

EXHIBIT 5



MS RCE
 Commissioner for Patents
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 Alexandria VA 22313-1450

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Sir:

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Brad A. Armstrong
 Brad A. Armstrong

Technology Center 2600

INFORMATION DISCLOSURE STATEMENT

MS RCE
 Commissioner for Patent
 PO BOX 1450
 Alexandria VA 22313-1450

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

Serial No.: 091715,532 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:

This Information Disclosure Statement (IDS) is being filed with an RCE because the application has been allowed and the issue fee paid.

The following sections below address disclosures of prior art and relevant art that may pertain to the claims of this application.

1. As part of this Information Disclosure Statement are listings on modified 1449 forms of : A) US Patent References, B) Foreign Patent References, C) Non Patent Disclosures and Other References, and D) US Patent Application Publications.

Best full or partial copies which Applicant currently possesses of each of the Foreign Patent References and Non Patent Disclosures and Other References are included herewith. Applicant understands that the PTO now supplies its own copies of the US Patents and US Patent Applications cited in new patent applications. If this is not correct and Applicant is required to acquire paper copies from the PTO and then supply them to the PTO, please inform Applicant as soon as possible so that the copies can be ordered from the PTO and sent to the Examiner. Thank you.

The Foreign Patent References are in some cases foreign patents and in other cases patent applications.

For the Examiner's convenience, each of the four (A-D) above described lists includes a column with heading of "Previously Submitted" wherein a "yes" is applied in that column next to each reference which was Previously Submitted. If there is no "yes" in that column then the reference is herein Newly submitted. Please consider all Previously and Newly submitted references during the examination of the present application and claims.

Each of the four above described lists includes references to Footnotes of Special Interest. The "Footnotes-References of Special Interest" are included to provide assistance to the Examiner while determining allowability of the claims. The Footnotes pertain to Office Actions. So that the Examiner may be fully

informed of all objections made in the past by any Patent Examiner against any of Applicant's claims, Applicant herein includes a copy of each Office Action regarding Applicant's other Patent Applications wherein an Examiner relied upon the "special interest" identified reference art as indicating lack of novelty or indicating obviousness either alone or in combination for the then claimed invention. Many of these objections were later found by the Examiner of record to be overcome resulting in issuance of a U.S. Patent, but only the objections are listed here for the sake of brevity and so that the current Examiner can be fully informed of all arguments made in the past by other PTO Examiners against Applicant's claims. The current Examiner is requested to contact Applicant if Applicant can answer any questions regarding any of these Office Actions or the inventions to which they pertain.

2. Applicant has also provided the below comments and included photographs regarding products once on the market. One such product is the CyberMan™ controller first sold in 1993 in the USA by Logitech Inc. 6505 Kaiser Dr., Fremont CA USA. Applicant believes he is the inventor of the CyberMan controller which was made without his permission after failed licensing negotiations regarding Applicant's US Patent Application No. 07/847,619 now Patent 5,589,828. Applicant believes an element disclosed in the CyberMan that was not taught in the '828 Patent is the membrane element. Membrane elements are taught in Applicant's US Patent Application No. 081677,378 filed July 5, 1996. It appears to Applicant that the "one year bar" rule applies to the membrane connection of sensors as disclosed in CyberMan. Nevertheless the '378 Patent Application teaches a great variety of novel and unobvious utilizations of a membrane in unique combination with many important elements. Additionally the '378 application teaches many elements in inventive combination, numerous structural variations and inventive leaps; both with and without the cost saving advantages taught in the '378 application of the membrane connecting to the circuit board without the expensive wiring harness of CyberMan. Many embodiments of the '378 application do not require use of a membrane to be novel and inventive.

And many embodiments of the '378 application having a membrane are novel and inventive over the CyberMan disclosure.

Located at the top of the stack of Reference Art copies is a CyberMan disclosure containing 1) an advertisement flyer with the heading CyberMan 3D Controller and 2) photographs 1, 2 and 3 of the CyberMan Controller assembled and also disassembled. Photograph 1 shows the CyberMan in a top perspective view and showing a base, a handle and three buttons. Photograph 2 shows a portion of the CyberMan in a disassembled state and showing the handle, three buttons, a microswitch for one of the buttons, a wiring harness spanning between a membrane located in the handle and a circuit board located in the base. The three buttons each use normally-open momentary-On switches. No proportional pressure-sensors are used. Movement of the major plate is tracked by two bi-directional slide potentiometers (variable resistors), all other sensors are uni-directional sensors of a momentary-On On/Off only type. The major plate is moveable in two-axes. Photograph 3 shows a portion of the CyberMan in a disassembled state. **Shown in photograph 3 is the handle in an upside-down position and having a motor with offset weight for providing active tactile feedback.** Four metal dome On/Off switches on a 1st plane (two axes input), and two more On/Off switches located on a third and fourth planes (third axis) are all integrated with the flexible membrane. The membrane further has solder connections to two metal dome On/Off switches (fourth axis) and solder connections to the three On/Off microswitches associated with the finger depressible buttons.

The membrane is located in the handle and the circuit board is located in the base. The expensive conventional wiring harness spans between the membrane in the handle and the circuit board in the base. The membrane does not physically engage, contact or connect to the circuit board. The membrane does not touch the circuit board and does not lay adjacent to the circuit board. The membrane is not adhered to the circuit board, directly connected to the

circuit board, or otherwise in close proximity to the circuit board. All metal domes and physical switch packages are located on only one side of the membrane.

Regarding the circuit board, two sensors are located on only one side of the circuit board (the two bi-directional sliding potentiometers or variable resistors) the second side of the circuit board has no sensors located on it.

The Examiner is respectfully requested to examine the claims in light of the CyberMan disclosure which the Applicant has described herein and included photographs for the Examiner's consideration. If the Examiner needs any additional information regarding CyberMan please contact Applicant or Logitech at the above listed address, or Applicant would be glad to supply a working example of the CyberMan (with screwdriver included:-) for the Examiner.

3. Another product on the market is a video game controller manufactured by Namco Ltd. The Namco controller is believed to have been the controller that was referred to as the "NEO GEO" controller in Application No. 081942,450 now Patent 6,102,802, in paper no. 3, a Preliminary Amendment dated July 7, 1999 by the PTO and cited by Applicant at that time for an example of a two hand held controller with an analog button in the right hand area. The Namco controller has POSITIONAL button sensors which were critically differentiated from Applicant's PRESSURE button sensors resulting in the now issued U.S. Patent 6,102,802. Of interest to the present claims the Namco controller is an image controller utilizing four rotary potentiometers. The printed material associated with the Namco controller has a copyright date of 1994 which Applicant assumes is the first time of sale to the public. Three photographs are included of the Namco controller.

Photograph 1 is of the top of the controller. In the left hand area is positioned a four-way cross key or rocker for operation by the user's left hand thumb. The rocker actuates four normally-open momentary-On/Off only switches. Two shoulder buttons are positioned for operation one each for the

user's right and left hand index fingers. Four individual buttons are embodied in the right hand area for operation by the right hand thumb. Two of the four buttons are normally-open momentary-On/Off only switches. The other two of the buttons on the right hand area of the Namco controller are buttons structured to drive gears to rotate potentiometers. These gear-drive buttons are depressible only in a linear fashion, the buttons themselves do not pivot or rotate.

Photograph 2 is a picture of the Namco controller in an upside-down position with a housing bottom panel removed on the right hand side of the controller in order to show internal components associated with the two gear-drive buttons. The buttons rest on metal coil compression springs and the human user can depress the buttons with his right thumb. The metal coil springs return the buttons to a normally extended or raised position. The buttons are connected to rack and pinion gears to translate the linear travel of the buttons into rotation of a pinion gear, and the pinion gear is connected to the rotary shaft of an electrical rotary potentiometer.

Photograph 3 is a picture of the Namco controller in an upside-down position with both housing bottom panels removed to show the internal components of the controller. Four rotary potentiometers are utilized. The first and second rotary potentiometers are as described in Photograph 2 above. The third rotary potentiometer is utilized with a similar rack and pinion type gearing with an individual button, this button being the shoulder button depressible by the user's left hand index finger. The fourth rotary potentiometer has planetary type gearing for sensing the articulation between the right and left hand areas of the Namco case. Of interest the three rotary potentiometers associated with depressible buttons are not embodied to act as bi-directional sensors as defined in the current specification. In contrast the fourth rotary potentiometer is embodied in the Namco controller as a bidirectional sensor, for example, the two case halves of the Namco controller can be rotated in two separate directions for the normally resting position. The Namco controller also has three circuit boards.

The Namco controller does not have a flexible membrane connecting to any circuit board. The Namco controller does not have a flexible membrane

bearing circuitry. The Namco controller does not have any structure for active tactile feedback. The Namco controller does not have a motor and offset weight. The Namco controller does not have any pressure sensors. The Namco controller does not have any pressure sensors associated with individual buttons. The Namco controller does not have any pivotal or rotary buttons. The Namco controller does not have any single element structured to activate more than one rotary potentiometer.

4. Inventor Poulson of German Patent DE4013227 published 05/29/1991 is of particular interest and therefore Applicant is setting Poulson out here for special consideration by the Examiner especially in regards to claims 19-24, 25-31 and 32-37 of Applicant's U.S. Patent Application 091715,532. Applicant believes Poulson does not anticipate or make obvious any of these claims for at least the reason that in Poulson figures 2 and 3 joy stick 3 is a vertically structured element, not a "platform" (from applicants claims). In Applicant's claims a platform is a horizontally structured element with a greater dimension along the two axes of input than along the third axis, for examples of platforms please see U.S. Patent No. 5,589,828 figure 2 platform 232 and U.S. Patent No. 6,222,525 figure 21 platform type element 300, figure 32 platform type element 423, figure 36 platform type element 500, figure 13 platform type element 222; and for further examples meeting Applicant's definition of a "platform" please see U.S. Patent 6,428,416 figure 2 platform type element 12, figure 4 platform type element 201, figure 5 platform type element 301, and U.S. Patent 6,524,187 figure 16 platform type element 211.

5. Applicant further wishes to inform the Examiner that during licensing negotiations of Applicant's issued patents a third party corporation has presented to Applicant Japanese Utility Model Publication No. 5-87760 and Japanese Unexamined Patent Application Publication No. 7-302159 asserting full anticipation of many of Applicant's US Patents including Patent 6,102,802,

Patent 6,135,886, Patent 5,999,084 and Patent 6,208,271. Copies of both of these Japanese references along with the English translations were supplied by the third party to Applicant and are included herewith for review by the Examiner. Applicant believes that all claims of the current application are not taught or suggested by these Japanese documents and requests the Examiner to treat these documents as if they are authentic. The third party argued that claim 12 of Applicant's U.S. Patent 6,222,525 was anticipated by U.S. Patent 4,246,452 to Chandler as Chandler discloses a hand held remote controller with a membrane sheet connecting the sensors of a two-axes input member with independent button sensors. The third party argued that Applicant's U.S. Patent 5,589,828 claims 15-18 were fully anticipated by U.S. Patent 5,207,426 to Inoue et al and U.S. Patent 4,469,330 to Asher. The third party also presented to Applicant Japanese Unexamined Patent Application Publication No. 63-29113 for another example of an analog sensor, and U.S. Patent 4,745,301 to Michalchik for disclosing a pressure sensitive material which is deformable elastomeric material having carbon particles used in a pressure sensitive switch with two electrodes.

Applicant does not agree with most of the third party assertions. This third party has recently proposed a lucrative business agreement with Applicant in which it would agree to the validity of many of Applicant's above mentioned U.S. Patents.

6. During licensing negotiations with another party, that third party's Patent Attorney asserted that O'Mara of U.S. Patent 5,510,812 has a pressure sensitive 4-way rocker in a game controller not disclosed to be held by two hands of the user, and that aspect of O'Mara is relevant to Applicant's U.S. Patent 6,343,991. Additionally, that third party's Patent Attorney determined or agreed that the two hand held video game controller of Japanese disclosure JP 5-87760 (Furukawa discussed above) does not disclose pressure sensitive single depressible independent analog buttons in the right hand area as claimed in Applicant's '991 US Patent.

The current claims have many elements in combination not taught or suggested by O'Mara or Furukawa.

7. In Applicant's currently pending application Applicant has disclosed a great variety of structures in combination with "active tactile feedback" (i.e. motor and offset weight) and "passive tactile feedback" (i.e. threshold tactile feedback dome) structures, yet the current pending claims do not recite passive tactile feedback structures. Therefore, for the sake of brevity, Applicant is not including detailed discussions of prior art potentially relevant to passive tactile feedback structures. Should Applicant at some future time include passive tactile feedback structures in claims before the current Examiner then he will address those issues at that time.

8. Please consider the issue of double-patenting regarding this application and Applicant's other pending US applications which can be readily located by a search of the PTO records for pending applications under the Inventor name of "Brad A. Armstrong". Applicant believes that the most important pending claims to review relative to the claims of this application are the claims in U.S. Patent Application No. 091893,292 being examined in art unit 2673 by Examiner D. Chow. Other pending claims which could be reviewed are in U.S. Pending application No. 101028,071 in art unit 3713 and US pending application No. 101042,027 in art unit 3714, although all of Applicant's claims should be reviewed. If the Examiner wishes and requests such, Applicant would be more than willing to submit copies of all of his currently pending claims. Applicant would be happy to discuss each claim with the Examiner. If the Examiner believes that would be helpful, please do not hesitate in requesting such from Applicant. Thank you.

9. Also, please consider the issue of double-patenting regarding this application and Applicant's Issued U.S. Patents which can be readily located by a

search of the PTO records for issued patent under the Inventor name of "Brad A. Armstrong". Applicant believes that the following U.S. Patents of Applicant's have at least some similarity and priority claims to U.S. Patent **5,589,828** as does the instant application and thus should be reviewed for double-patenting: U.S. Patent **5,565,891**; U.S. Patent **5,589,828**; U.S. Patent **6,222,525**; U.S. Patent **6,310,606**; U.S. Patent **6,344,791** and U.S. Patent **6,347,997**. If the Examiner wishes additional information, please do not hesitate in requesting such from Applicant. Thank you.

Applicant realizes the instant application and this IDS are extensive and sincerely apologizes to the Examiner. The legal system regarding prior art disclosure, as presently determined by the courts, is a harsh master – expensive, time consuming and difficult – for an inventor who only wants to enjoy the fruit of his invention. Please examine the previously allowed claims thoroughly so that Applicant may receive a valid and worthy Patent. Thank you for your time.

Please do not hesitate in requesting anything from Applicant that might assist the Examiner.

Respectfully,



Brad A. Armstrong

Date: Dec 4, 2003