

EXHIBIT 2



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L. Tyson
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Assistant Commissioner of Patents
Washington, D. C. 20231

(fee bearing response)

Re: Patent Application of Brad A. Armstrong

Serial No.: 08/677,378 Filed: 07/05/96

Title: 6 DOF GRAPHIC CONTROLLERS WITH SHEET CONNECTED SENSORS

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

Patent Examiner: Brier, J. Art Unit: 2775

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IN RESPONSE TO THE OUTSTANDING OFFICE ACTION OF 09/30/99

^ Sir:
REMARKS

This is responsive to the Office Action mailed 09/30/99, paper # 10, regarding the above specified application wherein claims 1-15 and 19-22 are pending and rejected.

A certificate of Express mailing is attached.

A Petition for Extension of Time under 37 CFR 1.136 and the fee for one additional month is hereto attached.

The consideration of this response, and the reexamination of the application and pending claims in view of this response is requested.

The entire Detailed Action of the 09/30/99 has been carefully read, including points 1-15, and 17.

Point 1 is noted.

Under amendments presented below claims 1-15 will be cancelled, therefore there should be no need to further address the patentability of claims 1-15. This is not to be considered

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an admission by applicant that claims 1-15 are not patentable.

Claims 19-22 remain pending and are firmly believed patentable.

In reference to Points 2-14 of the Office Action. Again, claims 1-15 will be cancelled below under amendments. It is noted in point 2 that the original 1.131 affidavit first stated by the PTO as being incorrect has now been decided by the PTO to be correct, thank you. It is also noted that the examiner believes the declaration is ineffective for claims 6-8, 10-12, and 19-22. Please see drawing figure 3 of my patent 5,565,891 and compare it to drawing figure 12 of the instant application wherein one can see that only a stick (rod or joystick) needs to be attached to the ball of a 6 axis trackball to have a 6 axis joystick, thus applicant believe it unreasonable to conclude that applicant did not have conception or even reduction to practice of the six axis joystick prior to the effective date of Hoyt, particularly in view that my patent 5,565,891 is a continuation-in-part of a patent teaching a 6 axis joystick which can specifically use Hall effect sensors.

However, my invention of claims 19-22 is not the claimed invention of Hoyt, and the evidence provided in the 4-3-98 pages 2-4 declaration included the U.S. Patent 5,565,891 (my trackball patent a copy provided herewith), this evidence intended to antedate the effective date of the Hoyt reference is the specific information detailed thereabout, and it was assumed and is now requested that my U.S. Patent 5,589,828 filed Mar. 5, 1992 (a copy provided herewith) would be considered as a portion of the submitted evidence since my patent 5,565,891 is a continuation-in-part of my patent 5,589,828 filed in 1992 and describes such on the front page thereof. My patent 5,589,828 teaches but does not specifically claim a six axis joystick controller using Hall effect sensors (like the much later Hoyt disclosure). My patent 5,565,891 makes the 35 USC 120 claim to my patent 5,589,828 for

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the purpose of overcoming prior art. On the front page of my Patent **5,565,891** is a statement making reference that said patent is a continuation-in-part of my U.S. patent **5,589,828**. Applicant believes the PTO may have erred in the issuance of the Hoyt disclosure. My U.S. Patent **5,589,828** was filed long before Hoyt and issued in time to become publically available as prior art useful against the Hoyt disclosure, and yet my U.S. patent **5,589,828** which clearly describes a six axis joystick using Hall effect sensors is not even listed as a prior art document on the Hoyt patent, and applicant believes it surely should have been considered in the Hoyt case. In my U.S. Patent **5,589,828** a copy provided herewith, please see page **1** wherein it is described as a **6** degree of freedom controller, and shown in the front page drawing as a joystick. Also in my same patent "**828** please see column **3** lines **35-42** wherein it is made clear many different types of sensors can be used with my joystick because of the joystick structuring, and then please see column **6** where Hall effect, magnetic, proximity sensor, etc. are all listed as examples of sensors used or all usable on my joystick, and then see column **13** lines **34** through about line **40** where I describe precisely where to buy Hall effect sensors which can be used in any of the sensor locations shown in the drawing figures. Please read my entire patent **5,589,828** and then please read my entire patent **5,565,891** which is a continuation-in-part of pat. '**828**, and then please reconsider whether I reduced to practice my invention in this country prior to the effective date of the Hoyt reference. In addition to my earlier proper swear behind, I **now** further swear behind Hoyt under **37 CFR 1.131** based on my U.S. Patent **5,589,828** as this patent clearly antedates the Hoyt patent **5,687,080**. I request the Hoyt disclosure be set aside and not applied as a prior art reference to claims **19-22**, and all statements herein are true or believed to be true. Thank you.

Would the Examiner please note MPEP 715.07 states:

"The purpose of filing a 37 CFR 1.131 affidavit is not to demonstrate prior invention, per se, but merely to antedate the effective date of a reference. See *In re Moore*, 58 CCPA 1340, 444 F.2d 572, 170 USPQ 260 (1971). Although the test for sufficiency of an affidavit under Rule 131(b) parallels that for determining priority of invention in an interference under 35 U.S.C. 102(g), it does not necessarily follow that Rule 131 practice is controlled by interference law. To the contrary, "[the parallel to interference practice found in Rule 131(b) should be recognized as one of convenience rather than **necessity**." *Id.* at 1353, 444 F.2d at 580, 170 USPQ at 267. Thus, "the 'conception' and 'reduction to practice' which must be established under the rule need not be the same as what is required in the 'interference, sense of those terms." *Id.*; accord, *In re Borkowski*, 505 F.2d 713, 718-19, 184 USPQ 29, 33 (CCPA 1974).

As far as diligence goes, the current application 08/677,378 was filed during the pendency of my prior applications 5,565,891, and 5,589,828, and applicant is a pro se applicant and assures the Examiner there was **never** a period when applicant was not working on or toward the instant invention.

Applicant believes his burden of showing that Hoyt should be set aside and not used against claims 19-22 has clearly been met, and it is respectfully requested Hoyt be set aside. It is respectfully requested claims 19-22 be reexamined in view of this and previous responses of applicants and found allowable over the prior art.

While the Hoyt disclosure of U.S. Patent 5,687,080 clearly should have been and should now be set aside, Hoyt in combination

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with Yoshida further simply does not suggest a combination of that which is claimed in claims **19-22** which is:

a computer keyboard housing supporting at least forty alpha-numeric keys so as to allow writing natural language letters, for example creating documents in English or other such languages, and to also process math using a number pad and use a space bar, etc, plus an incorporated joystick-type input member capable of being operated in six degrees of freedom by a human hand so as to allow the controller device user to manipulate **3D** graphics on the display through the use of the 6 DOF joystick.

Simply, such as claimed in claims **19-22** is not suggested by a combination of Hoyt and Yoshida, for many reasons, including but not limited to Hoyt never once mentions mounting his hall effect joystick in a keyboard, and Yoshida is not interested in a letter writing keyboard.

Allowance of claims **19-22** is respectfully requested.

AMENDMENTS

Please amend the title of the invention throughout the application to read
--IMAGE CONTROLLERS AND SENSORS--

Please cancel ~~claims 1-15~~.

Please insert the following new claims **23-37** into the claims section of the application, examine the claims in view of the instant application and prior art of record, and please find them allowable over the prior art of record.

C1 23. A hand-operated ~~image~~ controller, comprising:
at least one sensor operable by a human user, said sensor for use in controlling imagery,

means for controlling said imagery, said means at least capable of processing

an On/Off switched signal for controlling said imagery, said On/Off signal representing activated and non-activated states of said sensor, and said means at least capable of processing

a proportional signal for controlling said imagery, said proportional signal representing a level of pressure applied to said sensor, said sensor at least contains

a pressure-sensitive electrically regulating element for deriving at least said proportional signal from pressure applied to said sensor, said sensor is operated by

a finger activated button, said sensor further includes a tactile dome cap as a part of said sensor.

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24. A hand-operated image controller according to claim 23 in which said pressure-sensitive electrically regulating element is sandwiched between

at least two membrane sheets, said sensor within said membrane sheets is captured by

a package member having snap-fit legs.

25. A hand-operated image controller according to claim 24 in which said image controller is a DOF device.

26. A hand-operated image controller, comprising:

at least one sensor operable by pressure input from a human user, said sensor for use in controlling imagery,

means for controlling said imagery, said means at least capable of processing

a simple On/Off switched signal for controlling said imagery, said switched signal representing the human operation of said sensor, and said means at least capable of processing

a proportional signal for controlling said imagery, said proportional signal representing the human operation of said

sensor;

whereby said switched signal indicates the simple switched On state and switched Off state of said sensor, and said proportional signal represents a level of depressive pressure applied to said sensor.

27. A hand-operated image controller according to claim 26 in which said sensor is operated by a finger activated button.

28. A hand-operated image controller according to claim 27 in which said sensor contains a pressure-sensitive electrically regulating element for deriving at least said proportional signal from pressure applied to said sensor.

29. A hand-operated image controller according to claim 28 further including a tactile dome cap activated and creating a tactile feedback upon activation of said sensor.

30. A hand-operated image controller according to claim 29 wherein said pressure-sensitive electrically regulating element is sandwiched between at least two membrane sheets, said membrane sheets are captured by a package member having snap-fit legs.

31. A hand-operated image controller according to claim 30 in which said image controller is a 6 DOF device.

32. A hand-operated image controller, comprising:
at least one sensor operable by a human user, said sensor capable of outputting at least two data types to
circuitry including means for reading said data types from said sensor
said circuitry further including means for outputting proportional and simple switched data representing the operation of said sensor.

33. A hand-operated image controller according to claim 32 in which said sensor is operated by a finger activated button.

34. A hand-operated image controller according to claim 33 in which said sensor contains a pressure-sensitive electrically regulating element for deriving at least said proportional signal from pressure applied to said sensor.

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35. A hand-operated image controller according to claim 34 further including a tactile dome cap as a part of said sensor.

36. A hand-operated image controller according to claim 35 wherein said pressure-sensitive electrically regulating element is sandwiched between

at least two membrane sheets, said sensor within said membrane sheets is captured by a package member having snap-fit legs.

37. A hand-operated image controller according to claim 36 in which said image controller is a 6 DOF device.

REMARKS

No new matter has been added with the inclusion of new 23-37, the claim wording and concepts are fully supported in the originally filed specification, and claims 23-26 are believe allowable over the prior art of record, therefore allowance of the claims is respectfully requested. Thank you.

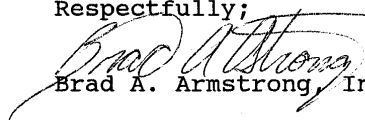
I hereby declare and swear that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued



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thereon.

Respectfully;


 Date: *Jan. 28, 2000*
Brad A. Armstrong, Inventor / Applicant / Declarant

CERTIFICATE OF EXPRESS MAILING

Assistant Commissioner for Patents
Washington, D. C. 20231

I hereby certify that this correspondence is being deposited with the United States Postal Service as EXPRESS MAIL article EE841213639US with sufficient postage paid in an envelope addressed to: Assistant Commissioner of Patents, Washington, D. C. 20231, on this

date: January 28, 2000


Brad A. Armstrong, Inventor / Applicant