United States District Court,
C.D. California.

HARMONIC DESIGN, INC., a California corporation,
Plaintiff.
v.
HUNTER DOUGLAS, INC., a New Jersey corporation, and Does 1 through 10, inclusive,
Defendants.

Nos. CV 99-02921 WJR (RCX), CV 98-7477 WJR (RCX)

Feb. 9, 2000.

Owner of patents for window covering actuators sued competitors for infringement. Construing claim terms, the District Court, Rea, J., held that: (1) term "electronic circuit" included microprocessors; (2) term "control signal generator" referred to component of electronic circuit that produced control signal; and (3) term "sensor" meant device designed to respond to physical stimulus and transmit resulting impulse for interpretation or measurement or for operating control.

Claims construed.

5,444,339, 5,698,958, 5,714,855, 5,883,480. Cited.

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ORDER RE PARTIES' JOINT MOTION FOR INTERPRETATION OF CLAIM TERMS BY THE COURT

REA**, District Judge.**

On January 31, 2000, the joint motion of Plaintiff Harmonic Design and Defendant Hunter Douglas for interpretation of claim terms by the Court came on for a hearing. After oral argument, the Court took the motion under submission.

The Court has fully considered the arguments, authorities, and exhibits submitted in the briefing and has fully considered the oral argument. Based on the foregoing, the Court makes the following findings.

I. Rules of Claim Construction

[1] A patent infringement analysis entails two steps. The first step involves determining the meaning and scope of the patent claims asserted to be infringed. The second step involves comparing the properly construed claims to the device accused of infringing. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed.Cir.1995).

[2] [3] [4] [5] Construction of patent claims is an issue of law for the Court to decide. *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 388, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). In constructing claims, courts look to intrinsic evidence, which includes the language of the claims, the specification, and the prosecution history. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). FN1 In general, the terms of a claim are to be given their ordinary and accustomed meaning. *See* Johnson Worldwide Assocs. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999). The ordinary meaning of a claim term is that meaning ascribed by one of ordinary skill in the art. *See* Zelinski v. Brunswick Corp., 185 F.3d 1311, 1315 (Fed.Cir.1999).

FN1. In general, courts should not rely on extrinsic evidence in constructing a claim term unless such evidence is needed to assist in determining the meaning and scope of technical claim terms. *See* Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1216 (Fed.Cir.1995). While dictionary definitions appear to constitute extrinsic evidence, the Federal Circuit has stressed that courts are free to "rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found or ascertained by a reading of the patent documents". Vitronics, 90 F.3d at 1584.

[6] [7] Whether the language of a claim invokes 35 U.S.C. s. 112, para. 6 is also a question of law for the Court to decide. *See* Personalized Media Communications v. International Trade Comm'n, 161 F.3d 696, 702 (Fed.Cir.1998). Section 112, para. 6 of 35 U.S.C. provides that

[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. s. 112, para. 6. Failure to use the phrase "means for" creates a presumption that s. 112, para. 6 does not apply. *See* Personalized Media Communications, 161 F.3d at 703-04. This presumption can be rebutted if evidence intrinsic to the patent and any relevant extrinsic evidence so warrant. *See id*. In deciding whether the presumption has been rebutted, the focus remains on whether the claim as properly construed connotes "sufficiently definite structure" in the minds of those skilled in the art. *See id*. at 704. If the claim does connote sufficiently definite structure, s. 112, s. 6 does not apply.

II. Interpretation of the Term "Electronic Circuit"

The parties dispute the meaning of the term "electronic circuit" in claim 1 of U.S.Patent No. 5,698,958 (the "958 Patent"), claims 1, 71, 83, and 97 of U.S.Patent No. 5,714,855 (the "855 Patent"), and claims 1, 18, 22, 28, 31, 35, and 42 of U.S.Patent No. 5,883,480 (the "480 Patent").

The parties vigorously disagree as to whether the relevant claim language is written in means-plus-function format. Claim 1 of the 855 Patent is representative of a disputed claim in which the term "electronic circuit" appears. That claim provides in part:

A window covering with actuator, comprising: ... an electronic circuit electrically connected to the control signal generator and the battery for processing the control signal to cause the battery to energize the motor to move the rod.

A. ***The Term "Electronic Circuit" Connotes Sufficiently Definite Structure to Avoid Application of*** 35 U.S.C. s. 112***, para. 6***

[8] The language of the disputed claims does not use the phrase "means for." Therefor, 35 U.S.C. s. 112, para. 6 presumptively does not apply. Furthermore, it appears that the ordinary meaning of the word "circuit" connotes sufficiently definite structure to avoid application of s. 112, para. 6. The term "circuit" is defined as "an arrangement of interconnected electronic components that can perform specific functions upon application of proper voltages and signals." IEEE Standard Dictionary of Electrical and Electronic Terms (Institute of Electrical and Electronics Engineers, 6th ed.1997) (hereinafter "IEEE Standard Dictionary"), p. 156. Several courts have agreed that the word "circuit" connotes sufficiently definite structure to those skilled in the art. *See* Nilssen v. Magnetek, Inc., 1999 WL 982966, (N.D.Ill. Oct. 26, 1999) (considering term "circuit means"); CellNet Data Sys., Inc. v. Itron, Inc., 17 F.Supp.2d 1100, 1109 (N.D.Cal.1998) (same); Database Excelleration Sys. Inc. v. Imperial Technology Inc., 1998 WL 785302, 48 U.S.P.Q.2d 1533, 1537 (N.D.Cal.1998) (considering term "control circuit").

Finally, claims 1, 71, 83, and 97 of the 855 Patent and claims 1, 22, 31, 35, and 42 of the 480 Patent identify the physical location of the electronic circuit as "electrically connected to the control signal generator and the battery." Claim 1 of the 958 Patent indicates that the electronic circuit is electrically connected to the light sensor and the battery. Language identifying physical location suggests that a patentee intended to recite a structural element. *See* Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996). While claims 18 and 28 of the 480 Patent do not indicate the physical location of the electronic circuit, the Court is persuaded for the reasons above that the language of these two claims is not written in means-plus-function format.

[9] Accordingly, the Court finds that the term "electronic circuit" does not invoke 35 U.S.C. s. 112, para. 6. Furthermore, the Court finds that a person of ordinary skill in the art of electronic circuits would understand the term "electronic circuit" to mean "an arrangement of interconnected electronic components that can perform specific functions upon application of proper voltages and signals." FN2

FN2. Hunter Douglas argues that the term "electronic circuit" does not connote sufficiently definite structure because it is a generic term that refers to a multitude of structures. The test, however, is not whether a claim term connotes a precise physical structure. On the contrary, 35 U.S.C. s. 112, para. 6 is inapplicable even where the claim term denotes a variety of structures to one knowledgeable in the art. *See* Personalized Media Communications, 161 F.3d at 705.

B. ***A Microprocessor Is a Type of Electronic Circuit***

[10] The parties disagree over whether a microprocessor is an example of an electronic circuit as that term is used in the disputed claims. Hunter Douglas appears to agree that, in general, a microprocessor is a type of electronic circuit. But it argues that Harmonic Design is not entitled to a broad claim scope because the specifications and the prosecution history of the patents at issue teach "a very narrow solution to the problem of saving battery power" that is at odds with the use of microprocessors.*See* Def.'s Construction

Brief, at 20.

Harmonic Design used the term "non-logical CMOS component" in dependent claim 18 of U.S.Patent No. 5,444,339, an older patent related to the patents at issue here. To overcome an obviousness rejection to that particular claim by the U.S.Patent Office, Harmonic Design had distinguished the term "non-logical CMOS component" from a microprocessor taught by the prior art. Harmonic Design argued that a microprocessor, unlike a non-logical CMOS component, consumes a relatively large amount of power. Because a stated object of the patents at issue here is to provide a window covering device that "consumes relatively little power," Hunter Douglas argues that the Court should interpret the term "electronic circuit" to exclude microprocessors.

Harmonic Design limited its comments to the U.S.Patent Office regarding microprocessors to a single, dependent claim. Harmonic Design did not argue that the broad term "electronic circuit" does not include microprocessors. Moreover, no claim in the patents at issue refer to a non-logical CMOS component. Finally, none of the disputed claims appear to require battery-conserving features. This fact is significant since other claims appear to provide for battery-conserving features. *See, e.g.,* 855 Patent, claims 14, 99; 480 Patent, claims 40, 43. For the above reasons, it appears that Harmonic Design never intended to exclude microprocessors from the scope of term "electronic circuit."

The ultimate issue, therefore, is whether the term "electronic circuit" includes microprocessors. As mentioned above, Hunter Douglas apparently agrees that it does. In any event, the Court notes that one of ordinary skill in the art of electronic circuits would understand that a microprocessor is a type of electronic circuit. The term "microprocessor" is defined as "an integrated circuit that contains the logic elements for manipulating data and for making decisions." IEEE Standard Dictionary, p. 653. And the term "integrated circuit" is defined as a "combination of connected circuit elements (such as transistors, diodes, resistors, and capacitors) inseparably associated on or within a continuous substrate." IEEE Standard Dictionary, p. 536. It follows from these definitions that a microprocessor is a type of electronic circuit. *See also* Decl. of Lawrence J. Kamm, para. 12.

For the above reasons, the Court finds that the term "electronic circuit" includes microprocessors.

III. Interpretation of the Term "Control Signal Generator"

[11] The parties dispute the meaning of the term "control signal generator" in claims 1, 71, 83, and 97 of the 855 Patent and claims 1, 17, 22, 27, 31, 35, and 42 of the 480 Patent. The relevant claim language references "a control signal generator for generating a control signal."

The language of the disputed claims does not use the phrase "means for." Therefor, 35 U.S.C. s. 112, para. 6 presumptively does not apply. Harmonic Design has not pointed to a dictionary definition of "control signal generator." It does appear, however, that the term refers to a component of an electronic circuit that produces a control signal, which is defined as "any signal that purposely affects the recording, processing, transmission or interpretation of data by a system element." IEEE Standard Dictionary, p. 218.

A review of both intrinsic and extrinsic evidence supports this conclusion. First, the language of the disputed claims specifies that the control signal generator is electrically connected to the electronic circuit, which is in turn electrically connected to the battery. *See, e.g.,* 855 Patent, claim 1. Such language suggests that the patentee intended to recite a structural element as opposed to functional language that would invoke

35 U.S.C. s. 112, para. 6. *See* Cole, 102 F.3d at 531. Second, Figure 7 of the 480 Patent identifies a control signal generator as a component of the electronic circuitry. And third, extrinsic evidence indicates that the term "control signal generator" connotes sufficiently definite structure to one of ordinary skill in the art. *See* Kamm Decl., para. 9 (noting that those skilled in the art would recognize that a control signal generator may refer to an electronic circuit or component, a photodiode, a photoransistor, or other devices).

Because the term "electronic circuit" connotes sufficiently definite structure to avoid application of 35 U.S.C. s. 112, para. 6, it follows that the term "control signal generator" also connotes sufficiently definite structure. That the term may not connote a specific structure is not dispositive. *See* Personalized Media Communications., 161 F.3d at 705. Accordingly, the Court finds that the term "control signal generator" connotes sufficiently definite structure to avoid application of 35 U.S.C. s. 112, para. 6. The Court also finds that the term "control signal generator" refers to a component of an electronic circuit that produces a control signal.

IV. Interpretation of the Term "Sensor"

The parties dispute the meaning of the term "the sensor" in claim 107 of the 855 Patent and claims 12, 20, and 47 of the 480 Patent. Hunter Douglas argues that these claims are indefinite under 35 U.S.C. s. 112, para. 2 because they refer to a non-existent element called "the sensor" in preceding claims from which they depend.

[12] [13] [14] [15] Under 35 U.S.C. s. 282, a patent is presumed valid. *See* 35 U.S.C. s. 282. The defendant has the burden of proving facts by clear and convincing evidence establishing that the patent is invalid. *See* North Am. Vaccine, Inc. v. American Cyanamid Co., 7 F.3d 1571, 1579 (1993). Indefiniteness is a question of law. *See id*. The determination of whether a claim is invalid as indefinite "depends on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the specification." *Id*. While claims may be rendered indefinite for lack of antecedent basis, such claims may nevertheless remain definite when read in light of the specifications. *See* Slimfold Mfg. Co. v. Kinkead Indus., Inc., 810 F.2d 1113, 1116-17 (Fed.Cir.1987); Messerschmidt v. United States, 29 Fed.Cl. 1, 42 (1993).

The language of the disputed claims refers to "the electronic circuit [that includes] a switch electrically connected to the sensor for receiving the control signal." Neither the disputed claims nor the claims from which they depend refer to or define a sensor element. The independent claims, however, do refer to a "control signal generator for generating a control signal." Hunter Douglas argues that it is unclear whether the term "the sensor" refers to "the sensor for receiving the control signal" from the control signal generator of the independent claims or whether "the sensor" is part of the control signal generator itself. Hunter Douglas argues further that the specifications do not resolve the ambiguity because they refer to two sets of sensors, one that generates signals and one that receives those signals.

Contrary to Hunter Douglas' argument, the specifications of the patents at issue do resolve the ambiguity. The specifications refer to "[a] control signal generator, preferably a daylight sensor 28 ... [that is] electrically connected to electronic components within the actuator 10 to send a control signal to the components." 480 Patent, col. 9, lines 30-38; 855 Patent, col. 8, lines 22-30. The specifications also refer to "another control signal generator, preferably a signal sensor 29 ... [that is] electrically connected to the electronic components within the actuator 10[and] that can generate an electrical control signal to activate the actuator 10." 480 Patent, col. 9, lines 43-58; 855 Patent, col. 8, lines 34-49. Thus, it appears that the term

"the sensor" in the disputed claims refers to the control signal generator in the independent claims.

[16] Hunter Douglas is correct that the specifications refer to a second set of sensors, namely the "first and second stages 144, 146 of a type 4538 activity sensor." 480 Patent, col. 13, lines 39-40; 855 Patent,col. 12, lines 26-27. But the specifications also make clear that these devices receive the signals produced by the signal sensor 29 through the means of an electrically connected "switch." Thus, it appears clear that the "switch" in the disputed claims is the device that "receives" the control signal generated by "the sensor."

[17] Because the specifications resolve the ambiguity of the claim language, the Court is inclined to find that the claims are not invalid as indefinite. Furthermore, the Court is also inclined to find that one of ordinary skill in the art would understand the term "sensor" to mean a "device designed to respond to a physical stimulus (as heat or cold, light, a particular motion) and transmit a resulting impulse for interpretation or measurement or for operating a control." Webster's Third New International Dictionary (unabridged edition) (1986), p.2068.

IT IS SO ORDERED.

C.D.Cal.,2000.
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