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);

Inventor's signature	12/10/2012 Date
U Danny B. Lange	
Printed Name in English	Printed Name in Native Language
·	(if other than English)

PATENT ASSIGNMENT

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inventor of s	subject matter (l inventor or an original joint and/or claimed in a patent "("APPLICATION"), which:
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		and was given by the following Office ";	
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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

De lo, rolv

Date

Hung-Chih Yang

Printed Name in English

Printed Name in Native Language
(if other than English)

PATENT ASSIGNMENT

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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);

Hull	12/07/2012
Inventor's Signature	Date
Xiong Zhang	
Printed Name in English	Printed Name in Native Language
and the state of t	(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);

	arend (1995)
s when.	12/10/2012
Inventor's Signature	Date
Graham A. Wheeler	
Printed Name in English	Printed Name in Native Language
	(if other than English)

		PATENT ASSIGNMENT	
inventor of	subject matter ("I		eventor or an original joint and/or claimed in a patent ("APPLICATION"), which:
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successors a entire and a (and all ot applications	and assigns ("ASSIC exclusive rights, titl ther applications a	iNEE"), is entitled to, and e and interest in the INVE ind patents derived the	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
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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);

Inventor's Signature	12/04/2012 Date	
Jason J. Joyce		
Printed Name in English	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);

Dayn, Mor	12/3/12
Inventor's Signature	Date
David M. Moore	
Printed Name in English	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).

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Marti	V1/13
Inventor's Signature	Date
Bhalchandra Pandit	
Printed Name in English	Printed Name in Native Language (if other than English)

Page 2 of 22899722.1