United States District Court,
S.D. California.

MINEBEA CO., LTD,
Plaintiff.
v.
THINK OUTSIDE, INC. and Peripheral Technology, Inc,
Defendant.

No. 01CV771 BTM (POR)

Aug. 19, 2002.

Benjamin Levi, David H. Kagan, Joel E. Lutzker, Todd Sicklinger, Schulte Roth and Zabel, New York, NY, Charles G. La Bella, Labella and McNamara, San Diego, CA, for Plaintiff.

Michael A. Jacobs, Morrison and Foerster, San Francisco, CA, Charles H. Dick, Jr., Baker and McKenzie LLP, San Diego, CA, for Defendants.

ORDER RE: CLAIM CONSTRUCTION

BARRY TED MOSKOWITZ**, District Judge.**

I. BACKGROUND

Dean Cowles invented a keytop leveling mechanism in 1982 for use with computer keyboards or electric typewriters. Generally, when a user pushes down on a keytop at a point not directly over the keyswitch, the keytop tends to tilt which can cause the keyswitch to bind. The objective of the invention is to prevent the keyswitch from binding when pressing the keytop at a point not directly over the keyswitch. Patent 4,433,225 teaches a scissor-like structure to stabilize the portions of a keytop not supported by the keyswitch. Minebea is the owner of Patent '225.

Plaintiff Minebea and defendant ThinkOutside have filed cross-motions for claim construction of Patent '225. Plaintiff Minebea submitted the testimony of expert witnesses Bryan Broussard and William Voit in support of its motion for claim construction. Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), the court must construe the patents at issue in the above-entitled case as a matter of law. On January 14, 2002, the court held a *Markman* hearing. The court heard arguments regarding the construction of the disputed claims of the '225 patent and concerning a motion to strike expert testimony. Having considered the evidence presented in the parties' briefs, supporting declarations, and argument at the hearing, the court issues the following ruling construing the disputed claim language as a matter of law.

II. DISCUSSION

Legal Standard for Claim Construction

To ascertain the meaning of the claims, the court initially looks to three sources of intrinsic evidence: the claims, the specification, and the prosecution history. Vitronics Corp. v. Conceptronic Inc., 90 F.3d 1576, 1583 (Fed.Cir.1996) ("it is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.") These sources form the public record of the patentee's claim. *Id.*

In construing the claims, the court first looks at the language of the claims. Markman, 52 F.3d 967, 979 (Fed.Cir.1995) (en banc) *aff'd* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). There is a "heavy presumption" in favor of the ordinary and accustomed meaning of claim language as understood by one of ordinary skill in the art. Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999); *see also* Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1299 (Fed.Cir.1999) ("[W]ords in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning."). Accordingly, a technical term used in a patent is interpreted as having the meaning a person of ordinary skill in the field of the invention would understand it to mean.

In its initial examination of the intrinsic evidence, the court is also instructed to examine the prosecution history to determine whether the patentee has relinquished a potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference. *Bell Atlantic,* 262 F.3d at 1268 (citing Southwall Techs., Inc. v. Cardinal IG, Co., 54 F.3d 1570, 1576 (Fed.Cir.1995) (stating that "[t]he prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution"). The prosecution history, or "file wrapper," contains the complete record of all the proceedings before the Patent and Trademark Office ("PTO"), including any express representations made by the applicant regarding the scope of the claims. *Id.* (citing Vitronics, 90 F.3d at 1582). In examining the prosecution history, however, the Court cannot "enlarge, diminish, or vary" the limitations of the claims. Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 227, 26 L.Ed. 149 (1880).

If the meaning of the claim limitation is apparent from the intrinsic evidence alone, the Court may not rely on extrinsic evidence other than that used to ascertain the ordinary meaning of the claim limitation. *Bell Atlantic,* 262 F.3d at 1268-69. However, in the "rare circumstance" that the meaning of the asserted claims cannot be ascertained after examining the intrinsic evidence, the Court may look to extrinsic evidence to help resolve any lack of clarity. *Id.* Extrinsic evidence consists of ail evidence external to the patent and prosecution history and includes such evidence as expert testimony, articles, and inventor testimony. Markman, 52 F.3d at 980. It may be used only to assist the Court in determining the proper understanding of the disputed limitation, rather than "to vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history." *Bell Atlantic,* 262 F.3d at 1269 (citing Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d at 1584-85). While dictionaries fall within the category of extrinsic evidence, the Court is free to consult them at any time "so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." Vitronics, 90 F.3d at 1584 n. 6. Dictionaries are preferred over opinion testimony because they are objective and available to the public. Id. at 1585. This limited use of extrinsic evidence comports with the principle that "[a]llowing the public record to be altered or changed by extrinsic evidence ... would make th[e] right [to design around the claimed invention] meaningless." Id. at 1583. Otherwise, "[a]ny other rule would be unfair to competitors who must be able to rely on the patent documents themselves, without consideration of expert opinion that then does not even exist, in ascertaining the scope of a patentee's right to exclude." Southwall,

54 F.3d at 1578.

II. Construction of the Disputed Terms of the '225 Patent

The Court addresses the following eight disputed terms of Claim 1 of the 225 patent:

A keytop leveling mechanism for use in conjunction with:

[1] a keytop having a main portion and a stem portion cantilevered from said main portion; and a keyswitch, [2] mounted on a[3] circuit board, which is adapted to be actuated when said keytop is pressed; said leveling mechanism comprising:

[3] a pair of lever arms joined at intermediate portions thereof by a **[4] pivot** to form a scissors-like linkage having first, second, third and fourth ends;

[5] means for pivotally mounting said first and second ends to longitudinally opposed ends of said cantilevered portion;

[6] means for pivotally mounting said third and fourth ends to separate joints adjacent said circuit board under said cantilevered portion; and

[7] means for enabling at least two of said first, second, third, and fourth ends to slide in addition to pivot.

Disputed language numbers 1-3 appear in the preamble of Claim 1. Descriptions that are recited in a claim's preamble are generally not limitations of the claimed apparatus but instead function to identify its context. Williams, Mfg. Co. v. United Shoe Machine Corp., 316 U.S. 364, 368, 62 S.Ct. 1179, 86 L.Ed. 1537 (1942). However, terms appearing in a preamble may be deemed limitations of a claim when they give meaning to the claim and properly define the invention. In re Paulsen, 30 F.3d 1475, 1479 (Fed.Cir.1994). Where claim language uses a term that can be understood only by looking to the preamble, the preamble must be considered in interpreting the claim. Pitney Bowes Inc., v. Hewlett-Packard Co., 182 F.3d 1298, 1306 (Fed.Cir.1999). A term appearing in the preamble is limiting when it is required to confer meaning on the claim. Philips Petroleum Co. v. Huntsman Polymers Corp., 157 F.3d 866, 872 (Fed.Cir.1998).

Claim 1 twice contains the phrase "said cantilevered portion" ('225 patent, col. 5, lines 4-9) referring to the preamble which describes "a keytop having a main portion and a stem portion cantilevered from said main portion." This phrase is otherwise undefined. Claim 1 also includes the phrase "said circuit board" which refers to the preambular language "mounted on a circuit board, which is adapted to be actuated when said keytop is pressed" and is also otherwise undefined. The court therefore finds that the preamble is "intimately meshed with the ensuing language in the claim" and therefore must be construed in interpreting the claim. Pitney Bowes Inc., 182 F.3d at 1306.

A. A keytop having a main portion and a stem portion cantilevered from said main portion.

Think Outside contends that this language should be construed to mean "keytops bearing a shape in which an unsupported segment extends outward at an angle from the supported main part of the keytop." The effect of such a construction would be to limit the patent to keys that are "L" or "T" shaped, excluding long rectangular keys. Minebea proposes that the main portion should be defined as "the part of the keytop that is

in alignment with and in contact with the resilient support. The stem cantilevered portion is the "part of the keytop that extends laterally from the main portion that is not sufficiently supported by the resilient support to prevent tilting when pressed." This construction of the claim would include long rectangular keys which have a cantilevered portion unsupported by the keyswitch.

Having considered the arguments on both sides, the court agrees with Minebea's construction. The court finds that nothing in the plain language of the claim requires that the stem portion extend outward at an angle from the main portion. The court rejects ThinkOutside's contention that implicit in the definition of "stem" is that it juts out at an angle from the main portion. FN1 The definition of cantilever is a projecting beam supported only at one end. *Webster's Third New International Dictionary (unabridged)* at 329 (1986). The court therefore finds that the stem portion of the keytop is simply the unsupported portion of the cantilever. Bell Atlantic Network Servs., Inc. v. Covad Comms. Group, Inc., 262 F.3d 1258, 1268 (Fed.Cir.2001) citing Vitronics, 90 F.3d at 1584 n. 6 (In determining the ordinary and accustomed meaning of a term to one skilled in the art, "[d]ictionaries and technical treatises, which are extrinsic evidence, hold a 'special place' and may sometimes be considered along with the intrinsic evidence when determining the ordinary meaning of claim terms.")

ThinkOutside argues that the '225 patent specification supports their interpretation of stem and main portion. The specification includes diagrams of an L-shaped key which label the stem portion as the part which juts outward from stem 14 at an angle. Also, the patent specification describes the invention in terms of an "oddly shaped keytop, such as an L-shaped keytop." ThinkOutside argues that the specification language distinguishes square or rectangular keytops from oddly-shaped keys:

Most keytops used in conventional keyboards are square or rectangular in shape. However for some machine functions, keytops of different shapes are used. One shape which is often used for certain keyboard functions is an L-shaped keytop.

ThinkOutside argues that the patent is limited to oddly-shaped keytops and a rectangular key is not an oddly-shaped keytop.

The court finds that although the specifications clearly envision an L-shaped key as an example of an oddly-shaped key, nothing in the specifications and language of the claim excludes a rectangular key. In fact, the prosecution history confirms the fact that the inventor clearly envisioned that rectangular keys are one of the types of "oddly-shaped keytop" for which his invention would provide full-top surface utilization. Responding to the initial rejection by the patent Examiner, the applicant for the '225 patent distinguished prior art references by stating that:

Both the Abernethy and Fleming disclosures recognize the problem of preventing binding when pressing an oddly-shaped keytop at a point which is not directly over the keyswitch ...

Prior to applicant ... there was no use, disclosure, or suggestion of a scissors-type linkage for enabling full-top surface utilization of **oddly-shaped keytops.**

The Abernethy invention related to a rectangular keytop and Fleming involved a large area button. The applicant for the present patent clearly refers to the keytops in these inventions as "oddly-shaped keytops" thus indicating there was no limitation to actual shapes as suggested by ThinkOutside.

Nothing in the claim language itself requires a limitation to keytops that have an L-shape (a stem portion that juts out at an angle). When there is ambiguity in the ordinary meaning of a disputed claim term, the meaning of the disputed term may be clarified by referring to the intrinsic evidence of the record, which includes the specification and the prosecution history. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). However, "while claims are to be interpreted in light of the specification and with a view to ascertaining the invention, it does not follow that the limitations from the specification may be read in to the claim." Comark Communications Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed.Cir.1998). Even if the specification identifies the invention as dealing with L-shaped keys, the court would not read the specification's description of oddly-shaped keys as limitations of Claim 1 which simply describes a stem portion cantilevered from a main portion. The court construes "main portion" as *the part of the keytop that is supported by the keyswitch* and "stem portion cantilevered from said main portion" as *the part of the keytop that extends laterally from the main portion*.

B. Mounted

ThinkOutside contends that "mounted on a circuit board" should be construed to mean "directly attaching the keyswitch to a rigid board having conductive pathways so that the keyswitch derives structural support from the rigid board." Minebea proposes that mounted should be defined as "positioned in place over the circuit board."

A patent's claims should not be construed so as to exclude from their scope a preferred embodiment which is disclosed and described in the specification. Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1581 (Fed.Cir., 1996) ("it is unlikely that an inventor would define the invention in a way that excluded the preferred embodiment, or that persons of skill in this field would read the specification in such a way."); Vitronics, 90 F.3d at 1578 ("Such an interpretation is rarely if ever correct.") An examination of the preferred embodiment reveals that to construe "mount" as directly attaching to the circuit board would result in an construction that excludes the preferred embodiment. The preferred embodiment describes: "Metal frame 68 is situated above circuit board 70. Frame 68 serves to hold keyswitch in place over circuit board 70. The actual electrical connections to keyswitch 18 are made on circuit board 70." This makes it clear that in the preferred embodiment, the keyswitch is supported over the circuit board 70 by frame 68, not directly affixed to the circuit board as Think Outside Suggests. The metal frame 68, not circuit board 70 provides, structural support for the keyswitch. The court therefore does not construe mounted on a circuit to mean directly attached to the circuit board so that it derives structural support from the board.

Minebea contends that "mounted" should be construed to mean "positioned." The court finds that nothing in the ordinary meaning of "mounted" or the intrinsic evidence warrants such a broad construction. The ordinary meaning of mounted is to attach to a support. *Webster's Third New International Dictionary (unabridged)* at 1477 (1986). There is no basis to believe that the definition of "mounted" in the relevant art is anything other than its ordinary meaning. The court therefore construes "mounted" to mean *secured either directly to the circuit board or onto a base that is attached directly to the circuit board*. This definition does not exclude the preferred embodiment.

C. Circuitboard

ThinkOutside contends that circuit board should be construed as "a rigid board having conductive pathways" while Minebea argues that the claim should be construed as an "insulating sheet having conductive pathways." For the reasons below, the court accepts Minebea's proposed construction.

A claim term is to be construed objectively as one of ordinary skill in the art at the time of invention would have understood the term to mean. Markman, 52 F.3d at 986. "[T]he court must determine how a person of experience in the field of this invention would upon reading the patent documents, understand the words used to define the invention." Toro Co. v. White Consolidated Industries, Inc., 199 F.3d 1295, 1299 (Fed.Cir.1999). The court may rely on extrinsic evidence *as to the meaning of a claim* only in the rare circumstance when there is ambiguity in the intrinsic evidence. Vitronics v. Conceptronics, 90 F.3d 1576 (Fed.Cir.1996). However, the court can always receive extrinsic evidence such as dictionary definitions, treatises, articles and expert testimony *to aid and educate the court in understanding the state of the art at the time of invention*. Tanabe Seiyaku Co. Ltd. v. United States Int'l Trade Comm., 109 F.3d 726, 732 (Fed.Cir.1997); Mantech Envtl. Corp. v. Hudson Envtl. Servs. Inc., 152 F.3d 1368, 1373 (Fed.Cir.1998).

ThinkOutside parses the term circuit board into its constituent words "circuit" and "board" and concludes that since a board is a flat rigid object, a circuit board is a flat, rigid object containing circuits or conductive pathways. The court rejects this construction as an over-literal and improper reliance on dictionary definitions. Liebscher v. Boothroyd, 46 C.C.P.A. 701, 258 F.2d 948, 950 (C.C.P.A.1958) (indiscriminate reliance on definitions found in dictionaries can often produce absurd results.). Instead, the court finds that "circuit board" is a term of art to be construed as a person skilled in the art of keyboards at the time of the patent.

Minebea submits testimony of the experts Broussard and Voit which state that a person skilled in the art in 1983 would have understood the term to include flexible circuit boards and any other non-conductive sheets having conductive pathways. The court accepts this expert testimony as extrinsic evidence to educate the court about the state of the art at the time of the patent. FN2 Markman, 52 F.3d at 980. Minebea has also provided the court with examples of contemporaneous patents that included flexible circuit boards. (Sicklinger Decl., Exh. A, B, C) Based on this evidence, the court finds that "circuit board" should be construed as *insulating sheet having conductive pathways*.

D. A Pair of Lever Arms

Think Outside proposes that "a pair of lever arms" be construed as "two structures approximating the shape of a human arm." Minebea contends that lever arm means "a rigid member that turns about a pivot."

ThinkOutside argues that dictionary definitions provide that "arm" refers to structures that are slender and approximate the shape of a human arm. It derives its construction by parsing out "arm" from "lever arm" and looking up "arm" in the dictionary. The court rejects this as another over-literal reliance on dictionary definitions. The term "arm" should be construed in the context of the claim language and the specifications. Anderson v. Int'l Eng'g & Mfg., Inc., 160 F.3d 1345, 1348-49 (Fed.Cir.1998). The court finds that the inventor used the term "arm" as part of the phrase "lever arm" to denote simply the part of the lever that turns around a pivot or fulcrum.FN3 The patent specification describes "a pair of lever arms 24 and 26 are joined approximately at the centers thereof by a pivot to form a scissors like linkage." (Col.3, ll.26-29) Nothing in the written specifications indicates that the term lever arms is used in any other way than to indicate the turning component of a lever.

Although the specifications draw thin long lever arms, "particular embodiments appearing in the specification will not be read into the claims when the claim language is broader that such embodiments." Electro. Med. Sys. v. Cooper Life Services, 34 F.3d 1048, 1054 (Fed.Cir.1994). "[I]t is well established that broad claims supported by the written description should not be limited in their interpretation to a preferred

embodiment." Gart v. Logitech, Inc., 254 F.3d 1334, 1343 (Fed.Cir.2001). The court therefore will not limit the phrase "lever arms" in Claim 1 to mean slender structures shown in the specification diagrams. Moreover, the specification itself states "[t]hose skilled in the art will appreciate that modifications can be made to the shape of lever arms 24 and 26." (Col. 4, lines 40-41). Instead, it construes the term "lever arms" as a *rigid structure of any dimensions which functions as the part of a lever that turns about a fulcrum or pivot*.

E. Joined at Intermediate Portions thereof by a Pivot to form a Scissors-like LinkageFN4

Think Outside proposes that the court construe "pivot" as "a fixed point at which these lever arms rotate and do not slide." Minebea contends that "pivot" means "a structure about which something normally turns but also slides." For the reasons discussed below, the court finds that pivot as it appears in Claim 1 does not include sliding motion.

Standard and scientific dictionaries confirm that a pivot is a fixed point about which something turns. *Merriam Webster's Collegiate Dictionary* at 887 (10th ed.1993); *Webster's Third New International Dictionary (unabridged)* at 1477 (1986); *Academic Press Dictionary of Science and Technology* at 1659 (1992). Although there are special pivots that allow sliding as well as turning motion such as in a pair of pliers, the ordinary meaning of "pivot" includes only turning motion.

An examination of the specifications supports this construction. Where both pivoting and sliding motion are envisioned, the claim and the specifications clearly and explicitly provide for it. Claim 1 provides for "an articulating joint which allows both pivoting and sliding motion." (See Column 3, lines 53-55.) This articulating joint, however, is not the pivot in question here. There is no mention of sliding motion at the pivot which connects the two lever arms. An examination of the diagrams in the specification show that the joints that allow for sliding and pivoting are designed to allow for such movement where as the pivot connecting the two lever arms are not. (Figs.3, 9, 11).

The court notes that it is not importing a limitation from the specifications where the language of the claim is broader than the material in the specifications. The court finds that the term pivot in Claim 1 means a point about which something turns. The specifications and the diagrams contained therein support the construction that only turning motion was envisioned by the inventor at the pivot which connects the two lever arms as compared to other joints where pivoting and sliding may occur. The court therefore construes "pivot" as *a fixed point about which something turns*.

F. Means for pivotally mounting said first and second ends to longitudinally opposed ends of said cantilevered portion.

Think Outside contends that "ends" should be construed as 'the extremity of an object with length." Minebea on the other hand defines ends as "near the boundary." The court rejects both constructions of "ends."

Figure 3 of the specifications shows that ends 72 and 74 are near the boundary of the cantilevered portion, but that they are not at the extremity of the cantilevered portion. To interpret "ends" to mean the very outer extremity would be to construe the claim in a way to exclude the preferred embodiment as drawn up in the diagrams. A construction which excludes the preferred embodiment is rarely if ever correct." Vitronics, 90 F.3d at 1582. The court therefore finds that the meaning of the terms "ends" in Claim 1 is not limited to the extremity of an object. The court instead construes "ends" as *at or near the extremity of an object*.

G. Means for pivotally mounting said third and fourth ends to separate joints "adjacent" said circuit board under said cantilevered portion.

Think Outside contends that "adjacent" should be construed to mean "next to the circuit board." Minebea proposes that adjacent in Claim 1 means "nearby." The court notes that the dictionary definition of adjacent is lying near, close or contiguous. *Webster's Third New International Dictionary (unabridged)* at 26 (1986). The specifications show that the joints in the preferred embodiment are located near and above the circuit board but not directly contiguous to the circuit board.

In the keyswitch structure shown, a metal frame 68 is situated above circuit board 70 ... Frame 68 also serves to hold a frame block 62 which provides articulating joints for third and fourth ends 76 and 78 ...

(Col. 3, lines 55-65). To limit claim language "adjacent" to mean next to would exclude the preferred embodiment. The court therefore construes adjacent to mean *contiguous or nearby*.

H. Means Plus Function Claim Elements

A patent application may describe an element of the invention by identifying it as the "means" for achieving a function rather than by identifying the physical item or element to be used. 35 U.S.C. s. 112. The court determines the meaning of the means plus function element by looking to the specifications to identify the structure, materials or acts corresponding to the claimed function. Sage Prods. Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1428 (Fed.Cir.1998). The scope of a claim having a means plus function limitation is confined to the structures expressly disclosed in the specifications and equivalents. Symbol Techs. Inc. v. Opticon, 935 F.2d 1569, 1575 (Fed.Cir.1991). A means-plus-function element will generally be held indefinite if the specification does not contain an adequate disclosure of structure corresponding to the function of the claims. In re Dossel, 115 F.3d 942, 946 (Fed.Cir.1997)

1. The Means Plus Function Claim Elements Do Not Fail For Indefiniteness

Think Outside contends the following means plus function claim elements fail for indefiniteness:

[1] **means for pivotally mounting said first and second ends to longitudinally opposed ends of said cantilevered portion;**

[2] **means for pivotally mounting said third and fourth ends to separate joints adjacent said circuit board under said cantilevered portion;**

ThinkOutside asserts that the specification does not contain an adequate disclosure of structures corresponding to the function of these claims. It points out that while the function claimed is "pivotally mounting," the specifications only disclose a structure that mounts the lever arm ends at joints that allow both sliding and pivoting. Because the specifications do not identify joints that allow only pivoting movement, ThinkOutside argues the two above means plus function claims fail for indefiniteness. The court notes however that the third means plus function element does claim pivoting and sliding motion at the joint that mount the lever arms. The third element claims a:

[3] **means for enabling at least two of said first, second, third, and fourth ends to slide in addition to pivot.**

When read in conjunction with the third element, the means plus function elements of Claim 1 provides a means for mounting the four ends of the lever arms at pivots that provide for both sliding and pivoting motion. As ThinkOutside concedes, the specifications disclose a structure that accomplishes this function. Col. 3, lines 49-55 and Col. 3, line 60-Col. 4, line 3. The court therefore finds that the means plus function claims of Claim 1 do not fail for indefiniteness.

2. Structures Corresponding to "means for pivotally mounting said first and second ends to longitudinally opposed ends of said cantilevered portion"

Minebea contends that the corresponding structure for the "means for pivotally mounting said first and second ends to longitudinally opposed ends of said cantilevered portion" are stud 34 protruding into slot 52, which is in keytop block 60, and stud 36 protruding into slot 54, which is in keytop block 60. (See Column 3, Lines 39-45) Minebea takes the position that although the slots are in keytop block 60, the keytop block 60 itself is not necessary to perform the required function. Think Outside contends that keytop block 60 is necessarily a part of the structure that pivotally mounts the first and second ends to the cantilevered portion of the keytop. The court agrees with ThinkOutside.

The function claimed includes mounting the first and second ends of the lever arms to the cantilevered portion of the keytop. Keytop block 60 which includes the slots 52 and 54 is the component that is attached to the keytop:

A keytop block 60 is mounted in cantilevered portion of keytop 12 to provide a means for pivotally mounting first end of 72 of lever arm 24 and second end 74 of lever arm 26 ... A stud 34 projects from first end of lever arm 24 and protrudes into slot 52 in keytop block 60. Similarly a stud 36 projects from second end 74 of lever arm 26 and protrudes into slot 54 of keytop block 60.

Without keytop block 60, the lever arm ends would not be mounted to the cantilevered portion of the keytop. Keytop block 60 is therefore a necessary component of the means for pivotally mounting the first and second ends to the keytop. The court concludes that the structures which correspond to the first means plus function element are: *keytop block 60, a stud 34 protruding into slot 52 and stud 36 and protruding into slot 54*.

3. Structures Corresponding to "a means for pivotally mounting said third and fourth ends to separate joints adjacent said circuit board under said cantilevered portion."

Minebea identifies the structure to perform the function "pivotally mounting said third and fourth ends to separate joints adjacent said circuit board under said cantilevered portion" as "stud 38 protruding into opening 56 and stud 32 protruding into opening 58." ThinkOutside argues that the structure that corresponds to the means must include frame block 62. Again, the court agrees with ThinkOutside.

The function claimed is mounting the third and fourth ends to joints adjacent the circuit board. The means for performing that function must include the joints to which the ends are mounted. The specifications states that:

Frame 68 also serves hold a frameblock 62 which provides articulating joints for third and fourth ends 76 and 78 ... As more clearly shown in Fig. 11 and 12, frame block 62 includes openings, or slots 56 and 58. A stud 38 projecting from third end 76 of lever arm 26 protrudes into opening 56 of frame block 62. Similarly, a stud 32 projecting from fourth end 78 of lever arm 24 protrudes into opening 58 of frame block 62.

(Col. 3, line 60-Col. 4, line 1).

Since frameblock 62 provides the joints to which the third and fourth ends are mounted, it is a necessary part of the means. The court concludes that the structures which correspond to the first means plus function element are: *frameblock 62, a stud 38 protruding into opening 56 and stud 32 and protruding into opening 58*.

4. Structures corresponding to a "means for enabling at least two of said first, second, third and fourth ends to slide in addition to pivot."

Minebea contends that the structure that enables the ends to slide instead of pivot is comprised of elongated profiles in at least two of slots 52, slot 54, opening 56 and opening 58. ThinkOutside argues that keytop block 60 and frame block 62 (which contain the openings/ slots 52, 54, 56, 58) is the means for enabling the sliding, in addition to pivoting.

Unlike the means plus function elements above which provided a structure for *mounting* the ends, this means plus function claim only needs to provide for a means for allowing sliding and pivoting motion. Sliding and pivoting motion is accomplished by the shape of the opening to which the ends are attached and is not dependent on the structure that provides the openings. The court accepts Minebea's construction which identifies the means structure as the elongated profiles in *slot 52, slot 54, opening 56, and opening 58*. Although the specification never expressly says "elongated slots," the slots are numbered and clearly refer to the diagrams which depict elongated slots to allow for the pivoting and sliding motion.

III. MOTION TO STRIKE

In support of their motion for claim construction, Minebea submitted expert declarations from William Voit and Bryan Broussard. Broussard and Voit testified that the term circuit board, as used by those skilled in the art in 1983, included both flexible and rigid sheets of materials containing electronic pathways.

Voit also testified to the following:

1) A lever is a simple machine consisting of a lever arm and a fulcrum. A lever arm need not resemble a human arm.

2) Nothing in the claim or specifications limits "a main portion and a stem portion cantilevered from said main portion" to any particular key shape.

3) "Mounted" is understood by one skilled in the keyboard art to mean "positioned."

4) "Pivot" as understood by one skilled in the art of mechanical engineering art does not exclude a sliding motion.

ThinkOutside moves to strike these declarations submitted by William Voit and Bryan Broussard arguing that Minebea has not identified any basis for allowing the court to consider extrinsic evidence. For the reasons discussed above, the court accepts the testimony of Broussard and Voit concerning circuit boards as evidence which aids the court in understanding the state of the art at the time of the invention. The court finds that the remaining expert testimony is impermissible extrinsic evidence.

In order for the court to consider extrinsic evidence, the court must first conclude that the meaning of a patent claim is ambiguous based on its language and on its intrinsic evidence. Bell & Howell v. Altek Systems, 132 F.3d 701, 706 (Fed.Cir.1997). Minebea argues that because claims must be construed from the perspective of one skilled in the art, with consideration of the state of the art at the time of invention, a court is encouraged to receive aids to assist the court in understanding the state of the art at the time of the invention. Cybor Corp. v. FAS Tech, 138 F.3d 1448, 1462 (Fed.Cir.1998).

The court grants the motion to strike expert evidence as to the meanings of "mounted;" "pivot;" "a lever arm;" and a "main portion and a stem portion cantilevered from said main portion." The court notes that these terms are common descriptive terms detailing the patent, not terms of art. The expert testimony as to these matters does not help the court understand the technology behind the patent or provide a background. Vitronics, 90 F.3d at 1585 (holding district court can consider extrinsic evidence to understand the underlying technology but not on the ultimate issue of a disputed claim unless there is an ambiguity.) The expert's conclusions as to these meanings are conclusory statements that go to the ultimate claim construction question. Since the court notes no ambiguity as to the meanings of these terms in the claim and specifications, expert evidence is not appropriate. The court GRANTS the motion to strike with respect to those portions of expert testimony submitted by Minebea.

Think Outside also objected to Minebea's expert testimony based on Federal Rule of Evidence 702. Since the court granted the motion to strike with respect to all other expert testimony, it will deal with objections based on Rule 702 only with respect to the accepted testimony regarding circuit boards. Rule 702 states:

If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles.

The court finds that both Broussard and Voit are qualified as experts. They have worked in the field of mechanical engineering and in the field of circuit board design and IBM high speed products respectively for many years. Mr. Voit has an advanced degree in mechanical engineering and Mr. Broussard has a degree in electronics technology. They both testify on the basis of their expertise and knowledge of the industry.

Think Outside does not dispute their qualifications but contends that they have offered no basis or support for their conclusions. ThinkOutside points out that Broussard and Voit submit no facts or data or other proof that their testimony is based on reliable principles. The court notes that although the reliability inquiry in many cases may involve facts, data and scientific methodologies, in other cases the reliability concerns may focus on the personal knowledge or experience of the experts. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 139, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999) (the *Daubert* factors are a non-exclusive list of factors and may be inapplicable to certain circumstances). The court finds that Broussard's and Voit's experience in the fields of circuit board design and product development form a reliable basis for their testimony concerning how one skilled in the art of circuit boards would have understood the term "circuit board" at the time of the patent. The court finds Broussard and Voit's testimony concerning circuit boards admissible and denies the motion to strike regarding this testimony.

IV. CONCLUSION

For the above reasons, the court GRANTS IN PART and DENIES in part ThinkOutside's motion to strike **[67-1]** expert evidence. Plaintiff's motion for claim construction is GRANTED IN PART and DENIED IN PART **[59-1]** and defendant' motion for claim construction **[56-1, 72-1]** is GRANTED IN PART and DENIED IN PART.

The court has given substantial time and study to the issues involved. Generally motions for reconsideration are disfavored. However, if a party believes such a motion to be appropriate, it must file it on or before August 29, 2002. The motion is limited to 10 pages. Any opposition shall be filed by September 6, 2002 and shall also be limited to 10 pages. No replies will be accepted. The limit on the timing and length of any such motion should not be considered encouragement to file one.

IT IS SO ORDERED.

FN1. ThinkOutside submits dictionary definitions of stem which defines the word in terms of wine glasses, pipes, and musical notes. They argue that in all of the above examples, the stem juts out at an angle from the main portion. The court finds this unpersuasive. The above examples would equally support a definition of stem through contrast to a main portion.

FN2. The court will discuss the remainder of the issues raised by ThinkOutside's Motion to Strike Minebea's Expert Testimony below.

FN3. The court notes that a definition of "lever arm" is the perpendicular distance from the fulcrum of a lever and the line of action of the weight. *Webster's Third New International Dictionary (unabridged)* at 1301 (1986). The inventor clearly did not intend this definition of the phrase "lever arm."

FN4. Although Minebea claims the term "joined at intermediate portions thereof" is disputed, no alternative construction of these terms is offered by ThinkOutside. The court will therefore assume that this term is undisputed. A reading of Think Outside's papers supports the conclusion that they dispute the construction of the terms "lever arms" and "pivot," not "joined at intermediate portions thereof."

The phrase, "to form a scissors-like linkage having first, second, third and fourth ends" also appears undisputed. Minebea's papers offer no alternate construction of this phrase. Again the dispute seems to surround the word "pivot."
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