UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

CONTROL NO.	FILING DATE	PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
95/000,223	05/10/07	6,343,991	

BRAD ARMSTRONG
15487 JOSEPH ROAD
TYLER, TX 75707

EXAMINER
FLANAGAN, B.

ART UNIT	PAPER
3993	

DATE MAILED:

07/18/07

INTER PARTES REEXAMINATION COMMUNICATION

BELOW/ATTACHED YOU WILL FIND A COMMUNICATION FROM THE UNITED STATES PATENT AND TRADEMARK OFFICE OFFICIAL(S) IN CHARGE OF THE PRESENT REEXAMINATION PROCEEDING.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

DO NOT USE IN PALM PRINTER

(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

STEPHEN J. JONCUS
KLARQUIST SPARKMAN, LLP
121 SW SALMON STREET, SUITE 1600
PORTLAND, OR 97204

Transmittal of Communication to Third Party Requester *Inter Partes* Reexamination

REEXAMINATION CONTROL NUMBER *95/000,223*.

PATENT NUMBER *6,343,991*.

TECHNOLOGY CENTER *3999*.

ART UNIT *3993*.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the *inter partes* reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

OFFICE ACTION IN INTER PARTES REEXAMINATION	**Control No.** 95/000,223	**Patent Under Reexamination** 6,343,991	
	Examiner Beverly M. Flanagan	**Art Unit** 3993	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:
Patent Owner on _____
Third Party(ies) on 10 May 2007

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Response:
2 MONTH(S) from the mailing date of this action. 37 CFR 1.945. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.956.
For Third Party Requester's Comments on the Patent Owner Response:
30 DAYS from the date of service of any patent owner's response. 37 CFR 1.947. NO EXTENSIONS OF TIME ARE PERMITTED. 35 U.S.C. 314(b)(2).

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

This action is not an Action Closing Prosecution under 37 CFR 1.949, nor is it a Right of Appeal Notice under 37 CFR 1.953.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892
2. ☐ Information Disclosure Citation, PTO/SB/08
3. ☐ _____

PART II. SUMMARY OF ACTION:

1a. ☒ Claims 1-74 are subject to reexamination.
1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled.
3. ☐ Claims _____ are confirmed. [Unamended patent claims]
4. ☐ Claims _____ are patentable. [Amended or new claims]
5. ☒ Claims 1-74 are rejected.
6. ☐ Claims _____ are objected to.
7. ☐ The drawings filed on _____ ☐ are acceptable ☐ are not acceptable.
8. ☐ The drawing correction request filed on _____ is: ☐ approved. ☐ disapproved.
9. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has: ☐ been received. ☐ not been received. ☐ been filed in Application/Control No 95000223.
10. ☐ Other _____

DETAILED ACTION

This first action on the merits is being mailed with the order granting reexamination.

Reexamination Procedures

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be an Action Closing Prosecution (ACP), will be governed by 37 CFR 1.116(b) and (d), which will be strictly enforced.

Statutory Basis for Grounds of Rejections – 35 USC §§ 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Third Party Requester's Grounds of Rejection

Ground #1. The requester submits that claims 1-22, 35, 44-45, 54 and 70-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Furukawa '760.

Ground #2. The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Furukawa '740.

Ground #3. The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Asano.

Ground #4. The requester submits that claims 23-25, 35 and 70 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Sakurai.

Ground #5. The requester submits that claims 3-5, 7-10, 19-22, 44-45 and 70-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being obvious over Furukawa '760.

Ground #6. The requester submits that claims 11-25, 28-35, 44-45 and 70-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Sakurai.

Ground #7. The requester submits that claims 5, 20 and 35 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Kawashima.

Ground #8. The requester submits that claims 3, 7, 8 and 19 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Yamaoka.

Ground #9. The requester submits that claims 23-43, 55-69 and 74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Asano.

Ground #10. The requester submits that claims 27, 32, 35-43, 62-65 and 69-74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Asano and further in view of Sakurai.

Ground #11. The requester submits that claims 36-39, 55-69 and 74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '740.

Ground #12. The requester submits that claim 46 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy.

Ground #13. The requester submits that claim 36 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Tanami.

Ground #14. The requester submits that claims 44-53 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy and further in view of Eventoff '227.

Ground #15. The requester submits that claim 36 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Miller.

Ground #16. The requester submits that claims 44-53 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy and further in view of Waigand.

Ground #17. The requester submits that claims 26, 27, 32, 35-43, 62-65 and 70-74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '740 and further in view of Sakurai.

Ground #18. The requester submits that claim 69 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Sakurai.

Ground #19. The requester submits that claim 69 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Inoue.

Ground #20. The requester submits that claim 69 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Inoue.

Ground #21. The requester submits that claim 35 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '217.

Ground #22. The requester submits that claims 26-43 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Furukawa '760 and further in view of Waigand.

Ground #23. The requester submits that claims 35-39 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Furukawa '760 and further in view of Franz.

Ground #24. The requester submits that claims 44-45 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Yamamoto.

Ground #25. The requester submits that claims 23-34 and 40-43 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Furukawa '760 and further in view of Eventoff '238.

Ground #26. The requester submits that claims 71-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Sakurai in view of Kramer.

Ground #27. The requester submits that claims 72-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Sakurai in view of Kramer and further in view of Fukushima.

Ground #28. The requester submits that claims 44-45 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Kramer.

Ground #29. The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Waigand.

Ground #30. The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Waigand.

PROPOSED THIRD PARTY REQUESTER'S REJECTIONS

Proposed Third Party Requester Rejection: Ground #1

The requester submits that claims 1-22, 35, 44-45, 54 and 70-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Furukawa '760.

Claims 1-22, 35, 44-45, 54 and 70-73 of Armstrong '991 are rejected under 35 U.S.C. § 102(b) as being anticipated by Furukawa '760. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the

bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 also teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's

movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation).

This rejection of claims 1-22, 35, 44-45, 54 and 70-73 of Armstrong '991 based on Furukawa '760 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #2

The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Furukawa '740.

Claims 66-68 of Armstrong '991 are rejected under 35 U.S.C. § 102(b) as being anticipated by Furukawa '740. Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12 and 13 can be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4).

This rejection of claims 66-68 of Armstrong '991 based on Furukawa '740 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #3

The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Asano.

Claims 66-68 of Armstrong '991 are rejected under 35 U.S.C. § 102(b) as being anticipated by Asano. Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure applied to the spring 1 (see Figs. 1-3).

This rejection of claims 66-68 of Armstrong '991 based on Asano was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #4

The requester submits that claims 23-25, 35 and 70 of Armstrong '991 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Sakurai.

Claims 23-25, 35 and 70 of Armstrong '991 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sakurai. Sakurai teaches a game control with a housing to be grasped and held simultaneously by two hands including a left-hand area and a right-hand area (see Fig. 1). Sakurai teaches a plurality of depressible electricity manipulating devices where at least some are within reach of the user's right-hand thumb (see Fig. 1). Sakurai teaches at least one pressure-sensitive variable-

conductance sensor in the right-hand area reachable by the user's right hand thumb, which includes a means for creating an analog electrical signal representing varying applied physical pressure (see paragraphs 21, 26 and 57 of the accompanying translation). Sakurai teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation). The switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation). THIS REJECTION WAS PROPOSED BY THIRD PARTY REQUESTER IN THE REQUEST FOR REEXAMINATION AND IS BEING ADOPTED ESSENTIALLY AS PROPOSED IN THE REQUEST.

AV

Proposed Third Party Requester Rejection: Ground #5

The requester submits that claims 3-5, 7-10, 19-22, 44-45 and 70-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760.

Claims 3-5, 7-10, 19-22, 44-45 and 70-73 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as obvious over Furukawa '760. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a

plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the

accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 also teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '760 states that additional sensors may be used in other locations on the controller which inherently includes placing the sensors in an array that is located in a right hand area or a left hand area of a housing, as shown in Fig. 1 of Furukawa '760 (see also paragraph 9 of the accompanying translation).

This rejection of claims 1-22, 35, 44-45, 54 and 70-73 of Armstrong '991 based on Furukawa '760 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #6

The requester submits that claims 11-25, 28-35, 44-45 and 70-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Sakurai.

Claims 11-25, 28-35, 44-45 and 70-73 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Sakurai. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller

10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic

bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 also teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation).

Furukawa '760 is silent as to multiple pressure-sensitive variable-conductance sensors on the right hand area of the housing and that the sensors can be used for on/off functions (although Furukawa '760 does state that elements 19 and 20 are "trigger keys"). Sakurai discloses multiple pressure-sensitive variable-conductance sensors in the right-hand area to provide control of the game imagery (see Fig. 1 and paragraphs 21, 26 and 57 of the accompanying translation of Sakurai). Sakurai also teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation of Sakurai). Sakurai also teaches that the switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation of Sakurai).

Sakurai thus demonstrates that it was well known in the art to place multiple pressure-sensitive variable-conductance sensors in the right-hand area of a housing to provide an alternate means for controlling game imagery. Sakurai also demonstrates that it was well known in the art to utilize pressure-sensitive variable-conductance sensors for on/off functions. Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the housing of Furukawa '760 with multiple pressure-sensitive variable conductance sensors in the right-hand area of the housing and to make at least one of these sensors with an on/off function.

This rejection of claims 11-25, 28-35, 44-45 and 70-73 of Armstrong '991 based on Furukawa '760 in view of Sakurai was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #7

The requester submits that claims 5, 20 and 35 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Kawashima.

Claims 5, 20 and 35 Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Kawashima. Furukawa '760 teaches that the use of pressure-sensitive switches makes it possible to freely control the operation of a game character in a video game (see paragraph 12 of the accompanying translation). Furukawa '760 is silent as to the pressure-sensitive switches being an on/off switch. However, Kawashima teaches a game control device that uses a

pressure-sensitive variable-conductance rubber material in a pushbutton switch in place of an on/off switch for increasing the intensity of firing of missiles or pistols (see cols. 1-2 of Kawashima). Kawashima also teaches circuitry for interpreting the analog output of sensor material 36 and converting it into a digital signal (see Fig. 1 of Kawashima). Kawashima thus demonstrates that it was well known in the art to utilize pressure-sensitive variable-conductance sensors for on/off functions. Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make at least one of these sensors of Furukawa '760 with an on/off function.

This rejection of claims 5, 20 and 35 of Armstrong '991 based on Furukawa '760 in view of Kawashima was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #8

The requester submits that claims 3, 7, 8 and 19 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Yamaoka.

Claims 3, 7, 8 and 19 Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Yamaoka. Furukawa '760 teaches that the use of pressure-sensitive switches makes it possible to freely control the operation of a game character in a video game (see paragraph 12 of the accompanying translation). Furukawa '760 is silent as to the specific operation of the character that is being controlled. However, Yamaoka teaches a video game machine with a pushbutton

having a piezoelectric element that converts the intensity of the pressing force into a variable output for controlling characters in the game, such a controlling the height of a jump (see paragraphs 9, 25, 28-30 and 35 of the translation accompanying Yamaoka). Yamaoka thus demonstrates that controlling the height of a jump of a video game character is well known in the art. Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the pressure-sensitive switches of Furukawa '760 control the jumping of a character.

This rejection of claims 3, 7, 8 and 19 of Armstrong '991 based on Furukawa '760 in view of Yamaoka was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #9

The requester submits that claims 23-43, 55-69 and 74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Asano.

Claims 23-43, 55-69 and 74 Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Asano. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas

for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). It is also agreed that Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to

the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). It is also agreed that Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). It is also agreed that Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 for controlling on/off output (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure applied to the spring 1 (see Figs. 1-3). Asano thus demonstrates that a surface with an apex positioned above a board is well known in the art for pressure-sensitive variable-pressure sensors where the sensor provides on/off output. Accordingly, it would have been obvious for one of ordinary skill in the art to provide the sensor of Furukawa '760 with on/off output.

This rejection of claims 23-43, 55-69 and 74 of Armstrong '991 based on Furukawa '760 in view of Asano was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #10

The requester submits that claims 27, 32, 35-43, 62-65 and 69-74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Asano and further in view of Sakurai.

Claims 27, 32, 35-43, 62-65 and 69-74 Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Asano. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring

pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). It is also agreed that Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 for controlling on/off output (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure

applied to the spring 1 (see Figs. 1-3). Asano thus demonstrates that a surface with an apex positioned above a board is well known in the art for pressure-sensitive variable-pressure sensors where the sensor provides on/off output. Accordingly, it would have been obvious for one of ordinary skill in the art to provide the sensor of Furukawa '760 with on/off output. Sakurai discloses multiple pressure-sensitive variable-conductance sensors in the right-hand area to provide control of the game imagery (see Fig. 1 and paragraphs 21, 26 and 57 of the accompanying translation of Sakurai. Sakurai also teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation of Sakurai). The switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation of Sakurai). Sakurai also demonstrates that it was well known in the art to utilize pressure-sensitive variable-conductance sensors for on/off functions. Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the housing of Furukawa '760 with multiple pressure-sensitive variable conductance sensors in the right-hand area of the housing and to make at least one of these sensors with an on/off function.

This rejection of claims 27, 32, 35-43, 62-65 and 69-74 of Armstrong '991 based on Furukawa '760 in view of Asano and further in view of Sakurai was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #11

The requester submits that claims 36-39, 55-69 and 74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '740.

Claims 36-39, 55-69 and 74 Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '740. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing

operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12

and 13 can be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). It would have been obvious for one of ordinary skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex, in the manner disclosed by Furukawa '740.

This rejection of claims 36-39, 55-69 and 74 of Armstrong '991 based on Furukawa '760 in view of Furukawa '740 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #12

The requester submits that claim 46 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy.

Claim 46 Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy. Furukawa '760 teaches a resilient dome cap 30 positioned over a sheet 32 (see Fig. 2 and paragraph 9 of the accompanying request). Clancy teaches a dome cap with a deformable substantially convexed surface having an apex located to contact a sheet (see Figs. 1-4, col. 3, lines 27-36 and col. 4, lines 10-14 of Clancy). As Clancy demonstrates, it would have been obvious for one of ordinary

skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex.

This rejection of claim 64 of Armstrong '991 based on Furukawa '760 in view of Clancy was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #13

The requester submits that claim 36 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Tanami.

Claim 36 Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Tanami. Furukawa '760 teaches a resilient dome cap 30 positioned over a sheet 32 (see Fig. 2 and paragraph 9 of the accompanying request). Tanami teaches a dome cap with an inner surface that has an apex (see Fig. 1 of Tanami). As Tanami demonstrates, it would have been obvious for one of ordinary skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex.

This rejection of claim 36 of Armstrong '991 based on Furukawa '760 in view of Tanami was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #14

The requester submits that claims 44-53 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy and further in view of Eventoff '227.

Claims 44-53 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy and further in view of Eventoff '227. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a

wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '760 teaches a resilient dome cap 30 positioned over a sheet 32 (see Fig. 2 and paragraph 9 of the accompanying request). Clancy teaches a dome cap with a deformable substantially convexed surface having an apex located to contact a sheet (see Figs. 1-4, col. 3, lines 27-36 and col. 4, lines 10-14 of Clancy). As Clancy

demonstrates, it would have been obvious for one of ordinary skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex. Furthermore, Eventoff '227 teaches conductive material 22 that is pressure-sensitive variable-conductance material (see Fig. 2, and col. 5, lines 14-42). Eventoff '227 also teaches a non-conductive sheet 20 supporting conductive material 22 (see Fig. 2 and col. 5, lines 1-42). As Eventoff '227 demonstrates, it would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the pressure-sensitive variable conductance material of Eventoff '227 in the device of Furukawa '760.

This rejection of claims 44-53 of Armstrong '991 based on Furukawa '760 in view of Clancy and further in view of Eventoff '227 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #15

The requester submits that claim 36 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Miller.

Claim 36 Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Miller. Furukawa '760 teaches a resilient dome cap 30 positioned over a sheet 32 (see Fig. 2 and paragraph 9 of the accompanying request). Miller teaches a dome cap with an inner surface that has an apex (see Fig. 3 of Miller).

As Miller demonstrates, it would have been obvious for one of ordinary skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex.

This rejection of claim 36 of Armstrong '991 based on Furukawa '760 in view of Miller was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #16

The requester submits that claims 44-53 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy and further in view of Waigand.

Claims 44-53 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Clancy and further in view of Waigand. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross

shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys

(see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '760 teaches a resilient dome cap 30 positioned over a sheet 32 (see Fig. 2 and paragraph 9 of the accompanying request). Clancy teaches a dome cap with a deformable substantially convexed surface having an apex located to contact a sheet (see Figs. 1-4, col. 3, lines 27-36 and col. 4, lines 10-14 of Clancy). As Clancy demonstrates, it would have been obvious for one of ordinary skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex. Furthermore, Waigand teaches a nonconductive sheet 7 supporting conductive material 6 (see Fig. 3 and col. 3, lines 33-45 of Waigand). Waigand also teaches conductive material 6 located to contact circuit traces 5 (see Fig. 3 of Waigand). As Waigand demonstrates, it would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the pressure-sensitive variable conductance material of Waigand in the device of Furukawa '760.

This rejection of claims 44-53 of Armstrong '991 based on Furukawa '760 in view of Clancy and further in view of Waigand was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #17

The requester submits that claims 26, 27, 32, 35-43, 62-65 and 70-74 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '740 and further in view of Sakurai.

Claims 26, 27, 32, 35-43, 62-65 and 70-74 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '740 and further in view of Sakurai. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected

to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). It is also agreed that Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). It is also agreed that Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). It is also agreed that Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12 and 13 can be electrically connected to each other via a movable

contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). It would have been obvious for one of ordinary skill in the art to construct the pressure-sensitive variable-resistance button of Furukawa '760 with an apex, in the manner disclosed by Furukawa '740.

Furukawa '760 is silent as to multiple pressure-sensitive variable-conductance sensors on the right hand area of the housing and that the sensors can be used for on/off functions (although Furukawa '760 does state that elements 19 and 20 are "trigger keys"). Sakurai discloses multiple pressure-sensitive variable-conductance sensors in the right-hand area to provide control of the game imagery (see Fig. 1 and paragraphs 21, 26 and 57 of the accompanying translation of Sakurai). Sakurai also teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation of Sakurai). Sakurai also teaches that the switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation of Sakurai). Sakurai thus demonstrates that it was well known in the art to place multiple pressure-sensitive variable-conductance sensors in the right-hand area of a housing to provide an alternate means for controlling game imagery. Sakurai also demonstrates that it was well known in the art to utilize pressure-sensitive variable-conductance sensors for on/off functions. Accordingly, it would have been obvious for one of ordinary skill in the

art at the time the invention was made to provide the housing of Furukawa '760 with multiple pressure-sensitive variable conductance sensors in the right-hand area of the housing and to make at least one of these sensors with an on/off function.

This rejection of claims 26, 27, 32, 35-43, 62-65 and 70-74 of Armstrong '991 based on Furukawa '760 in view of Furukawa '740 and further in view of Sakurai was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #18

The requester submits that claim 69 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Sakurai.

Claim 69 of Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Sakurai. Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12 and 13 can be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). Sakurai teaches a game control with a housing to be grasped and held simultaneously by two hands including a left-hand area and a right-hand area (see Fig. 1). Sakurai also teaches a plurality of depressible electricity

manipulating devices where at least some are within reach of the user's right-hand thumb (see Fig. 1). Sakurai also teaches at least one pressure-sensitive variable-conductance sensor in the right-hand area reachable by the user's right hand thumb, which includes a means for creating an analog electrical signal representing varying applied physical pressure (see paragraphs 21, 26 and 57 of the accompanying translation). Sakurai teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation). The switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation). Sakurai thus demonstrates that it was well known in the art to place multiple pressure-sensitive variable-conductance sensors in the right-hand area of a housing to provide an alternate means for controlling game imagery. Sakurai also demonstrates that it was well known in the art to utilize pressure-sensitive variable-conductance sensors for on/off functions. Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the housing of Furukawa '740 with multiple pressure-sensitive variable conductance sensors in the right-hand area of the housing and to make at least one of these sensors with an on/off function.

This rejection of claim 69 of Armstrong '991 based on Furukawa '740 in view of Sakurai was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #19

The requester submits that claim 69 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Inoue.

Claim 69 of Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Inoue. Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12 and 13 can be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). Inoue teaches a control device with a housing to be grasped by two hands simultaneously, the housing having a left hand area and a right hand area (see Fig. 1 of Inoue). As demonstrated by Inoue, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the housing of Furukawa '740 with a left hand area and a right hand area.

This rejection of claim 69 of Armstrong '991 based on Furukawa '740 in view of Inoue was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #20

The requester submits that claim 69 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Inoue.

Claim 69 of Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Asano in view of Inoue. Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure applied to the spring 1 (see Figs. 1-3). Inoue teaches a control device with a housing to be grasped by two hands simultaneously, the housing having a left hand area and a right hand area (see Fig. 1 of Inoue). As demonstrated by Inoue, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the housing of Asano with a left hand area and a right hand area.

This rejection of claim 69 of Armstrong '991 based on Furukawa '740 in view of Inoue was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #21

The requester submits that claim 35 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '217.

Claim 35 of Armstrong '991 is rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Furukawa '217. Furukawa '760 teaches a device

and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of

the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 also teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '760 is silent as to converting the analog signal to a digital signal. However, Furukawa '217 teaches a means for interpreting the analog output of sensor material 36 and converting it into a digital signal (see paragraph 11 of the accompanying translation). As Furukawa '217 demonstrates, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the device of Furukawa '760 with the capability to convert an analog signal to a digital signal.

This rejection of claim 35 of Armstrong '991 based on Furukawa '760 in view of Furukawa '217 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #22

The requester submits that claims 26-43 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Furukawa '760.

Claims 26-43 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Asano in view of Furukawa '760. Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure applied to the spring 1 (see Figs. 1-3). Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is

disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force

applied by the fingertip (see paragraph 10 of the accompanying translation). As demonstrated by Furukawa '760, it would have been obvious for one of ordinary skill in the art to provide the device of Asano with a rubber dome cap and electronic circuitry for creating an analog signal. Furthermore, Waigand teaches a nonconductive sheet 7 supporting conductive material 6 (see Fig. 3 and col. 3, lines 33-45 of Waigand). Waigand also teaches conductive material 6 located to contact circuit traces 5 (see Fig. 3 of Waigand). As demonstrated by Waigand, it would have been obvious for one of ordinary skill in the art to provide the device of Asano with the conductive material disclosed by Waigand.

This rejection of claims 26-43 of Armstrong '991 based on Asano in view of Furukawa '760 and further in view of Waigand was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #23

The requester submits that claims 35-39 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Furukawa '760 and further in view of Franz.

Claims 35-39 Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Furukawa '760 and further in view of Franz. Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11

where the fixed contacts 12 and 13 can be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring

pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12 and 13 can be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the

accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). Furukawa '740 is silent as to a housing. However, as demonstrated by Furukawa '760, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the device of Furukawa '740 with a housing. Furthermore, Franz teaches various electronic means for interpreting the analog output of a pressure-sensitive variable-conductance switch and converting it to a digital signal (see col. 4, line 4 to col. 6, line 43 of Franz). Furukawa '740 is silent as to a means for converting the analog signal to a digital signal. However, as demonstrated by Franz, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the device of Furukawa '740 with a means to convert the analog signal to a digital signal.

This rejection of claims 35-39 of Armstrong '991 based on Furukawa '740 in view of Furukawa '760 and further in view of Franz was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #24

The requester submits that claims 44-45 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Yamamoto.

Claims 44-45 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Yamamoto. Furukawa '760 teaches a device

and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of

the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 also teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Yamamoto teaches a resilient dome cap 55 positioned over a sheet 54 (see Fig. 4 and paragraph 22 of the accompanying translation). It would have been obvious for one of ordinary skill in the art at the time the invention was made to form the pressure-sensitive variable-conductance sensor of Furukawa '760 as a dome cap over a sheet, in the manner disclosed by Yamamoto.

This rejection of claims 44-45 of Armstrong '991 based on Furukawa '760 in view of Yamamoto was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #25

The requester submits that claims 23-34 and 40-43 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Furukawa '760 and further in view of Eventoff '238..

Claims 23-34 and 40-43 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Asano in view of Furukawa '760 and further in view of Eventoff '238. Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure applied to the spring 1 (see Figs. 1-3). Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying

translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the accompanying translation). Furukawa '760 teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement

changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). As demonstrated by Furukawa '760, it would have been obvious for one of ordinary skill in the art to provide the device of Asano with a rubber dome cap and electronic circuitry for creating an analog signal. Furthermore, Eventoff '238 teaches a pressure-sensitive variable-conductance switch used to generate and on/off signal (see col. 8, line 64 to col. 9, line 10 of Eventoff '238). As demonstrated by Eventoff '238, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the device of Asano with an on/off switch.

This rejection of claims 23-34 and 40-43 of Armstrong '991 based on Asano in view of Furukawa '760 and further in view of Eventoff '238 was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #26

The requester submits that claims 71-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Sakurai in view of Kramer.

Claims 71-73 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Sakurai in view of Kramer. Sakurai teaches a game control with a housing to be grasped and held simultaneously by two hands including a left-hand area and a right-hand area (see Fig. 1). Sakurai teaches a plurality of depressible electricity manipulating devices where at least some are within reach of the user's right-hand

thumb (see Fig. 1). Sakurai teaches at least one pressure-sensitive variable-conductance sensor in the right-hand area reachable by the user's right hand thumb, which includes a means for creating an analog electrical signal representing varying applied physical pressure (see paragraphs 21, 26 and 57 of the accompanying translation). Sakurai teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation). The switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation). Kramer teaches injection molded dome caps located to be operational with pressure-sensitive material of said pressure-sensitive variable-conductance analog sensors (see col. 5, lines 35-50 of Kramer). As demonstrated by Kramer, it would have been obvious for one of ordinary skill in the art at the time the invention was made to form the sensors of Sakurai by using injection molding. Furthermore, inherent in the devices of Sakurai and Kramer are the methods of manufacture, which constitute assembly steps.

This rejection of claims 71-73 of Armstrong '991 based on Sakurai in view of Kramer was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #27

The requester submits that claims 72-73 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Sakurai in view of Kramer and further in view of Fukushima.

Claims 72-73 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Sakurai in view of Kramer and further in view of Fukushima. Sakurai teaches a game control with a housing to be grasped and held simultaneously by two hands including a left-hand area and a right-hand area (see Fig. 1). Sakurai teaches a plurality of depressible electricity manipulating devices where at least some are within reach of the user's right-hand thumb (see Fig. 1). Sakurai teaches at least one pressure-sensitive variable-conductance sensor in the right-hand area reachable by the user's right hand thumb, which includes a means for creating an analog electrical signal representing varying applied physical pressure (see paragraphs 21, 26 and 57 of the accompanying translation). Sakurai teaches that pressure-sensitive variable-conductance sensors can be used for on/off functions, such as "start" (see Fig. 7 and paragraphs 24, 26-27 and 49-50 of the accompanying translation). The switches are connected to an electronic video game device that operates in response to the signals of the switches (see paragraphs 47-55 of the accompanying translation). Kramer teaches injection molded dome caps located to be operational with pressure-sensitive material of said pressure-sensitive variable-conductance analog sensors (see col. 5, lines 35-50 of Kramer). Fukushima teaches a typical injection molded dome cap (see Figs. 1-6 and 10-13 and col. 4, line 63 to col. 5, line 3 of Fukushima). As demonstrated by Kramer and Fukushima, it would have been obvious for one of ordinary skill in the art

at the time the invention was made to form the sensors of Sakurai by using injection molding. Furthermore, inherent in the devices of Sakurai, Kramer and Fukushima are the methods of manufacture, which constitute assembly steps.

This rejection of claims 72-73 of Armstrong '991 based on Sakurai in view of Kramer and further in view of Fukushima was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #28

The requester submits that claims 44-45 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Kramer.

Claims 44-45 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '760 in view of Kramer. Furukawa '760 teaches a device and method of using a two hand held game comprised of a controller 10 that is connected to a video game machine via a cable 11 where controller 10 is formed to be held by a user in two hands simultaneously and the controller 20 has a left-hand area and a right-hand area (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the left-hand area is a cross shaped key 12 having four codependent areas for vertically and horizontally moving characters on the screen (see Fig. 1 and paragraph 8 of the accompanying translation). Located in the right-hand area is a plurality of depressible trigger keys 19 and 20 (see Fig. 1 and paragraph 8 of the accompanying translation). A rubber contact point 29 on the cross shaped key 12 is formed from elastic rubber

material and a moving part 30 is disposed onto the center of each cross shaped key 12 (see Fig. 2 and paragraph 9 of the accompanying translation). Moving contact 32 is formed of conductive rubber and is disposed on the bottom end of each moving part 30, and conductive part 33, whose resistance varies with pressure, is attached to the bottom end surface of moving contact 32 (see Fig. 2 and paragraph 9 of the accompanying translation). By performing the depressing operation, moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 so that it is electrically connected to fixed contacts 7 and 7 on a wiring pattern disposed on substrate 5 (see Fig. 2 and paragraph 9 of the accompanying translation). The pressing force applied by the fingertip on each contact point 29 on the cross shaped key 12 changes the electrical resistance through conductive part 33 and thus, the operation of a character in a video game can be freely controlled by the pressing force applied by the fingertip of the operator (see Fig. 2 and paragraph 10 of the accompanying translation). Rubber contact point 29 is dome-shaped, and includes elastic leg parts 31 where moving part 30 is lowered while being resisted by the elastic bias of elastic leg part 31 (see Fig. 2 and paragraph 9 of the accompanying translation). Furukawa '760 also discloses placing analog sensors below each of the four directional sections of a cross key in a game controller, each of which is attached to the output circuit to control movement of a game character in one direction, allowing for a user to vertically and horizontally move characters on a screen (see paragraph 8 of the accompanying translation). Furukawa '760 also states that additional sensors may be used in other locations on the controller, other than in the cross keys (see paragraph 9 of the

accompanying translation). Furukawa '760 also teaches that by pressing the pressing portion of the cross key 12 with a fingertip, the speed of the character's movement changes according to the magnitude of the pressing force applied by the fingertip (see paragraph 10 of the accompanying translation). Kramer teaches a pressure-sensitive sensor having a rubber dome cap positioned over a sheet 14, where sheet is positioned over a circuit board 10 having electrical circuit traces 12.1 and 12.2 (see Fig. 1 of Kramer). Kramer also teaches circuitry for interpreting the analog output of sensor material 36 and converting it into a digital signal (see Fig. 2 of Kramer). As demonstrated by Kramer, it would have been obvious for one of ordinary skill in the art at the time the invention was made to form the pressure-sensitive variable-conductance sensor of Furukawa '760 as a dome cap positioned over a sheet, with means for converting an analog signal to a digital signal.

This rejection of claims 44-45 of Armstrong '991 based on Furukawa '760 in view of Kramer was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #19

The requester submits that claims 66-68 of Armstrong '991 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Waigand. Claims 66-68 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Furukawa '740 in view of Waigand. Furukawa '740 teaches a pressure sensitive device 10 comprised of a rubber key top 14 having a surface with an apex positioned above fixed contacts 12 and 13 on a board 11 where the fixed contacts 12 and 13 can

be electrically connected to each other via a movable contact 14b mounted to the lower end of the rubber key top 14 (see Fig. 2 and paragraphs 12-16 of the accompanying translation). The electrical resistance value R between the fixed contacts 12 and 13 changes considerably on the basis of pushing force F of the rubber key top 14 (see Figs. 3 and 4). Waigand teaches circuitry for interpreting the analog output of sensor material 36 and converting it into a digital signal (see col. 3, line 51 to col. 4, line 41 and Fig. 6 of Waigand). As demonstrated by Waigand, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the device of Furukawa '740 with a means for converting an analog signal to a digital signal.

This rejection of claims 66-68 of Armstrong '991 based on Furukawa '740 in view of Waigand was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

Proposed Third Party Requester Rejection: Ground #30

The requester submits that claims 66-68 of Armstrong '991 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Asano in view of Waigand.

Claims 66-68 of Armstrong '991 are rejected under 35 U.S.C. § 103(a) as being obvious over Asano in view of Waigand. Asano teaches an electro-conductive contact rubber 2 formed from an electro-conductive elastic body on the inner surface ceiling of a centrally hollow conical spring 1 (see Fig. 1). Fig. 1 shows that spring 1 has a surface with an apex positioned above a print board 3 with electrodes 4 for creating analog output proportional to varying physical pressure applied to the spring 1 (see Figs. 1-3).

Waigand teaches circuitry for interpreting the analog output of sensor material 36 and converting it into a digital signal (see col. 3, line 51 to col. 4, line 41 and Fig. 6 of Waigand). As demonstrated by Waigand, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the device of Furukawa '740 with a means for converting an analog signal to a digital signal.

This rejection of claims 66-68 of Armstrong '991 based on Asano in view of Waigand was proposed by the third party requester in the request for reexamination and is being adopted essentially as proposed in the request.

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that:

The patent owner's correspondence address for all communications in an *ex parte* reexamination or an *inter partes* reexamination is designated as the correspondence address of the patent.

> *Revisions and Technical Corrections Affecting Requirements for Ex Parte and Inter Partes Reexamination*, 72 FR 18892 (April 16, 2007)(Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is

strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination and Amendment Practice	(571) 272-7703
Central Reexam Unit (CRU)	(571) 272-7705
Reexamination Facsimile Transmission No.	(571) 273-9900

Conclusion

Please mail any communications to:

Attn: Mail Stop "Ex Parte Reexam"
Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Please FAX any communications to:

(571) 273-9900
Central Reexamination Unit

Please hand-deliver any communications to:

Customer Service Window
Attn: Central Reexamination Unit
Randolph Building, Lobby Level
401 Dulaney Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

/Beverly M. Flanagan/

Beverly M. Flanagan
CRU Examiner
GAU 3993
(571) 272-4766

Conferee _____

Conferee _____