

EXHIBIT 4

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date: Oct. 25, 2002.

Signature: *Brad A. Armstrong* Date: 10-25-02
Brad A. Armstrong

PRELIMINARY AMENDMENT

Re: Patent Application of Brad A. Armstrong
Applicant's Docket No. 30

Serial No.: 09/715,532 Filed: 11/16/2000.

Title: 3D CONTROLLER WITH VIBRATION

Applicant's mailing address: Brad A. Armstrong
P.O. Box 1419
Paradise, CA 95967

Examiner: Michael Moyer
Group Art Unit: 2675

Dear Sir:

REMARKS

This Preliminary Amendment to the above referenced pending
Patent application is being filed prior to the mailing of the
first action on the merits.

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A Terminal Disclaimer was sent to the PTO on 8/8/01 in a Preliminary Amendment to this application. Applicant now understands that the terminal disclaimer has been recorded at the PTO. The terminal disclaimer noted the instant application and my earlier U.S. patent 6,222,525. The submitted terminal disclaimer was submitted in regard to claims 1-38 of the current application which have now been canceled and Applicant believes no terminal disclaimer should be required for the currently pending claims,

The Examiner is respectfully requested to examine the currently pending claims and if the Examiner informs Applicant that the Examiner agrees the terminal disclaimer is not required, then Applicant will promptly submit a Petition to have the terminal disclaimer withdrawn.

Below are:

- A. Amendments to the Specification.
- B. Amendments to the Claims.
- C. Further remarks.

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AMENDMENTS TO THE SPECIFICATION IN MARKED UP VERSION

Amendments to the Specification in marked up version are shown with brackets showing deletion and underlining showing insertion. On 07/15/02 the "CROSS REFERENCE TO RELATED APPLICATIONS AND PATENTS" section on page 1 and 2 of the specification was amended.

To that section amended 07/15/02, please make the following changes:

[CROSS REFERENCE TO RELATED APPLICATIONS AND PATENTS

This application is a continuation-in-part of pending U.S. Non-provisional patent application Serial Number 08/677,378 filed July 5, 1996 of which the positive teachings and disclosures are herein incorporated by reference and the benefits of the filing date claimed. The pending U.S. Application 08/677,378 was filed during the pendency of U.S. application 07/847,619 filed March 5, 1992 and also makes claim to the benefit of the filing date of the application 07/847,619, now U.S. Patent 5,589,828. Also herein incorporated by reference for the positive teachings and disclosures therein is U.S. Disclosure Document Number 381081 filed Nov. 22, 1995 which has been placed in the file of U.S. Application 08/677,378. This application is also a Continuation-in-part of U.S. patent application serial number 07/847,619, filed March 5, 1992, now U.S. Patent 5,589,828, of which the positive teachings and disclosures are herein incorporated by reference. This application is a continuation-in-part of pending U.S. application 09/510,572 filed 02/22/00 as a continuation of U.S. patent application serial number 08/942,450, filed Oct. 1, 1997, now U.S. Patent No. 6,102,802 of which the positive teachings and disclosures are herein incorporated by reference and the benefit of the filing date claimed. This application also is a continuation-in-part of U.S. patent application serial number 08/393,459, filed February 23, 1995, now U.S. Patent 5,565,891, which is a continuation-in-part of U.S. patent application serial number 07/847,619 now U.S.

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Patent 5,589,828. The instant application claims the benefits under 35 U.S.C 120, where permitted, of the filing dates of the above listed patents and or applications including that of U.S. Patent 5,589,828 filed as an application on March 5, 1992.]

CROSS REFERENCE TO RELATED APPLICATIONS AND PATENTS

This application is a continuation of U.S. Patent Application Serial NO. 08/677,378 filed on July 5, 1996, now U.S. Patent 6,222,525.

U.S. Patent No. 6,222,525 is a continuation-in-part of U.S. Patent Application Serial No. 08/393,459 filed on Feb. 23, 1995, now U.S. Patent 5,565,891.

U.S. Patent No. 6,222,525 is also a continuation-in-part of U.S. Patent Application Serial No. 07/847,619 filed on March 5, 1992, now U.S. Patent 5,589,828.

The instant application claims the benefits under 35 U.S.C. 120 of the filing dates of the above listed Patents and or Applications.

The positive teachings and disclosures of U.S. Patents 6,222,525, 5,565,891 and 5,589,828 are herein incorporated by reference. Also herein incorporated by reference for the positive teachings and disclosures therein is U.S. Disclosure Document Number 381081 filed Nov. 22, 1995 which is located in the file of U.S. Patent 6,222,525.

In the last sentence on page 40 carrying over onto page 41 of the specification, the first line thereof on page 41, "346" should be changed to --364--. Marked up version of the change:

Super-structure 338 is the distinctive part of the different two armed rocker-arm types shown in Figures 20-22, of which are a V-slot type 340, an H-slot type 342, and a T-bone type 345 of which there are two rocker-arms being approximately identical but oriented perpendicular to one another and being called 'a' first t-bone 344 and a second t-bone [346] 364 rocker-arm actuators.

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on page 42 of the specification, in the paragraph starting on line 33 and extending through line 33, "346" in line 30 should be changed to --364--. Marked up version of the change:

Figure 26 and 27 show space savings structuring for the area of second platform 322. This space savings may be valuable in tightly constricted areas such as integration of the invention into computer keyboards and hand held remote control devices. The layout of second platform 322 as illustrated in figures 20-22 is shown by a dashed line indicating the original larger perimeter 370 the area of the newer smaller platform 322 shown by solid line 372 and first t-bone rocker-arm [346] 364 has been divided into two separate one-armed type 348 actuators each with its own mount 332, fulcrum 334, sensor actuating arm 336, and super structure 338.

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AMENDMENTS TO THE SPECIFICATION in clean version are presented below for use in the application and patent to issue therefrom: (the page 1, 2 of the specification marked up amendment of above is below in clean version)

CROSS REFERENCE TO RELATED APPLICATIONS AND PATENTS

This application is a continuation of U.S. Patent Application Serial No. 08/677,378 filed on July 5, 1996, now U.S. Patent 6,222,525.

U.S. Patent No. 6,222,525 is a continuation-in-part of U.S. Patent Application Serial No. 08/393,459 filed on Feb. 23, 1995, now U.S. Patent 5,565,891.

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U.S. Patent No. 6,222,525 is also a continuation-in-part of U.S. Patent Application Serial No. 07/847,619 filed on March 5, 1992, now U.S. Patent 5,589,828,

The instant application claims the benefits under 35 U.S.C 120 of the filing dates of the above listed Patents and or Applications.

The positive teachings and disclosures of U.S. Patents 6,222,525, 5,565,891 and 5,589,828 are herein incorporated by reference. Also herein incorporated by reference for the positive teachings and disclosures therein is U.S. Disclosure Document Number 381081 filed Nov. 22, 1995 which is located in the file of U.S. Patent 6,222,525.

In the last sentence on page 40 carrying over onto page 41 of the specification, the first line thereof on page 41, "346" should be changed to --364--. CLEAN version of the change:

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Super-structure 338 is the distinctive part of the different two armed rocker-arm types shown in Figures 20-22, of which are a V-slot type 340, an H-slot type 342, and a T-bone type 345 of which there are two rocker-arms being approximately identical but oriented perpendicular to one another and being called a first t-bone 344 and a second t-bone 364 rocker-arm actuators.

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On page 42 of the specification, in the paragraph starting on line 33 and extending through line 33, "346" in line 30 should be changed to --364--. CLEAN version of the change:

Figure 26 and 27 show space savings structuring for the area of second platform 322. This space saving6 may be valuable in tightly constricted areas such as integration of the invention into computer keyboards and hand held remote control devices. The layout of second platform 322 as illustrated in figure8 20-22 is shown by a dashed line indicating the original larger perimeter 370 the area of the newer smaller platform 322 shown by solid line 372 and first t-bone rocker-arm 364 has been divided: into two separate one-armed type 348 actuators each with its own mount 332, fulcrum 334, sensor actuating arm 336, and super structure 338.

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AMENDMENTS TO THE CLAIMS IN MARKED UP VERSION

To claim 49, please make the follow change:

11.49. (once amended) A 3-D graphics controller according to claim 47 wherein said tactile feedback [means comprises] vibration is provided by a motor and offset weight.

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AMENDMENTS TO THE CLAIMS IN CLEAN VERSION

To claim 49:

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1149.9 (once amended) A 3-D graphics controller according to claim 49 wherein said tactile feedback vibration is provided by a motor and offset weight.

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REMARKS

The above changes to the priority claim in the "CROSS REFERENCE TO RELATED APPLICATIONS AND PATENTS" have been made in order to more accurately describe the priority chain for the instant application.

In the current specification at numerous locations the language "3D" and "three-dimensional" have been used in substitution for "6DOF" and "six degrees of freedom" as originally used in the application issued as patent 6,222,525 from which the current specification is continued. This substitution of language does not constitute new matter, but has been made to allow the reader easier understanding of the subject matter. Any single three-dimensional software object moving, for example in an electronic game, is moving in six degrees of freedom. This "6DOF" and "six degrees of freedom" language is not as commonly used now as when the '525 patent was filed and the same equivalent product or device which was once so called is now commonly called a 3D or three-dimensional controller. The structures, sub-structures and methods taught in the current application offer great advantage in controlling three-dimensional graphics such as the graphics used in, for example, television based electronic games, their controllers, consoles, game software, associated three-dimensional graphics and the like. Specific definitions in the '525 patent set forth for the words having as a root "manipulate", "operate", and "convert" have not been found to be useful in the current application and these specific definitions have not been carried forward in the current application. Not carrying forward these specific definitions results in no material change in scope of the current application and no new matter has been added.

The use of the wording "positive teachings and disclosures" in reference to incorporation by reference into the specification is intended to mean that the useful teachings are brought into the current application, but not the negative limitations, such

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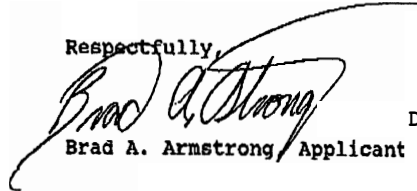
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as limitations on terms commonly created in the prosecution history of the incorporated by reference disclosures, to the detriment of the current specification and claimed Invention.

Please examine my application as amended and find that all claims are allowable. Thank you.

Also, please do not hesitate to telephone me at 530 872 4901 if I may be of any assistance in advancing this application toward issuance.

Respectfully,



Brad A. Armstrong, Applicant

Date:

October 25, 2002

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