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

ANASCAPE, LTD.	§	
	§	
Plaintiff,	§	
	§	Civil Action No. 9:06-CV-158
V.	§	
	§	
MICROSOFT CORP., AND	§	JUDGE RON CLARK
NINTENDO OF AMERICA, INC.	§	
	§	
Defendant.	§	

MEMORANDUM OPINION AND ORDER CONSTRUING CLAIM TERMS OF UNITED STATES PATENT NOS. 6,222,525 AND 6,906,700 - Part I

Plaintiff Anascape, Ltd. ("Anascape") filed suit against Defendants Microsoft Corporation ("Microsoft") and Nintendo of America, Inc. ("Nintendo") and Microsoft claiming infringement of U.S. Patent Nos. 6,222,525 ("the '525 patent") and 6,906,700 ("the '700 patent"). The court conducted a *Markman* hearing to assist the court in interpreting the meaning of the disputed claim terms. Having carefully considered the patents, the prosecution history, the parties' briefs, and the arguments of counsel, the court now makes the following findings and construes the first three groups of claim terms.²

¹ Anascape also filed suit against Microsoft and Nintendo alleging infringement of U.S. Patent Nos. 6,344,791 ("the '791 patent"), 6,352,205 ("the '205 patent"), and 6,563,415 ("the '415 patent"). On February 23, 2007, the court granted stay pending reexamination before the U.S. Patent and Trademark Office ("PTO") as to the '791, '205 and '415 patents.

²The transcript of the hearing contains a number of representations and agreements of the parties and their answers to technical questions from the court, all of which will not be repeated here, but which assisted the court in reaching the conclusions set out in this Order. This Order governs in the event of any conflict between the Order and the court's preliminary analysis at the hearing. The transcript will be cited as Tr. p. ___, ll. ___.

I. CLAIM CONSTRUCTION STANDARD OF REVIEW

Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S. Ct. 1384 (1996) ("*Markman II*"). "The duty of the trial judge is to determine the meaning of the claims at issue, and to instruct the jury accordingly." *Exxon Chem. Patents, Inc. v. Lubrizoil Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995) (citations omitted), *cert. denied*, 518 U.S. 1020, 116 S.Ct. 2554 (1996).

"[T]he claims of the patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005)(*en banc*)(citation omitted), *cert. denied*, 546 U.S. 1170, 126 S.Ct. 1332 (2006). "Because the patentee is required to 'define precisely what his invention is,' it is 'unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms." *Phillips*, 415 F.3d at 1312 (quoting *White v. Dunbar*, 119 U.S. 47, 52 (1886)).

The words of a claim are generally given their ordinary and customary meaning. *Phillips* 415 F.3d at 1312. The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention."

³ Based on the patents and their cited references, the tutorials, and the representations of the parties at the hearing, the court finds that "one of ordinary skill" in the art covered by the '525 and '700 patents is someone with the equivalent of a "four-year" degree from an accredited institution (usually denoted in this country as a B.S. degree) in mechanical or electrical engineering, and at least three years of experience designing, developing or improving electronic systems that include sensors and/or controllers for computers, robotics, video games or other electronic devices. He or she should have some familiarity with pressure-sensitive variable conductance material. Extensive experience and technical training might substitute for educational requirements, while advanced degrees might substitute for some of the experience. *See* Tr. p. 6, l. 17 - p. 8, l. 12.

Id. at 1313. Analyzing "how a person of ordinary skill in the art understands a claim term" is the starting point of a proper claim construction. *Id.*

A "person of ordinary skill in the art is deemed to read the claim term not only in context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. Where a claim term has a particular meaning in the field of art, the court must examine those sources available to the public to show what a person skilled in the art would have understood the disputed claim language to mean. *Id.* at 1414. Those sources "include 'words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.* (citation omitted).

"[T]he ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. In these instances, a general purpose dictionary may be helpful. *Id*.

However, the Court emphasized the importance of the specification. "[T]he 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." *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). A court is authorized to review extrinsic evidence, such as dictionaries, inventor testimony, and learned treaties. *Phillips*, 415 F.3d at 1317. However, their use should be limited to edification purposes. *Id.* at 1319.

The intrinsic evidence, that is, the patent specification, and, if in evidence, the prosecution history, may clarify whether the patentee clearly intended a meaning different from the ordinary meaning, or clearly disavowed the ordinary meaning in favor of some special meaning. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979-80 (Fed. Cir. 1995); *aff'd*, 517 U.S. 370, 116 S.Ct. 1384 (1996). Claim terms take on their ordinary and accustomed meanings unless the patentee demonstrated "clear intent" to deviate from the ordinary and accustomed meaning of a claim term by redefining the term in the patent specification. *Johnson Worldwide Assoc.*, *Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir. 1999).

The "ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Phillips*, 415 F.3d at 1321. However, the patentee may deviate from the plain and ordinary meaning by characterizing the invention in the prosecution history using words or expressions of manifest exclusion or restriction, representing a "clear disavowal" of claim scope. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002). It is clear that if the patentee clearly intended to be its own lexicographer, the "inventor's lexicography governs." *Phillips*, 415 F.3d at 1316.

III. DISPUTED TERMS IN THE '525 AND '700 PATENTS

A. Patent Background and Technology

The '525 patent relates to "graphic image controllers," commonly seen as the controllers used for video games. These controllers convert the movement of the user's hand or finger into an electrical impulse that controls the image on a display, such as a screen.

The patent focuses on the possibility of using the invention in controllers with an input member operable in six degrees of freedom (hereinafter "6 DOF") relative to a reference member

of the controller. Having 6 DOF means that the input member can move on three linear axes: 1) forward/backward, 2) up/down, 3) left/right, and on three rotational axes: 1) yaw, 2) pitch, and 3) roll. The input member can be of a continuously rotatable trackball-type or a limited rotation joystick-type. The reference member can be a shaft, a base, or a housing.

The patent also describes mounting the sensors on a rigid circuit board sheet, or on a flat flexible membrane sensor sheet that can be bent so as to conveniently reach and connect multiple arbitrarily distributed sensors to accept input(s) for a 3-D graphic display. This potentially eliminates the need for expensive hand wiring, making the controller highly reliable and relatively inexpensive to manufacture.

The '700 patent is a continuation of the '525 patent. The '700 patent describes controllers that have a "tactile feedback motor" with a shaft and offset weight for providing vibration that is felt by the user. In some embodiments, the sensors are pressure-sensitive variable output sensors.

B. Claim Construction

1. "Controller" terms.

TERM	ANASCAPE'S PROPOSED CONSTRUCTION	MICROSOFT'S & NINTENDO'S PROPOSED CONSTRUCTION
image controller '525 patent: claims 1, 5-6, 12-20	No construction is necessary. However, should the Court construe this term:	A controller having a hand operable, single input member that is moveable along and/or rotatable about three mutually
	an input device interfacing between human hands and a host device such as a computer or television or television based game	perpendicular axes in six degrees of freedom ("6DOF") relative to a reference member of the controller.

3-D graphics controller '700 patent: claims 1-15, 32-33	No construction is necessary. However, should the Court construe this term: a controller for controlling 3-D graphics controller: an input device interfacing between human hands and a host device such as a computer, television, or television based game 3-D graphics: imagery with apparent depth	A controller having a hand operable, single input member that is moveable along and/or rotatable about three mutually perpendicular axes in six degrees of freedom ("6DOF") relative to a reference member of the controller.
hand operated controller '700 patent: claims 19-20, 22-23, 26-29, 31	No construction is necessary. However, should the Court construe this term: an input device interfacing between human hands and a host device such as a computer or television or television based game	A controller having a hand operable, single input member that is moveable along and/or rotatable about three mutually perpendicular axes in six degrees of freedom ("6 DOF") relative to a reference member of the controller.

Introduction

The parties agree that these terms refer to devices that are held in the hands of an operator. Tr. p. 9, ll. 4-17. The devices allow hand or finger inputs to be converted into electrical signals for manipulation of images on a display device, such as a screen. '525 patent, col. 1, ll. 14-21. The dispute centers on Defendants' argument that these terms, in and of themselves, impose a limitation that the devices described have a single input member that is moveable in 6 DOF relative to a reference member. The patentee clearly expected the inventions to be used with a single input member (such as a joystick) that moved in 6 DOF to control an image appearing to move in three dimensions. He stated that they were "easily used for 3-D graphics control...."

'525 patent, col. 1, 1. 65 - col. 2, 1. 1. However, each of the three claim terms does not incorporate the 6 DOF limitation Defendants would impose. "Controller" will be construed as "a device held in the user's hand that allows hand or finger inputs to be converted into electrical signals for manipulation of images on a display device, such as a screen." Whether a claim is limited to a 6 DOF device depends on other wording in the claim.

Analysis

Defendants assert that, as used in the '525 and '700 patents, "controller" refers only to devices with 6 DOF relative to a single reference member. There are many references in the description of "best modes and preferred structures" of the '525 patent that associate "controller" with 6 DOF. See '525 patent, col. 4, ll. 50-55; col. 5, ll. 1-9; col. 5, ll. 15-18. No claim term of the '525 patent specifically states as a limitation a single input member movable in 6 DOF relative to a reference member. Claims 1, 5, and 12 of the '525 patent describe input members moveable on two axes: two degrees of freedom.

The claim terms of the '700 patent consistently refer to "3-D graphics controller." This specifically associates "controller," as used in the '700 patent, with three dimensions or six degrees of freedom. During the prosecution of the '700 patent, the patentee stated that the change in terminology from "6 DOF" in the '525 patent to "3-D" in the '700 patent was not intended to introduce a new or different concept:

In the current specification [of the '700 patent], at numerous locations the language '3-D' and 'three-dimensional' have been used in substitution for '6 DOF.' and 'six degrees of freedom' as originally used in the application issued as patent 6,222,525 from which the current specification is continued. This substitution of language [sic] does not constitute new matter Any single three-dimensional software object moving, for example in an electronic game, is moving in six degrees of freedom. This '6DOF' and 'six degrees of freedom' language [sic] is not as commonly used now as when the '525 patent was filed

and the same equivalent product or device which was once so called is now commonly called a 3D or three-dimensional controller.

Preliminary Amendment, 10/25/2002, p. 10, Nintendo's Brief, Ex. 6 [Doc. #96, Attachment #9, p. 11](emphasis added)

At the hearing, Anascape agreed that there is no substantial disagreement about whether the claims of the '700 patent describe a controller that manipulates images in 6 DOF or in three dimensions. *See* Tr. p. 19, 1l. 21-25. However, since the claim terms of the '700 patent themselves modify "controller" with "3-D graphics," it would be redundant, without more, to define the single word "controller" as limited to 6 DOF.

The fact that "controller" is consistently modified by "3-D graphics" in the '700 patent may indicate, under the doctrine of claim differentiation, that "controller" by itself does not always refer to a 6 DOF controller. Of course, claim differentiation is not a hard and fast rule; rather, it is merely a "guidepost" that cannot broaden a claim beyond its correct scope. *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1381 (Fed. Cir. 2006)

Even though the claims of the '700 patent clearly describe devices that control movement in three dimensions (or 6 DOF), they are not limited on their face to a "single input member" that moves "relative to a reference member." The independent claims in dispute, claims 1, 3, 5, 6, 9, 12, 13, 14, 15, and 32, all begin with "comprising" language, indicating that they have at least what is described and perhaps more. *See Cias, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007)("In the patent claim context the term 'comprising' is well understood to mean 'including but not limited to.""). Each of these claims describes at least three elements, one

of which is, or is made up of, "four unidirectional sensors." None of the claims state a limitation of a single member or control that moves in 6 DOF in relation to a single reference member.

While no claim of the '700 patent includes the limitations they propose, Defendants argue that every embodiment in the specifications of the '525 and '700 patents discloses such a single input member that moves in 6 DOF relative to a reference member of the controller.⁴ Here, the court is faced with a familiar conflict between opposing rules of construction.

Defendants assert that claim language cannot be read to exceed the scope of the unequivocal language in the patent specifications. *See Nystrom v. TREX Co.,. Inc.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005), *cert. denied*, 547 U.S. 1055, 126 S. Ct. 1654 (2006). Anascape argues that "limitations may not be imported from the specification to the claims." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004), *cert. denied*, 543 U.S. 925, 125 S. Ct. 316 (2004). Even if a specification describes only a single embodiment, the claims "will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Id.* at 906(internal quotation omitted). On the other hand, the same case states that claims must be read in the context of the specification, and notes the "particular difficulties" which arise when the claim language is broad but the specification is narrow. *Id.* at 905. The importance of the specification has been given even more emphasis since. *Phillips*, 413 F.3d at 1315.

The '525 patent uses the terms "image controller" and "hand-operated controller" in the preambles of the asserted claims. Defendants argue that the '525 patent repeatedly refers to the

⁴ The '700 patent is a continuation of the '525 patent, so the specification of the '525 patent is relevant in construing the '700 patent. *Microsoft Corp. v. Multi-Tech Systems, Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004), *cert. denied*, 543 U.S. 821, 125 S. Ct. 61 (2004).

term "controller" as a 6 DOF controller, which implies that 6 DOF is an inherent feature of the controller. The question is whether this is language of preference or requirement. *See Anderson Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1372 (Fed. Cir. 2004); *Honeywell Int'l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006). Examples from the '525 patent that are not limited to a preferred embodiment include:

"A sensor . . . operable in 6 DOF relative to a reference member" '525 patent, Abstract;

"[I]t is with this type of 6 DOF controller that the present invention is primarily concerned." '525 patent, col. 2, ll. 1-2;

In distinguishing prior art, U.S. Patent 5,298,919 (issued Mar. 29, 1994 to Chang): "The Chang controller does not have a single input member such as one ball or one handle which can be operated (causing representative electrical output) in six degrees of freedom. Nor can any one Chang input member be manipulated (moved) relative to a reference member on the controller in six degrees of freedom. Thus, the Chang device is functionally and structurally deficient. Therefore, there exists a need for further improvements in the field of six degree of freedom controllers for graphics control " '525 patent, col. 4, ll. 24-33.

At the same time, there are references in the specification to controllers with less than 6 DOF. Joystick controllers are described as having "up to 6 DOF." '525 patent, col. 7, ll. 40-41. This phrasing implies there could be less. The "Background of the Invention" discusses how the cost of manufacturing controllers increases as more degrees of freedom are added, and how the applicant's use of a flexible membrane sensor sheet can reduce that cost. '525 patent, col. 1, ll. 41-48, col. 2, ll. 60-65. While the thrust of the discussion is to incorporate the claimed advantages into a 6 DOF controller, nothing in the specification disclaims other variations.

The '525 patent does not have any textual "hook" in the claim language for Defendants' requested limitation to be imposed. Generally, "a party wishing to use statements in the written

description to confine or otherwise affect a patent's scope must, at the very least, point to a term or terms in the claim with which to draw in those statements." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). In other words, "there must be a textual reference in the actual language of the claim with which to associate a proffered claim construction." *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir. 1999). Simply pointing to "controller" or 'image controller," which are general descriptions of the devices contained in the preamble of the claims, and arguing that the patentee should be limited to what he described as the easiest way to use, or the preferred use of, such devices is not enough.

"Image controller," "3-D graphics controller," and "controller," as used in the '525 and '700 patents, refer to a hand-held device used to manipulate an image on a display device or medium. *See* '525 patent col. 1, ll. 16-25; '700 patent, col. 1, ll. 23-29. "Image" needs no construction. "3-D" means movement in 6 DOF. Preliminary Amendment, 10/25/2002, p. 10, Nintendo's Brief, Ex. 6 [Doc. #96, Attachment #9, p. 11]. The court will construe these terms as follows:

"Controller" means "a device held in the user's hand that allows hand or finger inputs to be converted into electrical signals for manipulation of images (graphics) on a display device, which are capable of being perceived by a human"

"3-D" means "capable of movement in six degrees of freedom"

⁵In the context of these patents, "hand operated" in the phrase "hand operated controller" is redundant, or merely emphasizes what is already clear from the specification—the controllers described by these patents are hand-held and operated by hand.

2. Other terms referring to the controller.

TERM	ANASCAPE'S PROPOSED CONSTRUCTION	MICROSOFT'S & NINTENDO'S PROPOSED CONSTRUCTION
input member Used in '525 patent, claims 1, 5, and 12.	a trackball or a joystick	A hand operable, single trackball or handle fit to be manipulated by a human hand in 6 DOF
a first [second] [third] element Used in '700 patent, claims 1, 3, 5, 6, 9, 12-13, 15, 32.	No construction is necessary. However, should the Court construe this term: a first [second] [third] structure, member, part, component or combination of the same	The first, second and third elements are controlled by a hand operable, single input member moveable in 6 DOF
a [first, second, third, fourth] rotary potentiometer Used in '700 patent, claim 9.	No construction is necessary. However, should the Court construe this term: a first [second] [third] structure, member, part, component or combination of the same	The first element, and the first, second, third and fourth rotary potentiometers are controlled or activated by a hand operable, single input member moveable in 6 DOF.
A first element Used in '700 patent, claim 14.	No construction is necessary. However, should the Court construe this term: a first [second] [third] structure, member, part, component or combination of the same	The first element and the first, second, third and fourth bidirectional proportional sensors are controlled or activated by a hand operable, single input member moveable in 6 DOF.
a [first, second, third, fourth] bidirectional proportional sensor Used in '700 patent, claim 14.	a [first, second, third, fourth] sensor that produces signals representative of change in two directions of the same axis (<i>e.g.</i> left and right)	The first element and the first, second, third and fourth bidirectional proportional sensors are controlled or activated by a hand operable, single input member moveable in 6 DOF.

[structure]; [second] [third] Element Used in '700 patent, claims 19, 26.	No construction is necessary. However, should the Court construe this term: a [second] [third] structure, member, part, component or	The structure, and the second and third elements are controlled by a hand operable, single input member moveable in 6 DOF.
	combination of the same	

Microsoft and Nintendo ask the court to construe all of these terms. Anascape argues that most do not need to be construed, but proposes definitions if they are. These terms all refer, in common patent parlance, to parts of the invention. Some of the terms use ordinal numbering, which is common in patents. Defendants agree there is no dispute over the numbering of the elements or the fact that the patents describe hand held devices. Tr. p. 47, l. 21 - p. 48, l. 18.

Given the court's definitions above, there can be no real dispute as to what these terms mean. For the reasons set out above, the court does not find that these words, in and of themselves, limit the inventions to those having single input members moveable in 6 DOF. There is no reason to construe these terms.

- **3. "Moveable on two axes."** Used in '700 patent, claim 14.
- "Moveable on at least two axes." Used in '525 patent, claims 1, 5 and 12.
- "Movable on two mutually perpendicular axes." Used in '700 patent, claims 19 and 26.

The parties agree that the movement these terms refer to is movement of or on the controllers, and not the movement that appears on a screen or other display device. Tr. p. 51, l. 4 - p. 52, l. 10. The parties also agree that movement on axes refers to degrees of freedom (discussed in Part III(A), *supra*). Tr. p. 55, l. 20 - p. 57, l. 8; p. 60, l. 18 - p. 61, l. 6. The dispute is whether "on" is limited to linear movement along an axis, as espoused by Defendants, or can include rotation about an axis, as argued by Anascape.

The terms of a claim must be read from the point of view of one skilled in the art - in this case one who would be building or designing a controller. *See* Tr. p. 51, l. 14 - p. 52, l. 10. However not every word is a technical term of art. *See United States Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997), *cert. denied*, 522 U.S. 950, 118 S. Ct. 369 (1997). Defendants are correct that "on" an axis can mean along it. However, it is also common to say that the world turns "on" its axis or that a wheel turns "on" its axis. These are rotational movements.

Figure 7 of both patents depicts three mutually perpendicular axes, "referred to as first, second and third, or respectively roll, pitch and yaw axes" '700 patent, col. 6, ll. 10-12. The specification states that the controllers convert "full six degrees of freedom physical input" from a hand by sensing the hand inputs and sending information describing rotation or rotational force of the hand "about" the yaw, pitch and roll axes and information describing linear movement "along" those axes. "525 patent, col. 4, ll. 50-63; '700 patent, col. 2, ll. 18-32. Clearly, the patentee knew how to distinguish between "along" and "about." There is no basis in the patent claims, specifications, or prosecution history, nor in the rules of English grammar, to limit "on" to just one of these.

Nintendo's brief quoted the same section of the '525 patent and then cleverly substituted "on" for "along" in its discussion of the term, as though the specification itself used "on" and not "along" when referring to linear movement. Microsoft took the same approach - quickly define "on" as "along," hope that the court would not notice, and then state that "common sense" tells us that "on" means "along."

At the hearing, Defendants' counsel and expert stated that they thought "on" must mean

only linear movement. Aside from the fact that this was their clients' position, no mathematical

or engineering principle, nor any reference in the specification, prosecution history, or even

extrinsic evidence was offered. Tr. p. 52, l. 11 - p. 55, l. 19; p. 58, l. 23 - p. 60, l. 17. Some

might conclude that Defendants are claiming confusion over such a simple term merely to lard

the record with potential points of error. The court will construe these claim terms as follows:

"Moveable on two axes" means "capable of two degrees of freedom of movement"

"Moveable on at least two axes" means "capable of two or more degrees of freedom

of movement."

"Movable on two mutually perpendicular axes" means "capable of two degrees of

freedom of movement on axes that intersect at a ninety degree angle."

IV. CONCLUSION

The jury shall be instructed in accordance with the court's interpretation of the disputed

claim terms in the '525 and '700 patents.

So ORDERED and SIGNED this 11 day of January, 2008.

Ron Clark, United States District Judge

Rm Clark

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