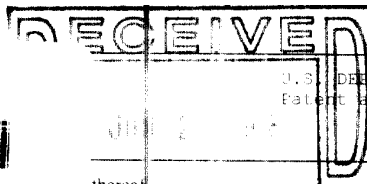


07-10-1998



U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office



100760986

To the Honorable Commissioner of Patents and Trademark

1. Name of conveying party(ies):

VPL Newco, Inc., a California corporation

Additional name(s) of conveying party(ies) attached?  Yes  No

6-25-98

2. Name and address of receiving party(ies):

Name: Sun Microsystems, Inc.

Internal Address:

Street Address: 901 San Antonio Road

City: Palo Alto State: CA ZIP: 94303

Additional name(s) & address(es) attached?  Yes  No

3. Nature of Conveyance:

- Assignment
- Merger
- Security Agreement
- Change of Name
- Other

Execution Date: October 7, 1997

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of this application is:

A. Patent Application No.(s) 08/165,046 Filed 10/6/93

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: B. Noël Kivlin

Internal Address: Conley, Rose & Tayon, P.C.

Street Address: P.O. Box 398

City: Austin State: TX ZIP: 78767-0398

6. Total number of applications and patents identified in this cover sheet: 1

7. Total fee (37 CFR 3.41): \$ 40.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number:  
(Attach a duplicate copy of this page if paying by deposit account)  
03-2769

07/09/1998 DMBUYER: 00000133 08165046

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9. Statement and Signature.

To the best of my knowledge and belief, the foregoing information is true and correct and my attached copy is a true copy of the original document.

B. Noël Kivlin  
Name of Person Signing  
Reg. No. 33,929

Signature

Date

6-22-98

Total number of pages 7

## PATENT ASSIGNMENT

THIS AGREEMENT, to be effective as of October 7, 1997, is by and between VPL Newco, Inc. ("*Company*"), a California corporation, and Sun Microsystems, Inc. ("*Sun*"), a Delaware corporation having a place of business at 2550 Garcia Avenue, Mountain View, California 94043-1100.

### WITNESSETH:

WHEREAS, Company is the owner of the entire right, title, and interest in and to the patents and applications for patent listed in Exhibits A and B attached hereto (the "*Patent Rights*"); and

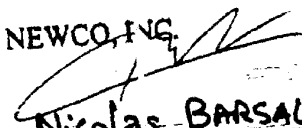
WHEREAS, Sun desires to obtain, and Company is willing to assign to Sun, the Patent Rights;

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereby agree as follows:

Company does hereby sell, assign, transfer, and set over unto Sun the entire right, title, and interest in, to, and under (i) the patents and patent applications listed in Exhibits A and B attached hereto and all other patent patents and patent applications owned by Company which are related thereto, (ii) all patents which may issue from such applications, (iii) the inventions claimed in such patents and applications, and (iv) all claims for damages by reason of past infringement of any such patents or patent applications by third parties with the right to sue for and collect the same.

IN WITNESS WHEREOF, Company has caused its duly authorized  
representative to execute this Assignment.

VPL NEWCO, INC.

By:   
Nicolas BARSALOU

Title: President

Date: October 7, 1997

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**EXHIBIT A**  
**United States Patents and Patent Applications**

1. United States Patent No. 4,542,291, entitled "Optical Flex Sensor"
2. United States Patent No. 4,937,444, entitled "Optical Flex Sensor"
3. United States Patent No. 4,988,981, entitled "Computer Data Entry and Manipulation Apparatus"
4. United States Patent No. 5,097,252, entitled "Motion Sensor Which Produces an Asymmetrical Signal in Response to Symmetrical Movement"
5. United States Patent No. 5,521,373, entitled "Position Tracking System Using a Radiation Director Which Directs Radiation from a Radiation Source onto a Radiation Sensor, Depending on the Position of the Radiation Source"
6. United States Patent No. 5,546,530, entitled "Method and Apparatus for Rendering Graphical Images Using Parallel Processing"
7. United States Patent No. 5,559,995, entitled "Method and Apparatus for Creating a Wireframe and Polygon Virtual World"
8. United States Patent No. 5,587,936, entitled "Method and Apparatus for Creating Sounds in a Virtual World by Simulating Sound in Specific Locations in Space and Generating Sounds as Touch Feedback"
9. United States Patent No. 5,588,104, entitled "Method and Apparatus for Creating a Wireframe and Polygon Virtual World"
10. United States Patent No. 5,588,139, entitled "Virtual Reality Network"
11. United States Patent Application Serial No. 08/128,112, filed 09/29/93, entitled "Method and Apparatus for Displaying a Virtual World"
12. United States Patent Application Serial No. 08/165,046, filed 11/30/90, entitled "Absolute Position Tracker"
13. United States Patent Application Serial No. 08/319,026, filed 11/30/90, entitled "Low Cost Virtual Reality System"

14. United States Patent Application Serial No. 08/335,302, Filed 03/24/87, entitled "Tactile Feedback Mechanism for a Data Processing System" [may be abandoned]
15. United States Patent Application Serial No. 08/351,741, Filed 07/03/91, entitled "Virtual Image Display Device"
16. United States Patent Application Serial No. 08/354,018, Filed 11/30/90, entitled "Radio Frequency Tracing System"
17. United States Patent Application Serial No. 08/413,940, Filed 11/30/90, entitled "Improved Method and Apparatus for Creating Virtual Worlds"
18. United States Patent Application Serial No. 08/480,236, Filed 03/17/87, entitled "Computer Data Entry and Manipulation Apparatus" [may be abandoned]

**EXHIBIT B**  
**Foreign (Non-United States) Patents and Patent Applications**

1. European Application No. 88-903612.5, filed 03/23/88, entitled "Motion Sensor Which Produces an Asymmetrical Signal in Response to Symmetrical Movement" (related to United States Patent No. 5,097,232) ✓
2. Canadian Application No. 2,112,682, filed 07/01/92, entitled "Virtual Image Display Device" (related to United States Patent Application Serial No. 08/351,741) ✓
3. European Application No. 92-915131.4, filed 07/01/92, entitled "Virtual Image Display Device" (related to United States Patent Application Serial No. 08/351,741) ✓
4. Japanese Application No. 502320/93, filed 07/01/92, entitled "Virtual Image Display Device" (related to United States Patent Application Serial No. 08/351,741) ✓
5. European Application No. 0 211 984 B2, filed 08/19/85, entitled "Computer Data Entry and Manipulation Apparatus" (granted 09/11/96) (related to United States Patent No. 4,988,981) ✓
6. Japanese Application No. 83-183789, filed 08/20/85, entitled "Computer Data Entry and Manipulation Apparatus" (granted 12/20/96) (related to United States Patent No. 4,988,981) ✓
7. European Application No. 92/902327, filed 12/02/91, entitled "Low Cost Virtual Reality System" (related to United States Application Serial No. 8/319,026) ✓
8. European Application No. 92/908839.6, filed 11/29/91, entitled "Method and Apparatus for Rendering Graphical Images Using Parallel Processing" (related to United States Patent No. 5,546,530) ✓
9. European Application No. 92/902710.0, filed 11/29/91, entitled "Improved Method and Apparatus for Creating Virtual World" (related to United States Patent Application Serial No. 08/413,940) ✓
10. Canadian Application No. 2,172,548, filed 09/29/94, entitled "Method and Apparatus for Displaying a Virtual World" (related to United States Patent Application Serial No. 08/128,112) ✓

11. European Application No. 94/929842.6, filed 09/29/94, entitled "Method and Apparatus for Displaying a Virtual World" (related to United States Patent Application Serial No. 08/128,112) ✓
12. Japanese Application No. 510358/95, filed 09/29/94, entitled "Method and Apparatus for Displaying a Virtual World" (related to United States Patent Application Serial No. 08/128,112) ✓
13. Patent Cooperation Treaty (PCT) Application No. PCT/US91/08944, filed 11/29/91, entitled "Improved Method and Apparatus for Creating Virtual World" ✓
14. Patent Cooperation Treaty (PCT) Application No. PCT/US91/08945, filed 11/29/91, entitled "Method and Apparatus for Rendering Graphics Images" ✓
15. Patent Cooperation Treaty (PCT) Application No. PCT/US92/08946, filed 11/29/91, entitled "Absolute Position Tracker" ✓
16. Patent Cooperation Treaty (PCT) Application No. PCT/US91/08947, filed 11/29/91, entitled "Improved Method and Apparatus for Creating Sounds in a Virtual World" ✓
17. Patent Cooperation Treaty (PCT) Application No. PCT/US91/08949, filed 11/29/91, entitled "System for Creating a Virtual World" ✓
18. Patent Cooperation Treaty (PCT) Application No. PCT/US91/09086, filed 12/02/91, entitled "Low Cost Virtual Reality System" ✓
19. Patent Cooperation Treaty (PCT) Application No. PCT/US92/08972, entitled "Virtual Image Display Device" ✓

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