

## PATENT ASSIGNMENT

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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>Charles N. Boyd</td><td>02/27/2001</td></tr><tr><td>Michael A. Toelle</td><td>02/27/2001</td></tr></tbody></table>	Name	Execution Date	Charles N. Boyd	02/27/2001	Michael A. Toelle	02/27/2001	
Name	Execution Date						
Charles N. Boyd	02/27/2001						
Michael A. Toelle	02/27/2001						
RECEIVING PARTY DATA							
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>11426485</td></tr></tbody></table>	Property Type	Number	Application Number:	11426485			
Property Type	Number						
Application Number:	11426485						
CORRESPONDENCE DATA							
Fax Number:	(216)696-8731						
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>							
Phone:	2166968730						
Email:	jsexton@thepatentattorneys.com						
Correspondent Name:	Amin & Turocy, LLP						
Address Line 1:	1900 East 9th Street						
Address Line 2:	24th Floor, National City Center						
Address Line 4:	Cleveland, OHIO 44114						
ATTORNEY DOCKET NUMBER:	MS147837.07/MSFTP1456US						
NAME OF SUBMITTER:	Himanshu S. Amin						
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PATENT

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REEL: 017844 FRAME: 0944



**ASSIGNMENT**

WHEREAS, we, **Charles N. Boyd and Michael A. Toelle** (hereinafter referred to as ASSIGNORS), having post office addresses of **22726 N.E. 150<sup>th</sup> St., Woodinville, WA 98072 and 3809 130th Ave N.E., Bellevue, WA 98005**, respectively, are the joint inventors of an invention entitled "**API Communications for Vertex and Pixel Shaders**," as described and claimed in the specification forming part of an application for United States letters patent executed herewith:

WHEREAS, **MICROSOFT CORPORATION** (hereinafter referred to as ASSIGNEE), a corporation of the State of Washington having a place of business at One Microsoft Way, Redmond, WA 98052, is desirous of acquiring the entire right, title and interest in and to the invention and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign and transfer unto said ASSIGNEE, the entire right, title and interest in and to said invention, said application and any and all letters patent which may be granted for said invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all divisions, reissues and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNORS had this assignment, transfer and sale not been made. ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNORS agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purposes of protecting title to said invention or letters patent therefor.



Charles N. Boyd (L.S.)  
Charles N. Boyd

STATE OF WASHINGTON:}  
                              }: SS  
COUNTY OF KING:       }

On this 27 day of February, year of 2001, before me personally came the above named **Charles N. Boyd** to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth

[Signature]  
Notary Public

Michael A. Toelle (L.S.)  
Michael A. Toelle

STATE OF WASHINGTON:}  
                              }: SS  
COUNTY OF KING:       }

On this 27 day of February, year of 2001, before me personally came the above named **Michael A. Toelle** to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth

[Signature]  
Notary Public