IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
LUFKIN DIVISION

Anascape, Ltd., Plaintiff, v. Microsoft Corp., and Nintendo of America, Inc., Defendants.	Civil Action No. 9:06-cv-158-RC JURY TRIAL REQUESTED

ANASCAPE'S OPENING CLAIM CONSTRUCTION BRIEF – PART I

PART I – MICROSOFT-INFRINGED PATENTS

U.S. Patent No. 5,999,084

U.S. Patent No, 6,102,802

U.S. Patent No, 6,135,886

U.S. Patent No. 6,343,991

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Plaintiff Anascape, Ltd. ("Anascape") submits its opening claim construction brief in two parts. Part I addresses the disputed terms of U.S. Patent Nos. 5,999,084; 6,102,802; 6,135,886; and 6,343,991.[1] Defendant Microsoft Corp. ("Microsoft") infringes these four patents; they are collectively referred to as the "Microsoft-Infringed Patents." Part II addresses the disputed terms of U.S. Patent Nos. 6,222,525 and 6,906,700, which both Microsoft and Defendant Nintendo of America, Inc. ("Nintendo") infringe. These two patents are collectively referred to as the "Microsoft & Nintendo-Infringed Patents."

The first section of this brief introduces the inventions of the Microsoft-Infringed Patents. The second section addresses applicable claim construction principles, including (a) the "cardinal sin" of reading limitations from the specification into the claims; and (b) the identification and interpretation of elements governed by 35 U.S.C. § 112 ¶ 6. The last section of this brief explains why Anascape's proposed constructions for the disputed terms of the Microsoft-Infringed Patents are consistent with the established principles of claim construction and should be adopted by the Court.

I. TECHNICAL BACKGROUND

Brad Armstrong is the sole inventor of each of the patents-in-suit. In the early to mid-1990s, Armstrong invented and built prototypes of improved controllers for video game systems, computers, and other electronic devices. His work – and the work of his company, Anascape – resulted in joint venture development efforts with established companies, which resulted in commercially marketed products. His inventions form the basis of the patents at issue in this lawsuit.

[1] Each of the patents-in-suit will be referenced by the last three digits of the patent number. For example, U.S. Patent No. 5,999,084 will be referred to as the '084 patent.

Generally, the Microsoft-Infringed Patents relate to pressure-sensitive sensors, whether as a stand-alone device, as a component in a game controller, or as part of a method claim. Unlike a digital sensor that only outputs an on-or-off signal, a pressure-sensitive sensor can output a range of electrical signals, *i.e.* analog signals, in proportion to the pressure applied to it by the user's finger or thumb. ('802 patent at 1:44-51, 3:39-43.)[2]

The disputed claim terms all relate to different aspects of creating an analog signal and the circuitry for interpreting those signals. The following technical background highlights those aspects of Armstrong's invention. In addition, Armstrong described and claimed (1) how pressure-sensitive sensors can be implemented in game controllers with novel layouts that correspond to the specialized operation of the two halves of a user's brain and (2) how pressure-sensitive sensors can be constructed and manufactured in cost-effective ways.

In an industry as competitive as video game systems, even subtle implementation details – much less the revolutionary advances of Armstrong's patents – can considerably impact the success or failure of a game controller and the accompanying video game system. For example, when Microsoft originally released its infringing Xbox video game system, the original Xbox controller was widely criticized because of its large form-factor. (*See* WIKIPEDIA, THE FREE ENCYCLOPEDIA, *available at* http://en.wikipedia.org/wiki/Xbox.) After releasing a smaller controller with identical functionality, the Xbox video game system's system popularity soared.

A. Pressure-Sensitive Sensors Provide Superior Game Control

Armstrong realized that pressure-sensitive sensors could provide numerous benefits when included within video game controllers. ('802 patent at 2:10-12.) For example, consider a

[2] Cites to a particular patent are exemplary only. In most cases, similar teachings and disclosures are provided in many of the Microsoft-Infringed Patents. Moreover, two of the Microsoft-Infringed Patents, the '802 and '991 patents, share a common specification.

button on a video game controller that normally makes a video game character jump. If the button is associated with a simple digital sensor, no matter the pressure applied to the button by the user, the video game character will jump the same height. However, if the button were associated with a pressure-sensitive sensor, the character would jump higher if the user pressed the button with a larger amount of pressure, and would jump lower if the user pressed the button with a smaller amount of pressure. ('802 patent at 3:17-20.) Video games sold for use with Microsoft's infringing Xbox products, such as *Dead or Alive Xtreme Beach Volleyball*, use pressure-sensitive sensors in exactly this way.

Similarly, if a button controlled a simulated game character's movement, the use of such a sensor would allow the character to stand still with no pressure, walk with low pressure, walk faster with increased pressure, and run with a relatively high pressure applied to a single button. ('802 patent at 3:10-17.) The possibilities are unlimited; other potential uses for a pressure-sensitive sensor include controlling the fire rate of a gun or the steering of a simulated racecar. ('802 patent at 3:20-26.)

B. Armstrong Described Two Ways of Creating a Pressure-Sensitive Output

The Microsoft-Infringed Patents disclose two ways of creating a pressure-sensitive output: an "increasing surface area" embodiment and a "volume effect" embodiment. In both embodiments, the pressure-sensitive sensor is capable of providing a varying electrical output in proportion to the applied pressure.

First, as shown below in the increasing surface area embodiment, the pressure-sensitive sensor **26** may provide a variable electrical output through the use of a flexible conductive element **36** that flattens with increasing applied pressure. ('802 patent at 8:36-9:4.) As the conductive element **36** flattens, additional surface area touches the circuit contacts **32** and **34**, which increases the electrical flow through the sensor. (*Id.* at 8:58-9:4.)

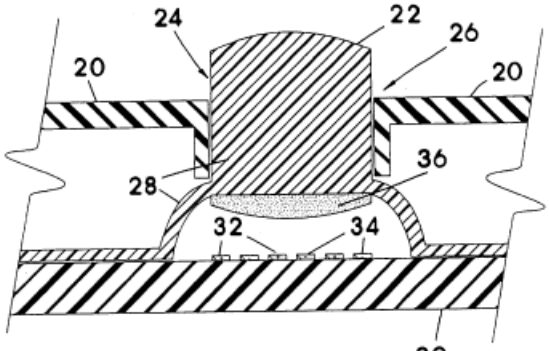


FIG. 7

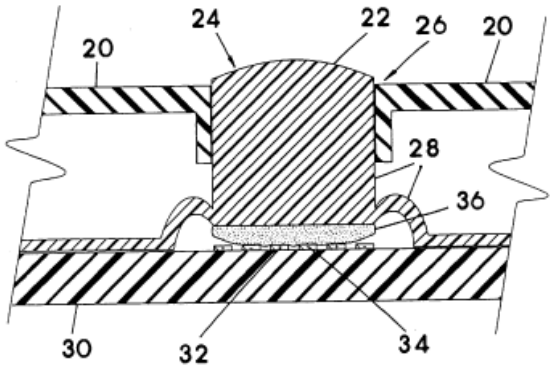


FIG. 8

(*Id.*, Figs. 7 and 8.) Figure 7, above, shows the sensor **26** in a deactivated or raised position. (*Id.* at 8:51-58.) A dome cap **28** is mounted over a circuit board **30** that includes first and second circuit contacts **32** and **34**. (*Id.* at 8:42-45.) The dome-cap **28** includes a conductive element **36** on its bottom surface. (*Id.*) The conductive element **36** includes a convex lower surface. (*Id.* at 8:58-9:4.) The upper surface of dome cap **22** may be depressed by a thumb or finger, which brings conductive element **36** into contact with circuit contacts **32** and **34**. (*Id.* at 8:45-49.) Figure 8, above, shows the same sensor **26** in an activated or depressed position. (*Id.* at 8:51-58.) When depressed, conductive element **36** establishes a conductive path between contact **32** and contact **34**, completing the sensor's electrical circuit. (*Id.* at 8:58-9:4.) Because the lower surface of conductive element **36** is convex and flexible, conductive element **36** deforms with additional pressure to flatten-out, allowing additional surface area of element **36** to touch both contact **32** and contact **34**. (*Id.*) In this embodiment, as the user increases pressure, more surface area of element **36** touches contacts **32** and **34**, providing increased conductivity due to the additional current paths created by the additional surface contact area. (*Id.*)

In the second embodiment – the volume effect embodiment – the pressure-sensitive sensor **10** may include a conductive element **14** that compresses as pressure is applied to the sensor and, as it compresses, alters its conductivity to create a varying electrical response.

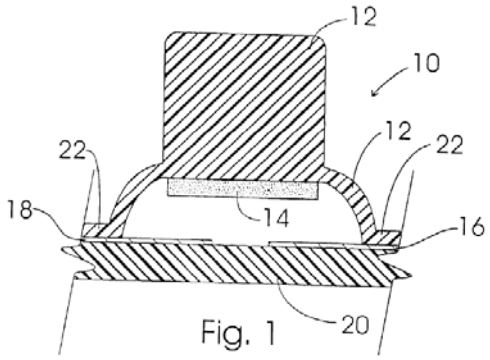


Fig. 1

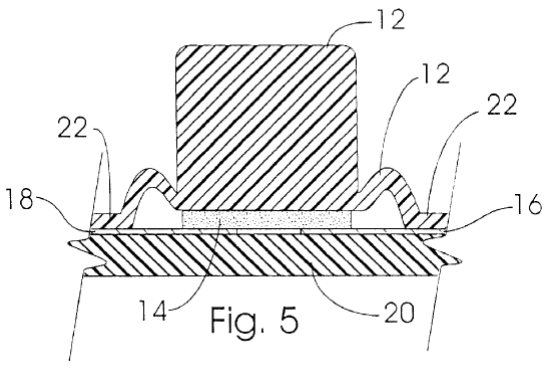


Fig. 5

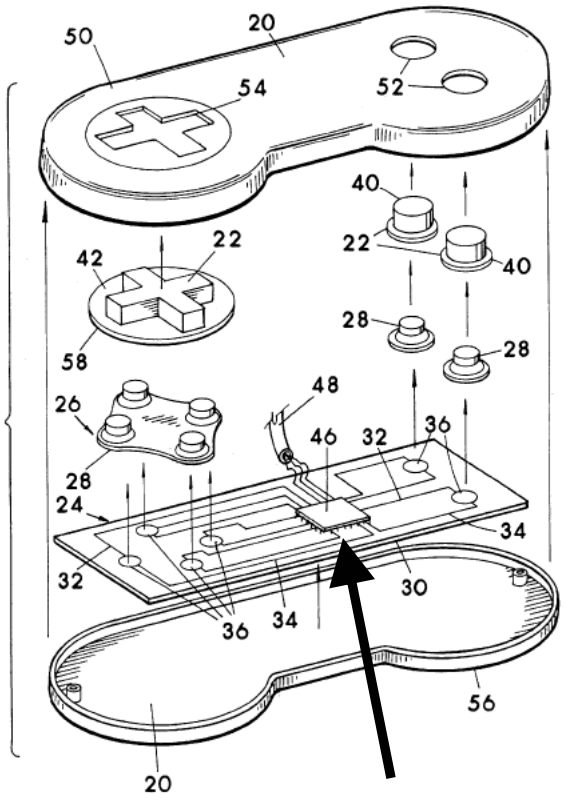
('886 patent, Figs. 1 and 5.) In Figure 1, sensor **10** is shown in a deactivated state with the conductive element **14** raised and disengaged from the two contacts **16** and **18**. (*Id.* at 6:1-10.) The two contacts **16** and **18** are supported by a non-conductive base **20**, which is frequently a circuit board. (*Id.* at 6:20-23.) The conductive element **14** is attached to the underside of a dome-cap **12**. (*Id.* at 6:1-10.) Figure 5 shows the same sensor in an activated state. (*Id.* at 7:56-64.) When pressure is applied to the top of dome-cap **12**, the conductive element **14** comes into contact with the contacts **16** and **18** to complete the electrical circuit of the sensor **10**. (*Id.* at 6:65-7:8.) As increasing depressive pressure is applied to dome-cap **12**, conductive element **14** will start to compress. (*Id.* at 7:31-38.) As the conductive element **14** is compressed, it will lower its resistivity and pass additional current from one contact **16** to the other **18**. (*Id.*) Accordingly, the electrical output of the sensor **10** will vary according to the applied pressure.

Regardless of which embodiment is being discussed, the "snap" provided by the dome-cap **12** is a particularly important aspect of the inventions of the Microsoft-Infringed Patents. The dome-cap **12** is typically hemispherically shaped and smaller at the end furthest from base **20**. (*Id.* at 6:23-25.) As the dome-cap **12** is depressed, it produces a soft snap, which is discernable by the user through his thumb or finger. (*Id.* at 1:58-66.) This snap occurs when the dome-cap is depressed beyond a given point – the point at which a mechanical threshold is crossed and the dome-cap caves in. (*Id.*) The snap defining the tactile sensation occurs just prior

to the conductive element **14** touching the two contacts **16** and **18** on the circuit board. (*Id.*) This tactile sensation is perceived by the user as occurring at the same time the sensor is activated and, thereby, alerts the user when the sensor is being activated. (*Id.*)

C. Armstrong Described Circuitry for Interpreting the Output of Pressure-Sensitive Sensors

The sensors described above are capable of outputting an analog electrical signal representative of the depressive force applied by the user. Before that signal can be used by an electronic device, however, it typically must be converted into a digital signal. Armstrong's patents describe circuitry that can perform such a conversion. (*See, e.g.* '802 patent at 10:25-11:25.) Figure 9 of the '802 patent shows an exploded view of a controller that includes pressure-sensitive sensors **36** as well as circuitry for converting analog signals into digital signals for transmission to a video game console. (*Id.* at 10:25-11:25.) Circuit board **30**, which is identified by the large arrow in the lower half of the figure, includes an array of circuitry **34** connecting the sensors **36** to active electronics **46**. (*Id.* at 10:58 - 11:13) The active electronics **46** receive the analog outputs of the sensors **36**, convert that output into a corresponding digital signal, and transmit the digital signal to the video game console through output cable **48**. (*Id.* at 10:67-11:7.) The active electronics **46** may be an application specific integrated chip ("ASIC") or a micro-controller with integrated



circuitry. (*Id.* at 11:7-14.) The active electronics typically include analog-to-digital conversion circuitry. (*Id.* at 11:14-18.)

II. APPLICABLE CLAIM CONSTRUCTION PRINCIPLES

Claim construction is an issue of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). Claim construction begins by inquiring how a person of ordinary skill in the art would understand the claim term at the time of the effective filing date of the patent application. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*). To that end, a court should look first to the patent claims, specification, and prosecution history – the intrinsic evidence – for the meaning of the claim terms. *Id.* at 1313-14. In light of this evidence, the words of a claim "are generally given their ordinary and customary meaning." *Id.* at 1313.

A. Importing Limitations From the Specification Is a "Cardinal Sin" of Claim Construction

In line with *Phillips*, Anascape primarily relies on the patents' specifications to support its constructions, since the claims "do not stand alone," but, rather, are part of "a fully integrated written instrument." *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978-79). The specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Id.* (quoting *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

Microsoft, however, ***repeatedly*** attempts to import limitations from preferred embodiments into the asserted claims. This is fundamentally unsound; the Federal Circuit has made clear that using the specification to read limitations into the chosen claim language is a "cardinal sin" of claim construction. *See, e.g., Phillips*, 415 F.3d at 1320 ("one of the cardinal sins of patent law [is] reading a limitation from the written description into the claims").

Although "the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice," the line should be reasonably clear if the district court remains focused on how a person of ordinary skill in the art would understand the claim terms. *Id.* Reading the claims and specification in context will usually inform the court whether the patentee is setting out specific examples of the invention or whether the patentee, instead, intends for the claims to cover only the described embodiments in the specification. *Id.* When the specification simply describes specific embodiments, the claims should not be confined to those embodiments. *Id.*; *see also Nazomi Communic'ns, Inc. v. ARM Holdings, PLC*, 403 F.3d 1364, 1369 (Fed. Cir. 2005) (claims may embrace "different subject matter than is illustrated in the specific embodiments in the specification").

B. "Means-Plus-Function" Terms Present Unique Claim Construction Issues

Some of the disputed claim terms are written in "means-plus-function" form pursuant to 35 U.S.C. § 112 ¶ 6. Under that statutory provision, "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

1. The Word "Means" Does Not, in Itself, Mandate Application of 35 U.S.C. § 112 ¶ 6

Microsoft and Anascape dispute whether certain disputed claim terms are governed by 35 U.S.C. § 112 ¶ 6. Although the use of the word "means" creates a presumption that § 112 ¶ 6 applies, this presumption may be overcome in two ways. *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1347 (Fed. Cir. 2002). First, "a claim element that uses the word 'means' but recites no function corresponding to the means does not invoke § 112, ¶ 6." *Rodime PLC v.*

Seagate Tech., Inc., 174 F.3d 1294, 1302 (Fed. Cir. 1999). Second, "even if the claim element specifies a function, if it also recites sufficient structure or material for performing that function, § 112, ¶ 6 does not apply." *Id.* Therefore, "the mere use of the word 'means' after a limitation, without more, does not suffice to make that limitation a means-plus-function limitation." *Allen Eng'g Corp.*, 299 F.3d at 1347.

2. In Applying 35 U.S.C. § 112 ¶ 6, the Court Should Only Identify Structure Necessary to Perform the Claimed Function

Anascape and Microsoft also disagree regarding the function and structure corresponding to some of the means-plus-function limitations. Claim elements written in means-plus-function format cover "means identical to or the equivalent of the structures, material, or acts described in the patent specification" that "perform the identical function as specified in the claims." *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1347 (Fed. Cir. 1999). Identifying the corresponding structure requires particular attention to detail, as it is important to avoid "import[ing] structural limitations from the written description that are unnecessary to perform the claimed function. *Wenger Mfg., Inc. v. Coating Machinery Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001); *see also Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999) (holding that § 112 ¶ 6 does not "permit incorporation of structure from the written description beyond that necessary to perform the claimed function").

III. ANASCAPE'S PROPOSED CONSTRUCTIONS OF THE DISPUTED TERMS

A. Level of Ordinary Skill in the Art

As discussed above, the patents require familiarity with mechanical structures as well as electrical sensors and circuitry. As a result, a person of ordinary skill in the art would hold a bachelor's degree in mechanical or electrical engineering and would have one year of experience

designing sensors and/or controllers for computers, robotics, video games, and/or other electronic devices.

B. "pressure-sensitive variable conductance analog sensor"

The term "pressure-sensitive variable conductance analog sensor" appears throughout the Microsoft-Infringed Patents.[3] Anascape proposes a construction that includes both embodiments of pressure-sensitive sensors invented by Armstrong and disclosed in the specifications. Microsoft, on the other hand, arbitrarily attempts to narrow the asserted claims to only the volume effect embodiment. The Court must reject Microsoft's invitation to commit a "cardinal sin" of claim construction by reading in the limitations of one disclosed embodiment. Moreover, Microsoft's proposal would read out one of the embodiments disclosed in the specification – an approach that is rarely, if ever, correct. *See MBO Labs., Inc. v. Becton, Dickson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007) ("A claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct."). The parties' competing proposals for the term "pressure-sensitive variable conductance analog sensor" are shown in the table below.

[3] This term appears in the asserted claims of the '084 and '991 patents. Anascape and Microsoft agree that the similar terms, "pressure-sensitive variable conductance sensor," "pressure-sensitive analog sensor," "pressure-sensitive variable conductance structural arrangement," "pressure-sensitive variable conductance structure," "pressure-sensitive variable sensor," and "pressure-sensitive . . . button sensor," which appear in the '802, '991, '525, and '700 patents, should be construed in the same way.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
pressure-sensitive variable conductance analog sensor	an electricity manipulating device for varying electrical output proportional to varying physical force	A pressure-sensitive variable-conductance sensor has material to contact conductive elements. This type of sensor has a conductivity that changes due to a volume effect. As pressure on the material increases the material volume decreases. This decrease in volume of the material increases the internal conductivity through the material. As a result, the conductivity through the sensor increases. A pressure-sensitive variable-conductance sensor does not include a variable conductivity sensor utilizing a micro-protrusion surface area effect. In such a sensor, as pressure on the material increases the surface area of contact between the micro-protrusions and the conductive elements increases. As a result, the conductivity through the sensor increases.

1. Anascape's Proposed Construction Is Derived From the Specifications

Anascape's proposed construction, "an electricity manipulating device for varying electrical output proportional to varying physical force" is founded upon the teachings of the specifications of the Microsoft-Infringed Patents, which make clear that a sensor is an "electricity manipulating device" and that a pressure-sensitive variable conductance analog sensor must be able to "vary electrical output proportional to varying physical pressure." First, the specifications repeatedly describe a sensor as an "electricity manipulating device":

- "At least one of the electricity manipulating devices is a pressure-sensitive variable-conductance sensor . . ." ('802 patent, Abstract);
- "One or more of the electricity manipulating devices are analog pressure-sensitive variable-conductance electrical devices (sensors) . . ." ('802 patent at 3:39-42); and
- "Electricity manipulating devices 24 in this disclosure can be any electrical device such as simple Off/On (momentary-On) switches as are commonly used in prior art game controllers, but with the present invention at least one of the electricity manipulating devices 24 is an analog pressure-sensitive variable-conductance sensor 26 . . ." ('802 patent, 5:62-6:5).

Second, the specifications also make clear that a "pressure-sensitive variable conductance analog sensor" is different from a prior art on/off sensor due to its ability to vary electrical output or flow proportional to varying physical force:

- ". . . a pressure-sensitive variable-conductance sensor for creating an analog electrical output proportional to varying physical pressure applied to at least one depressible surface." ('802 patent, Abstract);
- ". . . analog pressure-sensitive variable-conductance electrical devices (sensors) for varying electrical output proportional to varying physical pressure applied by the user's thumb or fingers" ('802 patent at 3:39-43); and
- " . . . the sensor is a momentary-on analog type sensor capable of outputs of many different readable states." ('271 patent at 18:45-46).

In addition, Armstrong did not disclaim the increasing surface area embodiment of his invention during the prosecution of the patents. Instead, the prosecution history shows that Armstrong indicated that the variable/analog output of the sensor distinguished his invention over the digital sensors of the prior art:

- "[The prior art cited by the examiner] does not show or describe a sensor capable of variable (analog) electrical output." ('084 patent file history, 4/30/1999 Amendment at 4, attached as Ex. 1.)

Therefore, the Court should construe this claim term as "an electricity manipulating device for varying electrical output proportional to varying physical force."

2. Microsoft's Proposed Construction Improperly Limits the Claim Term to One of the Two Embodiments Invented and Disclosed by Armstrong

Microsoft's lengthy proposal is a transparent attempt to limit the scope of the asserted claims to one of the two embodiments invented and disclosed by Armstrong. Microsoft does not even attempt to mask its strategy; it proposes a two paragraph construction that unabashedly imports limitations from the volume effect embodiment, such as requiring a sensor that "has a conductivity that changes due to a volume effect." Microsoft's attempt to read in limitations from a preferred embodiment should be rejected because it is not required by the plain language

of the claims. *See Acumed LLC v. Stryker Corp.*, Nos. 2006-1260 & 2006-1437, 2007 U.S. App. LEXIS 8375, at *17 (Fed. Cir. Apr. 12, 2007) (refusing to read in a limitation from the specification because, in writing his claims, the patentee "chose a different term that implies a broader scope").

Moreover, Microsoft's attempt to ***explicitly*** exclude the increasing surface area embodiment is an even more compelling ground for rejecting its proposal. This embodiment is described with respect to figures 7 and 8 of the '802 patent, and depicted in figures 4-13 of the '084 patent and figures 3 and 5 of the '802 patent. Microsoft's lengthy proposal explicitly excludes this embodiment: a "pressure-sensitive variable-conductance sensor ***does not include*** a variable conductivity sensor utilizing a micro-protrusion surface area effect. In such a sensor, as pressure on the material increases the surface area of contact between the micro-protrusions and the conductive elements increases." Microsoft's own proposal acknowledges that as a result of the increased surface area contact, "the conductivity through the sensor increases." As discussed above, that is exactly what the patents describe as the distinctive hallmark of a "pressure-sensitive variable conductance sensor."

Undoubtedly, Microsoft will point out that the increasing surface area embodiment is shown in combination with the volume effect embodiment. As the '802 patent makes clear, nothing prohibits the two embodiments from being used together. ('802 patent at 8:65-9:4.) However, the simple fact that the increasing surface area embodiment is only shown in conjunction with the volume effect embodiment should not limit the claims of these patents to only a single embodiment. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) ("This court has expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that

embodiment."). Because either embodiment of the patents-in-suit is capable of varying electrical output in proportion to the varying force applied to the sensor, the construction of this term must capture both embodiments. ('802 patent at 8:65 ("This arrangement of relatively lower initial surface area contact followed by additional or a larger surface area contact with further depression can provide additional conductivity changes due to not only the inherent conductivity changes brought about by pressure applied to material 36 but also by establishing additional current paths possible by the additional surface contact area.").)

C. "pressure-sensitive variable conductance material"

The parties' competing constructions of the claim term "pressure-sensitive variable conductance material"[4] present a similar issue for the Court's consideration.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
pressure-sensitive variable-conductance material	a conductive element that provides for variable electrical flow dependent upon the applied force	Material that has a conductivity that changes due to a volume effect. As pressure on the material increases the material volume decreases. This decrease in volume of the material increases the internal conductivity through the material. As a result, the conductivity through the sensor increases. This does not include material utilizing a micro-protrusion surface area effect. In such material, as pressure on the material increases the surface area of contact between the micro-protrusions and the conductive elements increases. As a result, the conductivity through the sensor increases.

Similar to the previous term, Anascape's construction is founded upon the teachings of the specification, which only require that pressure sensitive variable conductance material be a "conductive element" that "provides for variable electrical flow dependent upon the applied

[4] This term appears in each of the Microsoft-Infringed Patents. Anascape and Microsoft agree that the term "pressure sensitive variable conductance material means" of the '802 patent should be construed identically.

force." Microsoft's two-paragraph proposal, conversely, again attempts to inject limitations that narrow the scope of the asserted claims to one of the two disclosed embodiments of the patents.

The specifications confirm that "pressure-sensitive variable conductive material" must be a conductive element:

- "Pressure-sensitive variable-conductance material is contained within the housing and electrically positioned as a variably ***conductive element*** in a current flow path between the two conductive elements." ('084 patent, Abstract (emphasis added));
- "The present invention involves the use of pressure-sensitive variable-conductance material electrically positioned as a variably ***conductive element*** . . ." ('084 patent at 2:50-53 (emphasis added)); and
- "Improved methods for using a dome-cap sensor wherein an injection molded dome-cap is combined with an analog ***active element*** . . ." ('886 patent, Abstract (emphasis added)).

Similarly, the specifications repeatedly confirm that pressure-sensitive material must provide for variable electrical flow dependent upon the applied force:

- "pressure-sensitive variable-conductance material for providing variable electrical flow between the two conductive elements dependant upon the applied pressure . . ." ('084 patent, Abstract);
- "The present invention involves the use of pressure-sensitive variable-conductance material electrically positioned as a variably conductive element between highly conductive elements in a structural arrangement capable of providing variable electrical output . . ." ('084 patent at 2:50-54);
- "The present invention involves the use of structures (pressure sensors) having pressure-sensitive variable-conductance material across proximal circuit traces in order to provide variable output. Such variable output is useful for control of action intensity of electronic imagery in proportion to applied physical pressure . . ." ('802 patent at 2:55-60); and
- ". . . pressure-sensitive variable-conductance material for varying electrical output of circuitry in proportion to user applied pressure to a depressible surface." ('802 patent at 4:52-54).

Therefore, Anascape's proposed construction, "a conductive element that provides for variable electrical flow dependent upon the applied force," should be adopted because it captures these teachings of the specifications.

In support of its limiting construction, Anascape expects Microsoft to rely on portions of the specifications that provide examples of pressure-sensitive variable conductance materials that exhibit a "volume effect," as described in Microsoft's proposed construction. (*See generally* '802 patent at 6:66-7:21.) The specification, however, makes clear that variable conductance can be achieved by any material having "variable resistive properties." ('802 patent at 6:49-52.) One way pressure-sensitive material can provide variable resistive properties is through its geometry, as discussed with respect to the increasing surface area embodiment. ('802 patent at 8:65 ("This arrangement of relatively lower initial surface area contact followed by additional or a larger surface area contact with further depression can provide additional conductivity changes due to not only the inherent conductivity changes brought about by pressure applied to material 36 but also by establishing additional current paths possible by the additional surface contact area.").)

As discussed above with respect to the separate term "pressure-sensitive variable conductance sensor," Microsoft's attempts to read in limitations from one of the two embodiments should be rejected.

D. "pressure-sensitive variable conductance of one of said buttons"

The parties' dispute with respect to this term arises because Microsoft has proposed a construction that embeds its faulty construction of "pressure-sensitive variable conductance sensor"[5] into this additional disputed claim term. For all of the reasons discussed above with respect to the term "pressure-sensitive variable conductance sensor," Microsoft's attempt to limit Armstrong's patents to one of his two disclosed embodiments should be rejected. Anascape's

[5] This term appears in only claim 11 of the '991 patent.

construction, which embraces both of the embodiments invented and claimed by Armstrong, should be adopted. The parties' competing constructions are presented below.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
pressure-sensitive variable-conductance of one of said buttons	variable electrical flow produced by a button associated with an electricity manipulating device for varying electrical output proportional to varying physical force	The conductivity of a pressure-sensitive variable-conductance sensor.

E. "depressing . . . individual buttons with varying degrees of pressure . . ."

The two terms, "depressing at least one of said individual buttons with varying degrees of pressure for manipulating imagery in proportion to the degree of depressive pressure" and "depressing said depressible individual button with varying degrees of pressure for varying the action,"[6] can be addressed together because, in both cases, Microsoft is unnecessarily attempting to rewrite the asserted claims to include limitations imported from the specification. The parties' competing proposals are shown in the table below.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
depressing at least one of said individual buttons with varying degrees of pressure for manipulating imagery in proportion to the degree of depressive pressure	*No construction is necessary. However, should the Court construe this term:* depressing at least one of the depressible individual buttons with varying force in order to control or change the imagery in proportion to the force applied	depressing at least one of the depressible individual buttons, which include a pressure-sensitive variable-conductance sensor, with varying force in order to control or change the imagery in proportion to the force applied
depressing said depressible individual button with varying degrees of pressure for varying the action intensity of the imagery proportional to the degree of depressive pressure	*No construction is necessary. However, should the Court construe this term:* depressing at least one of the depressible individual buttons with varying force in order to choose the action intensity of the imagery in proportion to the force applied	depressing at least one of the depressible individual buttons, which include a pressure-sensitive variable-conductance sensor, with varying force in order to choose the action intensity of the imagery in proportion to the force applied

[6] These two terms appear in method claims 12-15 of the '802 patent.

These terms should be governed by their plain meaning, which will be readily understandable by the fact-finder in this case. *See Acumed LLC,* 2007 U.S. App. LEXIS 8375, at *9 ("The task of comprehending [the words of a claim] is not always a difficult one."); *Produits Berger S.A. v. Schemenauer,* No. 2:06-CV-002, 2007 U.S. Dist. LEXIS 13370, at *17 (E.D. Tex. Feb. 27, 2007) (holding that the term "separated" was "plainly set forth in the claim" and finding that no construction was necessary); *Vision Advancement, LLC v. Vistakon,* No. 2:05-cv-455, 2007 U.S. Dist. LEXIS 5742, at *34-39 (E.D. Tex. Jan. 26, 2007) (holding that the term a number of claim terms did not require construction because their plain meaning was clear and understandable). The two claim terms, which appear in the method claims of the '802 patent, require a user to depress a button with varying degrees of force in order to vary the imagery or action intensity of the game in proportion to the amount of pressure applied. For example, the user can depress a button with varying degrees of pressure in order to vary how fast a game character moves, how hard a simulated race car turns, how fast a game character fires his gun, how high the game character jumps, etc. ('802 patent at 3:10-26.) Alternatively, should the Court choose to construe these claim terms, Anascape requests that the Court adopt its proposed constructions in the table above, which are faithful to the language of the claims.

Microsoft's proposed constructions require a pressure-sensitive variable-conductance sensor, even though the plain language of these two method claims does not require such a sensor. The superfluous language of Microsoft's proposed constructions is underlined below:

> depressing at least one of the depressible individual buttons<u>, which include a pressure-sensitive variable-conductance sensor,</u> with varying force in order to control or change the imagery in proportion to the force applied
>
> * * *
>
> depressing at least one of the depressible individual buttons<u>, which include a pressure-sensitive variable-conductance sensor,</u> with varying force in order to choose the action intensity of the imagery in proportion to the force applied

Other than the underlined text, the parties' proposals are identical. No case law or claim construction evidence supports Microsoft's unwarranted inclusion of an apparatus-type limitation into these method claims. "[A] method claim is not necessarily limited to the specific apparatus device or embodiment in the patent specification. A method claim can be infringed by the practice of the method with a device claimed in the patent, described in the specification, or any other device." *Michaels of Or. Co. v. Clean Gun, LLC*, No. CV-01-1158-ST, 2002 U.S. Dist. LEXIS 20371, at *26 (D. Or. July 9, 2002); *see also Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000) (holding that the method claim was not limited to the specific tool described in the specification).

F. "flexible material"

Similar to the previous term, the parties' dispute regarding the claim term "flexible material"[7] can again be attributed to Microsoft's effort to import a limitation from the specification. The parties' competing proposals appear in the table below.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
flexible material	*No construction is necessary. However, should the Court construe this term:* material that deforms when pressure is applied	Pressure-sensitive variable-conductance material

The term "flexible material" has a plain meaning that is readily apparent to a lay juror. Therefore, no construction is necessary. *See Acumed LLC*, 2007 U.S. App. LEXIS 8375, at *9; *Produits Berger S.A.*, 2007 U.S. Dist. LEXIS 13370, at *17; *Vision Advancement, LLC*, 2007 U.S. Dist. LEXIS 5742, at *34-39; and parentheticals at *supra* § III.E. However, if the Court decides to construe the term, an appropriate construction would be "material that deforms when pressure is applied," which is taken directly from the specification.

[7] This term appears in only claim 41 of the '991 patent.

> Also shown in FIGS. 7 and 8 is the surface of material 36 which contacts traces 32 and 34 is convexed which in this particular application provides for the apex of the surface to first contact across traces 32 and 34 followed by ***material 36 which is flexible deforming with additional applied pressure*** to somewhat flatten-out and contact additional surface area of both traces 32 and 34.

('991 patent at 8:62-9:1 (emphasis added).)

Microsoft's proposal, on the other hand, attempts to incorporate limitations found in the specification that have no relation to the language of claim 41 of the '991 patent, the only claim in which this term appears. Claim 41 reads:

> 41. A game control according to claim 40 wherein said electronics means includes an ASIC, and said pressure-sensitive variable-conductance sensor includes flexible material having a substantially convex surface, said material deforming with additional pressure to flatten causing contact of additional surface area to provide conductivity changes of said sensor.

Nothing in the claim requires the flexible material to be pressure-sensitive variable conductance material. Nor does the specification or file history of the '991 patent.

To the contrary, the specification shows an embodiment that has flexible material with a substantially convex surface that is not pressure-sensitive variable conductance material.

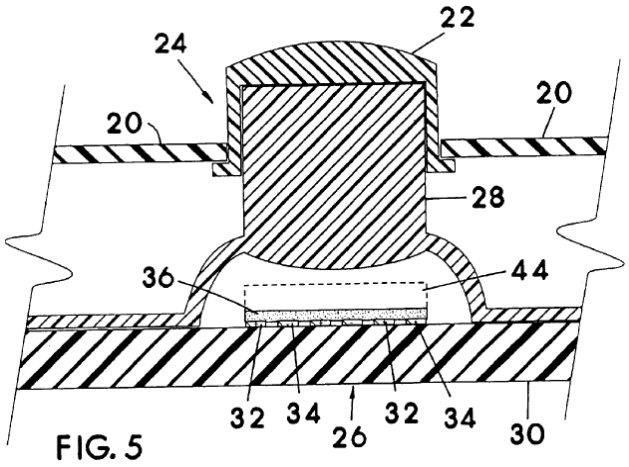


FIG. 5

('991 patent, Fig. 3.) In this embodiment, the convexed surface of dome-cap **28** is composed of rubbery material, such as injection molded silicone rubber. (*Id.* at 6:13-15.) As required by claim 41, the flexible material deforms with additional pressure to flatten and cause additional

surface area to provide conductivity changes of said sensor. (*See generally* '802 patent at 8:9-16 (explaining how optional plate **44** of figure 5 may be used to distribute the load or may be omitted, in which case the increasing surface area would cause additional conductivity changes).) Microsoft's invitation to read in a limitation from the specification – and exclude one of Armstrong's preferred embodiments – must be rejected.

G. "said surface with an apex is flexible, deforming with additional physical pressure to flatten and cause additional surface area contact to provide changes in electrical conductivity in said sensor"

This lengthy term, which appears only in claim 66 of the '991 patent, presents an almost identical dispute to the previous term because, again, Microsoft attempts to import limitations from one disclosed embodiment of the specification into the asserted claims. The parties' competing proposals are provided below.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
said surface with an apex is flexible, deforming with additional physical pressure to flatten and cause additional surface area contact to provide changes in electrical conductivity in said sensor	*No construction is necessary. However, should the Court construe this term:* the surface has an apex that flattens with additional force to increase the amount of surface area contact and, thereby, vary the electrical flow in the sensor	The surface with an apex is formed of pressure-sensitive variable-conductance material.

This lengthy term uses simple words that have a plain meaning and are readily understandable by a jury. Therefore, no construction is necessary. *See Acumed LLC*; *Produits Berger S.A.*; *Vision Advancement, LLC*; and parentheticals at *supra* § III.E. However, if the Court decides to construe the term, an appropriate construction is provided by Anascape in the table above. This proposal is faithful to the claim language and is supported by the specification. (*See* '991 patent at claim 66, 8:59-9:1 (emphasis added).)

Microsoft has proposed a construction that does not even attempt to clarify the lengthy claim term. Instead, Microsoft's proposal, again, attempts to import a limitation – pressure-sensitive variable conductance material – that is not required by claim 66 of the '991 patent. Claim 66 reads:

> 66. A pressure-sensitive variable-conductance sensor for a control device, said sensor comprising;
>
> a depressible resilient dome cap having a surface with an apex positioned above
>
> circuit trace means for conducting electricity, said resilient dome cap depressible for creating analog output proportional to varying physical pressure applied to said dome cap; said surface with an apex is flexible, deforming with additional physical pressure to flatten and cause additional surface area contact to provide changes in electrical conductivity in said sensor; said sensor electrically connected to
>
> active electronics means for interpreting the electrical conductivity of said sensor.

Nothing in the claim requires pressure-sensitive material. Nor does the specification or the file history of the '991 patent. To the contrary, the specification shows an embodiment that has a dome-cap with a lower surface with a flexible apex that is not pressure-sensitive variable conductance material.

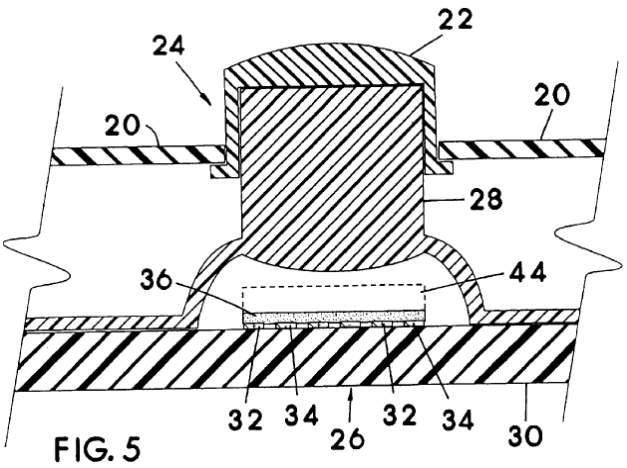


FIG. 5

('991 patent, Fig. 3.) As described in the previous section, the surface is composed of rubbery material, such as injection molded silicone rubber. (*Id.* at 6:13-15.) Microsoft's invitation to

read in a limitation from the specification – and exclude one of Armstrong's preferred embodiments – must be rejected.

H. "sheet"

Again, the parties' dispute regarding the claim term "sheet"[8] can be attributed to Microsoft's effort to read in limitations to the asserted claims that have no relation to the claim language. The parties' competing proposals appear below.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
sheet	*No construction is necessary. However, should the Court construe this term:* thin flat piece of material	Limited to circular disks of material adhered to a single dome cap or on top of a single circuit trace.

The term "sheet" has a plain meaning that is readily understandable by a jury. Therefore, no construction is necessary. *See Acumed LLC*; *Produits Berger S.A.*; *Vision Advancement, LLC*; and parentheticals at *supra* § III.E. However, if the Court decides to construe the term, a proper construction would be "thin flat piece of material." (*See* Oxford American Desk Dictionary and Thesaurus at 767 (2d ed. 2001) attached as Ex. 2 (defining "sheet" as a ". . . thin flat piece of material").)

Microsoft continues to import limitations from the disclosed embodiments of the '991 patent. Nothing in the asserted claims limits the term "sheet" to "circular disks of material adhered to a single dome cap or on top of a single circuit trace."

I. "means for creating [an analog electrical output]"

The parties agree that the terms "means for creating an analog electrical output proportional to varying applied physical pressure" and "means for creating an analog electrical output proportional to varying physical pressure applied" of the '802 patent and "means for

[8] This term appears in only claims 44, 46, and 47 of the '991 patent.

creating an analog signal representing varying applied physical pressure" of the '991 patent are governed by 35 U.S.C. § 112 ¶ 6 and also agree to the corresponding functions.[9] The parties dispute the corresponding structure, however, because Microsoft has failed to identify the minimum structure necessary to perform the claimed function.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
means for creating an analog electrical output proportional to varying applied physical pressure means for creating an analog electrical output proportional to varying physical pressure applied	*Anascape and Microsoft agree that this term is governed by 35 U.S.C. § 112(6). Anascape and Microsoft also agree that the function is:* creating an analog output proportional to varying applied physical pressure *The parties disagree with respect to the structure. Anascape contends that the structure is:* a dome-cap with a convexed inner surface and conductive material able to contact circuit traces, and equivalents thereof	*Anascape and Microsoft agree that this term is governed by 35 U.S.C. § 112(6). Anascape and Microsoft also agree that the function is:* creating an analog output proportional to varying applied physical pressure *The parties disagree with respect to the structure. Microsoft contends that the structure is:* pressure-sensitive variable-conductance material able to contact circuit traces, and equivalents thereof
means for creating an analog signal representing varying applied physical pressure	*Anascape and Microsoft agree that this term is governed by 35 U.S.C. § 112(6). Anascape and Microsoft also agree that the function is:* creating an analog signal representing varying applied physical pressure *The parties disagree with respect to the structure. Anascape contends that the structure is:* a dome-cap with a convexed inner surface and conductive material able to contact circuit traces, and equivalents thereof	*Anascape and Microsoft agree that this term is governed by 35 U.S.C. § 112(6). Anascape and Microsoft also agree that the function is:* creating an analog signal representing varying applied physical pressure *The parties disagree with respect to the structure. Microsoft contends that the structure is:* pressure-sensitive variable-conductance material able to contact circuit traces, and equivalents thereof

The '802 patent discloses a number of structures of pressure-sensitive variable conductance sensors that correspond to the "means for creating . . ." of the '802 and '991 patents. These structures are thoroughly described in the '802 patent. (*See generally* '802 patent at 6:6-10:24, Figs. 3-8.) The key inquiry with respect to these terms, then, becomes ascertaining the

[9] These terms appear in only claims 5, 7, 9, and 10 of the '802 patent and claim 23 of the '991 patent. The '991 patent is a continuation of the '802 patent; therefore, these two patents share a common specification.

minimum structure necessary to perform the function. *See Micro Chem., Inc.*, 194 F.3d at 1258 (holding that § 112 ¶ 6 does not "permit incorporation of structure from the written description beyond that necessary to perform the claimed function").

The minimum structure necessary to perform this function is a dome-cap with a convexed inner surface **28** and conductive material **36** to contact circuit traces **32** and **34**, as these elements appear in every embodiment of the '802 patent and create an analog output proportional to varying physical pressure applied. The dome-cap with a convexed inner surface **28** and the conductive material **36** are shown in the three figures below, which represent the three different embodiments of the "means for creating . . ." disclosed in the '802 patent.

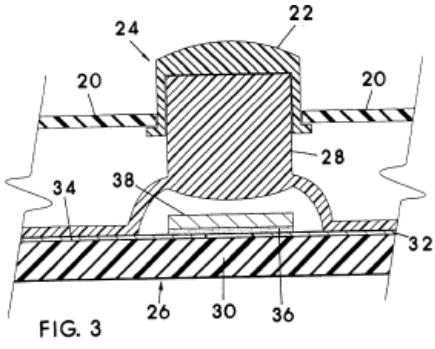


FIG. 3

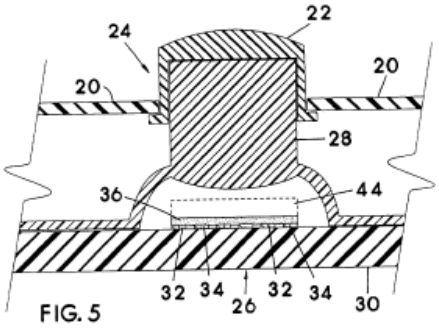


FIG. 5

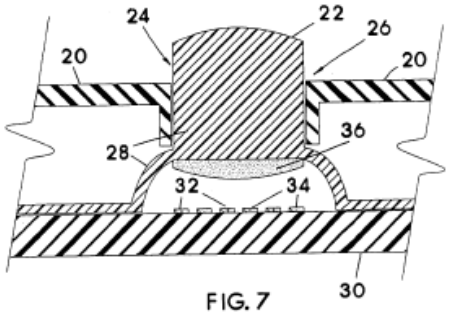


FIG. 7

('802 patent, Figs. 3, 5, 7.) These three figures show a cross-section of the "means for creating . . ." disclosed in the '802 patent. The circuit traces **32** and **34** are shown more clearly in other figures of the '802 patent; both of the figures below show top views of the circuit traces, which would be found underneath the dome-caps of figures 3, 5, and 7.

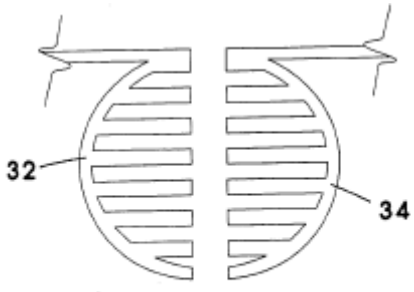


FIG. 4

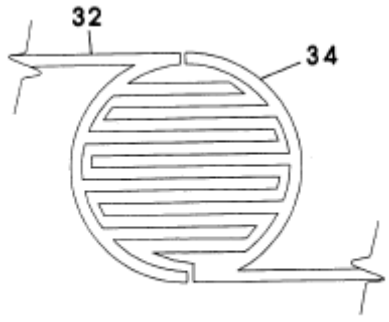


FIG. 6

('802 patent, Figs. 4, 6.) The '802 patent explains how these parts combine to create an analog electrical output proportional to varying applied physical pressure.

> An upper exposed portion of dome cap 28 is exposed exterior of housing 20 so that depression by a thumb or finger of depressible surface 22 causes downward movement or depression of dome cap 28 to bring material 36 into contact with traces 32 and 34.
>
> * * *
>
> [S]urface 22 is depressed to push dome cap 28 downward to bring material 36 into contact with traces 32, 34 which, under pressure, establishes a conductive path across traces 32, 34. Also shown in FIGS. 7 and 8 is the surface of material 36 which contacts traces 32 and 34 is convexed which in this particular application provides for the apex of the surface to first contact across traces 32 and 34 followed by material 36 which is flexible deforming with additional applied pressure to somewhat flatten-out and contact additional surface area of both traces 32 and 34. This arrangement of relatively lower initial surface area contact followed by additional or a larger surface area contact with further depression can provide additional conductivity changes due to not only the inherent conductivity changes brought about by pressure applied to material 36 but also by establishing additional current paths possible by the additional surface contact area.

('802 patent at 8:45-9:4.) This structure is explicitly claimed in claims 37, 39, 41, and 66 of the '991 patent as performing this function. Therefore, the minimum structure disclosed in the '802 and '991 patents for creating an analog electrical output proportional to varying applied physical pressure is a dome-cap with a convexed inner surface and conductive material to contact circuit traces, and equivalents thereof.

Microsoft's proposal, on the other hand, requires pressure-sensitive variable conductance material. As discussed above, Microsoft's proposed construction of "pressure-sensitive variable conductance material" incorrectly excludes one of the embodiments of the '802 and '991. Adopting Microsoft's proposal for this claim term would propagate and compound this error.

J. "means for creating an On/Off output, and with varied pressure creating an analog output"

Microsoft and Anascape agree that the term "means for creating an On/Off output, and with varied pressure creating an analog output"[10] is governed by 35 U.S.C. § 112 ¶ 6 and also agree on the function corresponding to this term. The parties' competing proposals for the structure corresponding to this term are provided below and are identical to the structures proposed for the previous term.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
means for creating an On/Off output, and with varied pressure creating an analog output *Claim 40*	*Anascape and Microsoft agree that this term is governed by 35 U.S.C. § 112(6). Anascape and Microsoft also agree that the function is:* creating an On/Off output, and with varied pressure creating an analog output *The parties disagree with respect to the structure. Anascape contends that the structure is:* a dome-cap with a convexed inner surface and conductive material able to contact circuit traces and equivalents thereof	*Anascape and Microsoft agree that this term is governed by 35 U.S.C. § 112(6). Anascape and Microsoft also agree that the function is:* creating an On/Off output, and with varied pressure creating an analog output *The parties disagree with respect to the structure. Microsoft contends that the structure is:* pressure-sensitive variable-conductance material able to contact circuit traces, and equivalents thereof

As explained herein, the structure described in the previous section above – a dome-cap with a convexed inner surface and conductive material able to contact circuit traces – can be used for outputting either (1) an analog output or (2) an on/off output. Therefore, the structure corresponding to this means-plus-function term is "a dome-cap with a convexed inner surface and conductive material able to contact circuit traces and equivalents thereof." For example, the '991 patent describes how, in some embodiments, the conductive material is not permanently contacting the circuit traces.

[10] This claim term appears only in claim 40 of the '991 patent.

> Material 36 is not permanently contacting traces 32 and 34 as is shown in FIGS. 3 and 5, but instead is on the underside of dome cap 28 in pill or disk form and raised or held upward above traces 32, 34 by dome cap 28 until, as indicated in FIG. 8, surface 22 is depressed to push dome cap 28 downward to bring material 36 into contact with traces 32, 34 which, under pressure, establishes a conductive path across traces 32, 34.

('991 patent at 8:55-62.) Because the conductive material in this embodiment, which is pictured in Figure 7 below, is not permanently contacting the circuit traces, it can be used to output an on/off signal dependent on whether the sensor is in a raised or depressed state.

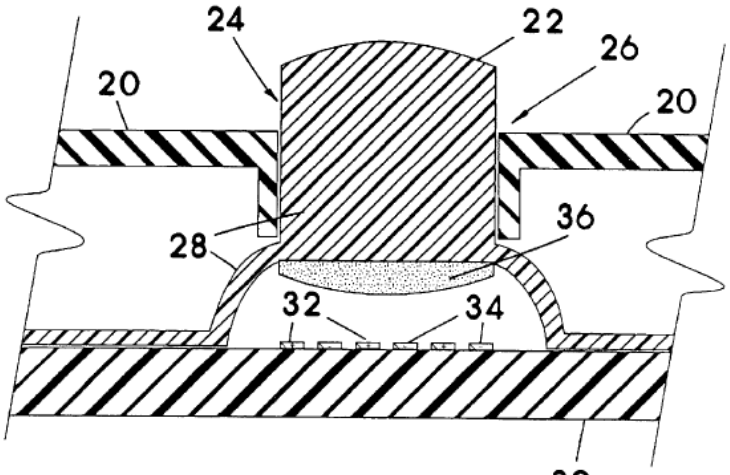


FIG. 7

In addition, this embodiment can be used to output an analog signal dependent on how much pressure is applied to the button:

> Also shown in FIGS. 7 and 8 is the surface of material 36 which contacts traces 32 and 34 is convexed which in this particular application provides for the apex of the surface to first contact across traces 32 and 34 followed by material 36 which is flexible deforming with additional applied pressure to somewhat flatten-out and contact additional surface area of both traces 32 and 34. This arrangement of relatively lower initial surface area contact followed by additional or a larger surface area contact with further depression can provide additional conductivity changes due to not only the inherent conductivity changes brought about by pressure applied to material 36 but also by establishing additional current paths possible by the additional surface contact area.

('802 patent at 8:63-9:4.) Furthermore, the '991 patent describes how the conductive material could be a carbon pill, which can be used in an on/off sensor or an analog sensor:

- ". . . carbon-rich conductive pills are employed as simple on/off momentary-On switches . . ." ('991 patent at 9:18-190); and
- ". . . a carbon-rich pill or disk can be used, in a novel manner as taught herein, as an analog sensor in a game controller . . ." ('991 patent at 9:39-41).

Therefore, the structure corresponding to the means-plus-function term is a dome-cap with a convexed inner surface and conductive material able to contact circuit traces, and equivalents thereof.

Microsoft's proposal, on the other hand, suffers from the same deficiency as its proposal for the previous term; it requires pressure-sensitive variable conductance material. As discussed above, Microsoft's proposed construction of "pressure-sensitive variable conductance material" incorrectly excludes one of the embodiments of the '802 and '991. Adopting Microsoft's proposal for this claim term would perpetuate this error.

K. "electronics means for . . ." and "active electronics means for . . ."

The parties' dispute with respect to the multiple claim terms beginning with "electronics means for" and "active electronics means for"[11] relates solely to whether or not 35 U.S.C. § 112 ¶ 6 applies. The disputed terms are presented below.

CLAIM ELEMENT
electronics means for at least reading the signals of said electricity manipulating devices
electronics means further for reading said at least one of said electricity manipulating devices including means for creating an On/Off signal, exclusively as an On/Off switch
electronics means is further for reading at least one of said electricity manipulating devices exclusively as an On/Off switch
electronics means also is for outputting to a game console information representing the signals

[11] These terms appear in claims 23, 24, 28, 30, 35, 40, and 66 of the '991 patent.

active electronic means for interpreting the analog output of said pressure-sensitive variable-conductance sensor
active electronics means for at least interpreting the outputs of said pressure-sensitive variable-conductance sensor
active electronics means for interpreting the electrical conductivity of said sensor

With respect to every term, the parties agree that, if §112 ¶ 6 applies, the corresponding function is the function listed after the "means for" language and that the corresponding structure is an "ASIC or micro-controller integrated circuitry, and equivalents thereof."

§112 ¶ 6 does not apply, however. As discussed above, the mere use of the word "means" after a limitation, without more, does not suffice to make that limitation a means-plus-function limitation." *Allen Eng'g Corp.*, 299 F.3d at 1347. Instead, if a claim element recites sufficient structure or material for performing that function, § 112, ¶ 6 does not apply. *See, e.g.*, *Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1365 (Fed. Cir. 1999) ("declining to apply § 112 ¶ 6 to "baffle means" because "the term 'baffle' itself imparts structure, meaning a surface which deflects air"). Each of these terms recites sufficient structure – electronics or active electronics – such that it is not governed by §112 ¶ 6.

First, claim 70 of the '991 patent uses the claim term "electronics" by itself, without the trailing language "means for . . . ."

> 70. A method of manufacturing a game control, including the steps:
>
> a) providing a housing shaped to be held simultaneously by two hands of a human user, said housing formed with a right-hand area and a left-hand area;
>
> b) assembling <u>electronics</u> into said housing;
>
> c) installing electricity manipulating devices connected to said <u>electronics</u>;
>
> d) positioning said electricity manipulating devices in-part exposed on said housing to be depressed by digits of the human user's hand;
>
> e) installing into said right-hand area of said housing at least two single individual button depressible pressure-sensitive variable-conductance

> analog sensors, said sensors connected to said electronics, said sensors independently depressible by a single digit of a human user's right hand.

Although claim 70 is asserted against Microsoft in this litigation, Microsoft has never contended that the term "electronics" in claim 70 should be governed by 35 U.S.C. § 112 ¶ 6. It is illogical that the term "electronics" could recite sufficient structure in claim 70 to avoid treatment as 35 U.S.C. § 112 ¶ 6, but the similar terms "electronics means" and "active electronics means" in the other asserted claims do not.

Second, the Federal Circuit has repeatedly found that the similar terms "circuit" and "circuitry" recite sufficient structure for avoiding 35 U.S.C. § 112 ¶ 6. *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1355 (Fed. Cir. 2006) ("the term 'circuitry,' by itself, connotes structure"); *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003) ("it is clear that the term 'circuit,' by itself connotes some structure."); *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) ("the term 'circuit' connotes structure").

Third, and possibly most important, the specification of the '991 patent explains exactly what active electronics are:

> Active electronics 46 ***(i.e., ASIC or micro-controller integrated circuity, etc.)*** which in addition to having normal circuitry of a typical game controller such as a prior art controller also has circuitry for interpreting the analog output of sensor material 36 and converting it into a digital signal (if a digital signal is desired) which is output to a host graphic generation machine via cable 48.

('802 patent at 11:7-14 (emphasis added).) Armed with this teaching from the specification, one of ordinary skill in the art would be able to ascribe sufficient structure to the terms "active electronics" and "electronics." Thus, for these three reasons, the Court should refuse to construe "active electronics means" and "electronics means" as means-plus-function limitations.

L. "snap-through"

The parties' dispute regarding the construction of the term "snap-through"[12] can be attributed to Microsoft's desire to deviate from the teachings of the '084 patent. The parties' competing constructions are provided in the table below.

CLAIM ELEMENT	ANASCAPE'S PROPOSAL	MICROSOFT'S PROPOSAL
snap-through	able to bow downward with a user discernible snap or click	able to bow downward with a snap or click

The real dispute between the parties concerns the words "user discernible:" Anascape contends that they should be part of the construction; Microsoft contends that they should not. The inclusion of these words is required by the teachings of the specification and the claim language of the '084 patent.

For example, the specification states "[s]ufficient depression of the actuator causes the actuator to apply force to the dome-cap, causing the dome-cap to ***bow (snap-through)*** downward . . . . The dome-cap when pressed against sufficiently to ***bow*** . . . has resistance to moving which begins low and increases toward a snap-through threshold wherein at the threshold the dome-cap snaps ***creating a snap or click which is user discernable in the form of a tactile sensation***." ('084 patent at 1:50-62 (emphasis added).)

In addition to the specification, the prosecution history and the claims of the '084 patent confirm that the "snap-through" dome-cap must be discernible by the user. In the prosecution history of the '084 patent, Armstrong explained:

> claims 1-3, 5-6, and 11 ALL include a dome-cap specifically for creating and providing the human user a tactile feedback, whereas [the prior art] is clearly trying to make sure that "if" there exists any clicking or the like . . . that the clicking does not reach the user as tactile sensation.

[12] This term appears in claims 5 and 6 of the '084 patent.

('084 Patent File History, 4/30/1999 Amendment, attached as Ex. 1.) Claim 5 of the '084 patent states:

> 5. An improved pressure-sensitive variable-conductance analog sensor of the type having at least two electrically conductive elements operationally connected to pressure-sensitive variable-conductance material; a depressible actuator retained relative to said pressure-sensitive variable-conductance material; said actuator depressible toward said pressure-sensitive variable-conductance material for transferring force into said pressure-sensitive variable-conductance material;
>
> wherein the improvement comprises:
>
> a resilient snap-through dome-cap positioned to provide tactile feedback to a user upon actuation of said pressure-sensitive variable-conductance material.

Similar to the file history, the underlined portion of the claim explains that the snap-through dome-cap must "provide tactile feedback to a user." Therefore, the snap or click must be user discernible and the term should be construed as "able to bow downward with a user discernible snap or click."

IV. CONCLUSION

For the foregoing reasons, Anascape respectfully requests that the Court adopt Anascape's proposed constructions of the disputed claim terms of the Microsoft-Infringed Patents, and refuse Microsoft's repeated invitations to import limitations from the preferred embodiments of the specification.

DATED: May 4, 2007.

Respectfully submitted,

McKOOL SMITH, P.C.

/s/ Sam Baxter

Sam Baxter
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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on counsel of record via ECF or U.S. Mail on this 4th day of May, 2007.

/s/ Luke F. McLeroy
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