United States District Court,
D. Minnesota.

ADC TELECOMMUNICATIONS, INC,
Plaintiff.
v.
SWITCHCRAFT, INC,
Defendant.

No. Civ. 04-1590ADMJSM

Sept. 9, 2005.

Alan G. Carlson, Philip P. Caspers, Timothy A. Lindquist, Samuel A. Hamer, and Brian W. Hayes, Carlson, Caspers, Vandenburgh & Lindquist, Minneapolis, MN, appeared for and on behalf of the Plaintiff.

Thomas I. Ross, Paul B. Stephens, and Matthias Abrell, Marshall, Gerstein & Borun, Chicago, IL, and Michael R. Cunningham, Gray, Plant, Mooty, Mooty & Bennett, P.A., appeared for and on behalf of the Defendant.

MEMORANDUM OPINION AND ORDER

MONTGOMERY**, J.**

I. INTRODUCTION

On June 22, 2005, a *Markman* hearing was conducted by the undersigned United States District Judge, pursuant to ADC Telecommunications, Inc.'s ("ADC") patent infringement claim against Switchcraft, Inc. ("Switchcraft"). ADC alleges Switchcraft infringed claims 1, 2, 16-18, and 21 of U.S. Patent No. 6,045,378 ("the '378 patent"). The patent, entitled "Switching Coaxial Jack with Impedance Matching," concerns a coaxial jack suitable for use with large bandwidth and high frequency transmission applications. Switchcraft also seeks a declaratory judgment that a new video jack design does not infringe the patent claims.

II. BACKGROUND

Switching jacks are used inside central communications facilities to allow two pieces of equipment to communicate. Pl.'s Markman Brief [Docket No. 47] at 1. Connecting each piece of equipment to a switching jack, rather than directly to one another, provides technicians with a convenient access point to test or monitor the signals running between the two components. *Id*. However, introduction of a switching jack into the signal path may result in an impedance mismatch. *Id*. at 2. Impedance, measured in ohms, is a component's opposition to the flow of an electrical signal. *Id*. If adjoining elements in a transmission line have different impedances, a portion of the transmission signal will be reflected at their interface, resulting in the loss or distortion of the signal. *Id*.

To minimize this problem, cables and components are designed with the same impedance characteristics, generally 75 ohms. *Id*. To avoid an impedance mismatch and the resulting partial reflection of the transmission signal, switching jacks must also possess an impedance close to 75 ohms. *Id*. Although a perfect match is impossible, the closer the impedance values, the more the switching jack will appear invisible to the signal as it travels between two equipment components. *Id*. at 2-3.

This matching task has been made more challenging with the advent of high definition television and other new technologies. *Id*. at 3. To transport greater amounts of information, communications equipment now operates on more and higher frequencies ("bandwidth"). *Id*. Since impedance is frequency dependent, a switching jack operating at large bandwidths must match impedance at each frequency without causing a mismatch, and corresponding signal loss, at the other frequencies. *Id*.

The '378 patent teaches that by adding specially shaped structures (sometimes called "waveguides") at certain locations within ADC's switching jack it is possible to tune impedance and improve the performance of the jack over large bandwidths. Id. at 3-4. ADC alleges three of Switchcraft's video jacks, the MVJ75T, VJHD75TX and VJSD75TX jacks, infringe its '378 patent. Id. at 5.

The parties seek claim construction on the following disputed claim terms: (1) "leaf spring portion"; (2) "waveguide"; and (3) "said housing including a plurality of projections projecting from said side walls." The parties also debate whether five other claim terms need be interpreted: (1) "positioned"; (2) "facing"; (3) "facing one another"; (4) "adjacent"; and (5) "V-shaped spring."

III. DISCUSSION

A. Standard of Review

In claim construction, terms are to be construed objectively, as a person of ordinary skill in the art would understand them. Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324-25 (Fed.Cir.2002); Markman v. Westview Instruments, Inc., 52 F.3d 967, 986 (Fed.Cir.1995), *aff'd* 517 U.S. 370 (1996). The inquiry begins with the claims themselves, whose language is given its ordinary meaning unless the patentee provides a particular definition. Teleflex, 299 F.3d at 1325. The intrinsic record of the patent should provide the primary source of evidence of interpretation. *See id*. "Among the intrinsic evidence, 'the specification is always highly relevant to the claim construction analysis" ' and 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)). The court should also refer to the prosecution history and the prior art referenced therein for evidence of definition of and limitation on claim scope. Vitronics, 90 F.3d at 1582-83. Dictionaries and treatises are considered particularly useful for discerning the ordinary meaning of claim language. Bell Atlantic Network Servs., Inc. v. Covad Comms. Group, Inc., 262 F.3d 1258, 1267 (Fed.Cir.2001). However, reliance on extrinsic evidence is only proper when claim language remains ambiguous after consideration of the intrinsic evidence. Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1308 (1999).

B. "Leaf Spring Portion"

ADC and Switchcraft debate the meaning of the claim term "leaf spring portion." Claim 1 teaches that a switch includes "at least one conductive movable portion defining a leaf spring portion." '378 patent at 10:20-31.

ADC argues the phrase should be construed to mean "a spring formed by a thin strip or leaf." ADC notes

that *Merriam Webster's Collegiate Dictionary* defines leaf spring as "a spring made of superimposed strips or leaves." Supra at 707 (11th ed.).

Switchcraft argues a leaf spring should be interpreted as a portion "that is firmly anchored at one end with a large deflection at another end." Switchcraft's Proposed Claim Constructions (Switchcraft Markman Brief [Docket No. 46], Ex. G). This proposed interpretation is based on the definition for leaf spring in the *McGraw-Hill Dictionary of Scientific and Technical Terms:* "[a] beam of cantilever design, firmly anchored at one end with a large deflection under a load. Also known as a flat spring." *Supra* at 1123 (5th ed.1994). Switchcraft argues leaf spring is a narrower term than "movable portion" because, after the claim was originally filed, it was specifically added to denote a specific type of movable portion. Switchcraft also supports this argument by noting that claim 1 teaches "said switch including at least one conductive movable portion defining a leaf spring portion" while claim 16 subsequently recites, "said switch including a plurality of conductive movable portions." '378 patent at 10:30-31, 14:9-10. Switchcraft argues that an interpretation of leaf spring as a configuration suitable for conducting electrical signals which is also movable renders superfluous the recitation of a conductive movable switch portion. Finally, Switchcraft argues all of the leaf springs shown in the preferred embodiment are shown and described as having free ends and subject to "deflecting forces." *See* 4:38, 57-58, 64-65.

ADC proposes "leaf springs" should be interpreted as "a spring formed by a thin strip or leaf." ADC argues claim one describes a spring as a leaf to convey its general shape: a thin or flat piece of material. ADC stresses *Merriam-Webster's Collegiate Dictionary* defines "leaf spring" as "a spring made of superimposed strips or leaves." Supra at 707. In addition, the definition cited by Switchcraft in the *McGraw-Hill Dictionary of Scientific and Technical Terms* states that a "leaf spring" is "[a]lso known as flat spring." Supra at 1123.

The '378 specification refers to switch elements 42a and 44a as "flexible leaf springs" but later refers to the same elements as including "spring contacts." *See* '378 patent 4 :32-34, 52. ADC argues the use of "spring contacts" supports its construction of "leaf springs" because spring contacts are defined as "a contact made from flat, metal spring stock; it is usually bent or curved" or as "a relay or switch contact mounted on a flat spring, usually of phosphor bronze." *The Illustrated Dictionary of Electronics, TAB Books, Inc.,* 477, 215 (3rd ed.1985); *McGraw Hill Dictionary of Scientific and Technical Terms, supra* at 1896. ADC argues the common emphasis in all of these definitions is the thin or flat shape of the spring. In the specification, six elements, 42a, 44a, 50a, 52a, 70a, and 70b, are identified as leaf spring portions and are shaped as thin strips or leaves. '378 patent 4 :31-33, 50-51, FIGS. 5, 6.

Switchcraft and ADC debate whether the definition of "leaf spring" must reflect its functional use. Switchcraft argues "leaf spring" is a term of art that describes both the structural and functional elements of the spring. Switchcraft contends ADC's definition only reflects the structure and not the function of a "leaf spring." ADC counters that if the definition of "leaf spring" encompasses the functional language included in Switchcraft's definition, the phrase "at least one conductive movable portion defining a leaf spring portion" would be redundant. ADC claims the functional limitation is included by the term "moveable."

The Court finds "leaf spring" should be interpreted as "a spring formed by a thin strip or leaf." This interpretation is consistent with the use of "leaf spring" in the specification. Although the preferred embodiment does show leaf springs that are anchored at one end, nothing in the claim recites that leaf springs must be anchored at one end or have a large deflection at the other end. Limitations shown in the preferred embodiment are not to be read into claims. Burke Inc. v. Bruno Indep. Living Aids, Inc., 183 F.3d

1334, 1340 (Fed.Cir.1999). The claims emphasize only that leaf springs are movable. Furthermore, the Court's construction reflects the common feature of the definitions for "leaf spring"-a thin or flat shape. In addition to the quoted dictionary definitions, other jurisdictions have also defined leaf springs as "flat pieces of tensed metal" and "flat (or leaf) springs." Cool-Fin Electronics Corp. v. Int'l Electronic Research Corp., 491 F.2d 660, 661 (9th Cir.1974); Turbocare Div. of Demag Delaval TurboMachinery Corp. v. General Electric Co., 264 F.3d 1111, 1121-22 (Fed.Cir.2001). The claim uses "leaf spring" to describe the element's structural aspect while "movable" describes its functional element.

Switchcraft argues adapting this interpretation ignores the stated preference for scientific dictionaries when defining technical terms. *See* AFG Indus. v. Cardinal, 239 F.3d 1239, 1248 (Fed.Cir.2001). However, it is critical the interpretation reflect the use of the term in the patent specification. Teleflex, Inc., 299 F.3d at 1325. The construction proposed by Switchcraft is itself a variance from the definition found in the technical dictionary. Switchcraft's construction includes a large deflection at one end while the technical dictionary does not specify the location of said deflection. Additionally, ADC presented several examples of leaf springs that would not be covered by Switchcraft's definition, and in at least one case, the technical dictionary's definition. These examples include leaf springs that are anchored on both sides with a deflection in the middle, such as those commonly used in van and truck suspension or described as leaf spring 130 in JP Patent No. 4-24642. *See* Pl.'s Markman Brief at 10; Pl.'s Oral Argument Slide Nos. 40-41. It also includes the leaf springs that are not anchored at either end, such as the leaf spring 15 of GB 1224234 discussed by the Federal Circuit in Turbocare. 264 F.3d at 1121-23; Pl.'s Oral Argument Slide No. 42. Switchcraft argues for a construction it claims is commonly understood by those skilled in the art. However, without greater intrinsic evidence that the patentee intended to limit the use of "leaf spring," it is inappropriate to impose such a definition given the many common examples of leaf springs that fall outside the ambit of its proposed definition.

C. "Waveguide"

ADC and Switchcraft contest the meaning of the term "waveguide." Used throughout the specification, "waveguide" first appears in asserted claim one:

... said housing including a waveguide projecting from one of said sidewalls adjacent to said moveable portion, said waveguide including a planar portion facing said leaf spring portion.

'378 patent at 10:32-35. The parties agree that a "waveguide" is a structure that affects the impedance of a signal transmission path. However, ADC and Switchcraft dispute whether "waveguide," as the term is used in the '378 patent, involves an element of intent.

The dictionary definition for "waveguide" is:

a device which constrains or guides the propagation of electromagnetic waves along a path defined by the physical construction of the waveguide; includes ducts, a pair of parallel wires, and a coaxial cable.

McGraw Hill Dictionary of Scientific and Technical Terms, supra at 2155. Under this definition, Switchcraft observes that the entire jack can be a waveguide. Therefore, Switchcraft argues, the term, as used in the '378 patent, must have a more specific interpretation. Switchcraft proposes "waveguide" be construed as a "structure positioned to affect impedance matching along the signal transmission through a jack housing."

In support of its proposed construction, Switchcraft argues that if waveguide is interpreted merely as a structure that tunes impedance, any device within a coaxial switching jack that improves impedance matching, regardless of the degree, would constitute a waveguide. Switchcraft argues the prosecution history supports a narrower interpretation. The prosecution history shows that the application that eventually matured to the '378 patent was initially rejected because all pending claims were taught in U.S. Patent No. 5,885,096 ("the '096 patent") in combination with U.S. Patent No. 4,264,115 ("the '115 patent"). *See* Patent Application File History (Stephens Decl. [Docket No. 46] Ex. C) at 56-99. The examiner found that the '096 patent taught all recited limitations except the housing with a waveguide, which was an obvious variation and shown in the '115 patent. Id. at 51.

The applicant subsequently amended claims 1 and 16 and added other claims to distinguish the '378 patent. For instance, claim 1 was amended to recite "a waveguide projecting from one of said walls adjacent to said movable portion, *said waveguide including a planar portion facing said leaf spring portion*" (with added limitations in underline). Id. at 101. The applicant argued repeatedly he had improved upon the prior art device "through the addition of structure internal to the jack device which results in an impedance matching at greater frequencies than prior jack designs" and that "the focus of the present invention is the electrical performance (impedance) of the switching jack device so that impedance mismatches are avoided." Id. at 104; *see also* id. at 105. The applicant also sought to distinguish the waveguides recited in the '115 patent by claiming they served to shield against interference rather than for "impedance matching" as taught by the '378 patent. Id. at 105. Switchcraft argues the measures needed to distinguish waveguides in the '378 patent from prior art limited the scope of "waveguide."

Finally, Switchcraft notes the '378 patent teaches that the geometric shape of the waveguides is not critical. Instead, the specification teaches the waveguide is a structure placed in an empty area of the switch housing to achieve impedance matching. '378 patent at 9:20-27, 9:47-52. For these reasons, Switchcraft argues the term "waveguide" should reflect an intent to position the structure to affect impedance matching.

Conversely, ADC argues "waveguide" should not be construed to include an element of intent. Instead, ADC proposes "waveguide" should be interpreted to mean "structure for tuning impedance in an electrical device for better carrying an electrical signal." ADC argues there is no intent element to direct infringement and it is therefore irrelevant whether the structure was placed or positioned in the device for some other purpose. Under ADC's interpretation, whether or not a structure is a "waveguide" can be determined by testing its affect on the impedance of the device without regard to the subjective intent of the engineer.

The Court construes "waveguide" to be a "structure for tuning impedance in an electrical device for better carrying an electrical signal." In general, intent is not relevant to whether a product directly infringes a patent. *See, e.g.,* Intel Corp. v. U.S. Int'l Trade Comm'n, 946 F.2d 821, 832 (Fed.Cir.1991); Florida Prepaid Post Secondary Edu. Expense Bd. v. College Savings Bank, 527 U.S. 627, 645 (1999). Therefore, whether a structure was placed in the device for some other purpose does not address whether it infringes an existing patent. *See* Vulcan Eng'g Co. v. Fata Aluminum, Inc., 278 F.3d 1366, 1375 (Fed.Cir.2002); Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 945 (Fed.Cir.1990).

The Federal Circuit has acknowledged, however, that a claim can be written, by including a scienter requirement, in a manner that limits it. Koito Manuf. Co., Ltd. v. Turn-Key-Tech., LLC, 381 F.3d 1142, 1150 (Fed.Cir.2004). In *Koito,* the Federal Circuit found a claim teaching "a method of injection molding a plastic product" carried a scienter requirement when it taught to inject "a quantity of first plastic into the first mold cavity so that the first plastic follows in the first-layer-defining-mold-cavity-section in a first

predetermined general direction." *Id*. at 1145 (emphasis in original). The Federal Circuit affirmed the district court's interpretation that the claim's use of "predetermined" "required intent or foreknowledge in the fixing of plastic flow direction." *Id*. at 1150.

The terminology at issue in *Koito* is distinguishable from "waveguide" at issue in the instant case. First, *Koito* dealt with a method claim rather than the apparatus claim as in the case at bar. Second, and more importantly, the term "predetermined" inherently requires foreknowledge in a manner completely absent from "waveguide."

Switchcraft argues that, without an intent component, any element that tunes impedance is a "waveguide" and that ADC limited the scope of the term through the prosecution history. While it is true that claims should be interpreted in light of the prosecution history, the statements cited by Switchcraft are in keeping with the interpretation of waveguide as a "structure for tuning impedance in an electrical device for better carrying an electrical signal." Subsequent language in the claim and specifications, describes where these waveguides should be positioned to improve impedance matching. FN1 Language defining this structural relationship, rather than an intent requirement, modifies and narrows "waveguide" by describing the position necessary to provide impedance tuning. As a result, "waveguide" should be construed as a "structure for tuning impedance in an electrical device for better carrying an electrical signal."

FN1. For example, claim 1 recites: "... said housing including a waveguide projecting from one of said sidewalls adjacent to said moveable portion, said waveguide including a planar portion facing said leaf spring portion."

D. "Said Housing Including a Plurality of Projections Projecting from Said Side Walls"

The parties agree that "said housing including a plurality of projections projecting from said side walls," as used in claim 16, requires two or more projections. The parties contest whether at least one projection must extend from each side wall or whether all projections may extend from a single side wall.

Switchcraft argues the phrase should be interpreted as "two or more projections where at least one projection extends from each side wall." In support of this argument, Switchcraft notes that claims 1 and 16 first describe:

An electrically grounded housing have a rear end, front end, a top wall, a bottom wall, and *two side walls* defining generally planar surfaces facing one another, wherein said front ends, and said top, bottom and side walls form an enclosed housing....

'378 patent at 10:3-7, 16:27-31 (emphasis added). Claim 16 subsequently teaches the projections extend from "said side walls." Id. at 14:11. Switchcraft argues any interpretation that does not require the projections to extend from each side wall ignores the claim's use of "wall *s*." Switchcraft gives significance to the description and illustration of the preferred embodiment showing at least one projection coming off each side wall. *See* '378 patent at 8:45-48, FIGS. 21, 22.

Conversely, ADC contends the phrase should be construed to mean "two or more projections with each projection projecting from either of the side walls." ADC argues the claim refers consistently to "side walls" collectively as a single entity. Collective use of "side walls," ADC avers, does not require any particular

distribution of projections on one or both side walls.

The Court finds claim 16 teaches that the plurality of projections may extend from either of the side walls. To eliminate any ambiguity, the Court interprets the phrase "said housing including a plurality of projections projecting from said side walls" to mean "two or more projections extending from one or both side walls." Adopting Switchcraft's interpretation would ignore the consistent collective use of "side walls" throughout the claim. In addition, the claim does not specify whether the projections must extend from one or both walls but merely teaches they extend into "previously empty spaces." '378 patent at 9:46-52. In the preferred embodiment, all projections extend from one side wall, with the exception of waveguide 210, which projects from the other side wall. Figures 21 and 22 show projection 210 necessarily extends from the cover sidewall because a lever arm occupies the space on the other side wall. However, the specification also describes an alternative embodiment that possesses only one forward port (rather than the two in the preferred embodiment). Id. at 9:32-35. Claim 16 also acknowledges the alternative embodiment through the language "said front end having *at least a first* jack port." Id. at 16:32 (emphasis added). The alternative embodiment omits forward port 34, which uses projection 210 for impedance matching purposes. In the absence of forward port 34, projection 210 would not be necessary and all of the remaining projections would extend from one side wall. For these reasons, the Court finds "two or more projections extending from one or both side walls" is the appropriate interpretation.

E. "Positioned"

Switchcraft and ADC disagree over whether the term "positioned" is ambiguous and requires construction. The term "positioned" is used in claims 16 and 21 as follows:

16 .... wherein said projections are positioned to provide impedance matching of said coaxial device jack device with said telecommunications line

21 .... wherein said projections are positioned such that impedance through said jack device is within a range of ...

'378 patent at 14:12-14, 41-43

Switchcraft proposes the Court should interpret "positioned" as it is defined by *Webster's New Collegiate Dictionary:* "to put in proper position." Supra at 890 (1979). Switchcraft argues the '378 patent and the record consistently used the term "positioned" to denote the purposeful placement of an element to provide impedance matching. Switchcraft cites to language in the '378 patent teaching, "[t]hrough the use of waveguides such as waveguides 210 through 222, impedance matching is achieved." '378 patent at 9:20-21. It also relies on the prosecution history statement that "[w]aveguides ... are positioned adjacent to the moveable portions within the switch so as to provide impedance matching." Patent Application File History at 104-05. During the course of this litigation, ADC also stated "the '378 patent discloses and claims the use of a waveguide projecting from a sidewall (claim 1) or a plurality of projections from the side walls (claim 16) having particular shapes, *in a particular location, and extending from a particular portion* (sidewall(s)) of the housing." ADC Prior Art Statement (Stephen Decl. Ex. F) at 6 (emphasis added). ADC further elaborated "that by adding *specially shaped* structures (sometimes called 'waveguides') at *select locations* within ADC's switching jack it was possible to provide a jack with improved performance over large bandwidths." Pl .'s Markman Brief at 3-4 (emphasis added). Switchcraft claims these statements, coupled with the language in claims 1 and 16, evidence an intent requirement that the elements be specifically

positioned, or "put in proper position" to impedance match.

ADC contends "positioned" is well-understood and does not require interpretation. It denies the term "positioned" itself has any intent requirement that projections be placed in a proper or specific location. Instead, it argues other language in claim 16 teaching that projections extend "from said side walls" and are "adjacent to said moveable portions" and "provide impedance matching of said coaxial jack device with said communications jack," rather than the term "positioned," explain the location of the projections. ADC argues Switchcraft's argument conflates these claim limitations into an intent requirement for "positioned." In the event the Court believes interpretation of "positioned" is necessary, however, ADC proposes it be interpreted as "placed."

Switchcraft's argument that the term "positioned" denotes an intent requirement to properly place an element for the purposes of impedance matching is rejected. Again, intent is generally not relevant to whether a product directly infringes a patent. *See, e.g.,* Florida Prepaid Post Secondary Edu. Expense Bd., 527 U.S. at 645; Intel Corp., 946 F.2d at 832. Switchcraft again argues, based on *Koito,* that the use of "positioned" injects a scienter requirement into the '378 patent. 381 F.3d at 1150.

The terminology at issue in *Koito* is distinguishable from "positioned" at issue in the instant case. Again, *Koito* dealt with a method claim rather than the apparatus claim presently before the Court. Second, "predetermined" inherently requires foreknowledge in a manner "positioned" does not. The Court accepts ADC's interpretation that the other limiting language in claim 16, rather than an intent requirement in "positioned," dictate placement of the projections.

Having found "positioned" does not carry an intent requirement, it is unnecessary to further construe the term. As the Federal Circuit has explained:

The Markman decisions do not hold that the trial judge must repeat or restate every claim term in order to comply with the ruling that claim construction is for the court. Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.

U.S. Surgical Co. v. Ethicon, 103 F.3d 1554, 1568 (Fed.Cir.1997). Switchcraft's proposed interpretation of "put in proper position" effectively adds the word "proper" to the claim. Rather than defining "position," the chief impact of adding "proper" would be to add a limitation not present in the claim.

F. "Facing" and "Facing One Another"

Claims 1 and 17 use the terms "facing" and "facing one another" in the following manner:

1 .... said housing including a waveguide ... said waveguide including a planar portion *facing* said leaf spring portion.

17. A coaxial jack device according to claim 16 wherein a plurality of said projections are fin-shaped, each having a planar portion *facing* one of said moveable portions of said switch.

'378 patent at 10:32-35, 14:16-19 (emphasis added). Claims 1 and 16 use the phrase "facing one another" in

the following phrase:

an electronically grounded housing having a rear end, a front end, a top wall, a bottom wall, and two side walls defining generally planar surfaces *facing one another,* wherein said front and rear ends, and said top, bottom and side walls form an enclosed housing.

Id. at 13:27-31.

Switchcraft asks the Court to adopt the third definition in *Webster's New Collegiate Dictionary* for "facing": "to bring face-to-face." Supra at 406. Switchcraft argues that, to ensure the term is used consistently in each claim, the term "facing" must mean "face-to-face." In support of its argument, Switchcraft notes the platform waveguide illustrated in the specifications is "well below the leaf springs, such that no face of the platform sees a leaf spring, as is the case with [fin-shaped waveguides]." Def.'s Markman Brief [Docket No. 46] at 13. Switchcraft argues it would be inconsistent to construe facing to cover such a configuration. Switchcraft also notes "the specification establishes that not all of the disclosed waveguide embodiments are "facing" a leaf spring." *Id*. Based on language that "each waveguide defines a generally planar surface *facing at least partially toward* each leaf spring member in the preferred embodiment," Switchcraft concludes its interpretation of "facing" is correct. '378 patent at 8:61-67 (emphasis added). It interprets the "facing at least partially toward" phrase to indicate that the patent modified "facing" when it did not want it to mean "face-to-face."

ADC argues "facing" is a non-technical term with a commonly understood meaning and does not require construction. However, in the event construction is necessary, ADC argues "facing" should be interpreted to mean "oriented toward." ADC notes dictionaries broadly define "facing" as "occupying a position with the face toward" and "to stand or sit with the face toward; to have a front oriented toward." *The American Heritage(R) Dictionary of the English Language,* 632 (4th ed.2000); *Merriam-Webster's Collegiate Dictionary,* supra at 447. ADC argues Switchcraft's proposed definition of "face-to-face," fails to consider that one object may face the back or side of another. ADC argues "facing" as used in the '378 patent, encompasses a broader meaning than face-to-face, as evidenced by the phrase "facing at least partially towards."

The Court finds "facing" should be interpreted as "with the face oriented toward." This interpretation corresponds with the definitions listed in the dictionaries cited by both parties and is in keeping with the use of the term in the patent claims and specifications. In addition to the definition proposed by Switchcraft, *Webster's New Collegiate Dictionary* also defines "facing" as "to have the face or front turned in a specified direction." Supra at 406. Both dictionary definitions cited by ADC note it is the "face" that is oriented towards something. ADC's proposed definition, "oriented toward," does not convey this important facet of the definition.

Switchcraft's proposed definition, "face-to-face," would improperly narrow the definition of facing, which clearly permits one object to face another even if the second object is itself facing in another direction. Switchcraft's proposed interpretation would render the phrase "facing one another" redundant. Furthermore, the language of claims 1 and 17 clearly state that all waveguides include a planar portion *facing* either a leaf spring portion or a movable portion. The preferred embodiment shows seven waveguides (six fin-shaped waveguides and one platform waveguide), each of which is "facing at least partially toward" the leaf springs. The use of "facing" in the specification indicates that "facing" in the claims has a broader meaning than "face-to-face." Adopting Switchcraft's construction would require a finding that the platform

waveguide described in the specification as "facing at least partially toward" an object is not facing the object. "[A] claim interpretation that excludes a preferred embodiment from the scope of the claim is 'rarely, if ever, correct." ' *On-* Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH, 386 F.3d 1133, 1138 (Fed.Cir.2004) (quoting Globetrotter Software, Inc. v. Elan Computer Group, Inc., 362 F.3d 1367, 1381 (Fed.Cir.2004). The construction "with the face oriented towards" best captures the meaning of facing reflected in the claims and the specification.

For the same reasons as set forth for "facing," the Court also interprets "facing one another" to mean "with the faces oriented towards one another."

G. "Adjacent"

Claims 1 and 16 use the term adjacent. Specifically, the claims state:

1 .... said housing including a waveguide projecting from one of said side walls *adjacent* to said moveable portion ...

16 .... said housing includes a plurality of projections projecting from said side walls *adjacent* to said moveable portions ...

'378 patent at 10:32-33, 14:10-12 (emphasis added).

ADC argues the term "adjacent" is clear on its face and does not require interpretation. However, if interpretation is necessary, ADC argues the term should be interpreted to mean "nearby, not distant." *See, e.g., Merriam-Webster's Collegiate Dictionary,* supra at 16.

Switchcraft claims "adjacent" "[i]f not construed ... could be used to describe any level of proximity, and thus render the claim indefinite and hence invalid under 35 U.S.C. s. 112(2)." Consequently, Switchcraft argues "adjacent" should be interpreted as "next to." In support of this position, Switchcraft cites language in the specification indicating a fin-like waveguide must project from the base of a wall to reach a region where it is adjacent to a movable leaf spring. '378 patent at 8:45-47, 8:59-61, 64-65. Based on this language, Switchcraft argues the '378 patent specification used the word "adjacent" to "denote surfaces which are next to one another in the sense that they share the same lateral space." Def.'s Markman Brief at 20.

The Court finds further construction may reduce any ambiguity in "adjacent" and interprets the term to mean "nearby, not distant." The proposed construction of "next to" is unwieldy, not supported by the specification, and unworkable. Switchcraft cobbles its "lateral space" requirement from several distinct provisions of the patent. Its adoption would create the illogical result of finding that objects which share the same vertical space, but do not overlap horizontally, are not adjacent.

Furthermore, *Merriam-Webster's Collegiate Dictionary* defines "next to" as "immediately following or adjacent to." (11th ed.2003) at 836. This definition would impermissibly narrow the meaning of the word "adjacent" beyond its use in the patent's specification and figures. Figure 1 and the text of the specification contain examples where "adjacent" elements are not "immediately adjacent" or "next to" one another, but are merely in close proximity. *See* '378 patent, 4:36-57, FIG. 1. ADC's proposed construction of "nearby, not distant" reflects the objective meaning of "adjacent" and corresponds to the use of the term in the patent. A claim is not indefinite under 35 U.S.C. s. 112 if "those skilled in the art would understand what is

claimed when the claim is read in light of the specification." Beachcombers, Int'l v. Wildewood Creative Prods., 31 F.3d 1154, 1158 (Fed.Cir.1994). A construction of "nearby, not distant" is consistent with the meaning given to "adjacent" by the Federal Circuit in other cases and is not indefinite. *See, e.g.,* General American Trans. Corp. v. Cyrp-Trans. Inc., 93 F.3d 766, 769 (Fed.Cir.1996) (applying "not far off" or "not necessarily at but nearby or near" as the definition of "adjacent").

H. "V-Shaped Spring"

Finally, Switchcraft seeks a construction of the term "V-Shaped Spring" as it is used in claims 2 and 18:

2. A coaxial jack device according to claim 1 wherein said switch includes a V-shaped spring with two movable arms ...

18. A coaxial jack device according to claim 17 wherein said switch including said moveable portions includes a V-shaped spring with two moveable arms ...

'378 patent at 10:36-37, 14:20-23. Both parties agree a "V-shaped spring" is a spring that has a V-shaped configuration. However, ADC and Switchcraft dispute whether the V-shaped spring should be interpreted as separate and distinct from the "movable portion" claim element. ADC argues they may constitute the same element, while Switchcraft contends they are separate and distinct elements. Both parties generally rely on the same claim language, rather than dictionary definitions, to support their opposing interpretations.

As a threshold matter, ADC argues "V-shaped springs" need not be construed because Switchcraft's product has four separate movable springs, any one of which could constitute the V-shaped spring described in the '378 patent while the others constitute the movable portions for the purposes of infringement. Such a conclusion goes beyond the scope of claim construction because it requires examination of the allegedly infringing device. Construction of the term "V-shaped springs" is appropriate since it is an integral aspect of a claim in dispute. *See* Pall Corp. v. Hemasure Inc., 181 F.3d 1305, 1308-09 (Fed.Cir.1999).

For the reasons set forth below, the Court construes claims 2 and 18 to find that the terms "V-shaped springs" and "movable portion" do not refer to separate and distinct elements.

Claim 1 recites "... said switch including at least one conductive movable portion defining a leaf spring portion." '378 patent at 10:30-31. Claim 2 incorporates claim 1 by reference and recites, "wherein said switch includes a V-shaped spring with two moveable arms." Id. at 10:36-37. Claim 2 never states or implies the V-shaped spring is a separate and distinct element from the movable portion recited in claim 1. Instead, the V-shaped spring has movable arms and the preferred embodiment states that the arms are "preferably constructed as leaf springs." '378 patent at 4:50-51.

Dependent claims 3 and 4, although not asserted, also provide useful context in interpreting claim 2. Claim 3 adds "a second movable portion" and then "a third movable portion," while claim 4 adds a "fourth movable portion." *See* 10:43-50, 57-59. Unlike claims 3 and 4, claim 2 does not use ordinals (e.g. "second" or "third") to denote an additional moveable portion distinct from the moveable portion recited in claim 1. If the patentee intended the V-shaped spring to represent an additional moveable element, it could have easily done so by reciting that the spring "further" includes a V-shaped spring. However, the claims recite only four moveable portions.

Furthermore, claim 3 recites:

said switch includes a second moveable portion ... engageable with one of said moveable arms of said V-shaped spring, wherein said switch further includes a third moveable portion ... engageable with the other of said moveable arms of V-shaped spring.

Id. at 10:43-49. As claim 3 clearly states, the second and third moveable portions engage with the moveable arms of the V-shaped spring. Unlike these moveable portions, the moveable portion described in claim 1 is never described as being engageable with the V-shaped spring. Finally, Switchcraft does not present a plausible explanation as to what the phrase "moveable portion" refers to in claim 1, as described in the preferred embodiment, if not to the V-shaped spring.

For the reasons set forth above, the Court does not interpret the terms "V-shaped spring" and "moveable portion," as used in claims 1 and 2, to refer to separate and distinct elements. The same logic applies to the similarly worded claims 16-20.

IV. CONCLUSION

Based upon the foregoing, and all of the files, records and proceedings herein, IT IS HEREBY ORDERED that, in interpreting the '378 patent, the contested terms be construed in accordance with this Order.

D.Minn.,2005.
ADC Telecommunications, Inc. v. Switchcraft, Inc.

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