United States Court of Appeals for the Federal Circuit

00-1439, -1490

DOORKING, INC.,

Plaintiff-Appellant,

v.

SENTEX SYSTEMS, INC.,

Defendant-Appellee,

and

DAVTHAL, INC., WILLIAM R. AVIS, RICHARD GREENTHAL,
LINK DOOR CONTROLS, INC., and CHAMBERLAIN GROUP, INC.,

Defendants-Cross Appellants.

DECIDED: September 13, 2001

Before MAYER, Chief Judge, SCHALL and DYK, Circuit Judges.

Opinion for the court filed by Circuit Judge DYK. Circuit Judge SCHALL concurs-in-part and dissents-in-part.

DoorKing, Inc. ("DoorKing") appeals from the decision of the United States District Court for the Central District of California granting the motion of Sentex Systems ("Sentex") for summary judgment of non-infringement of U.S. Patent No. 4,604,501 (the "'501 patent"). DoorKing, Inc. v. Sentex Sys., Inc., No. CV-98-372 (C.D. Cal. Jan. 20, 2000 and May 12, 2000) (DoorKing II and DoorKing III). Sentex cross-appeals the district court's separate decision denying Sentex's motion for attorneys' fees under 35 U.S.C. § 285. DoorKing, Inc. v. Sentex Sys., Inc., No. CV-98-372 (C.D. Cal. June 28, 2000) (DoorKing IV). The appeals of these decisions were consolidated. Because we find that there were genuine issues of material fact regarding infringement, we vacate the grant of summary judgment by the district court and remand so that the district court may determine whether the accused devices infringe. We affirm the denial of attorneys' fees under 35 U.S.C. § 285.

BACKGROUND

I. '501 Patent

DoorKing is the assignee of the '501 patent, which relates to a communication system that involves a first microphone at a noisy location and a second microphone at a relatively quite location. Such systems are typically used for communication between a visitor and a tenant of an apartment building. The specification of the '501 patent addresses shortcomings of prior art communication systems in situations where there was substantial background noise in the surroundings at the visitor microphone. In situations with substantial background noise, according to the specification, the prior art systems suffered from an inability to discriminate between the visitor's voice and the background noise. The background noise at the visitor location often interfered so that the visitor microphone maintained complete control over the communication line to the exclusion of the tenant, even when the visitor was not speaking. The '501 patent also discusses other prior art systems, such as a half-duplex system, that have failed to fully obviate the problems with background noise. In a half-duplex system, the circuit is designed to monitor the line and determine the source of the sound. Whichever party is speaking (or creating noise) will maintain transmit control over the line until he stops speaking (or creating noise). However, a problem exists if there is significant background noise at the visitor location, because the noise could constantly keep the visitor microphone in the transmit mode, precluding the tenant's being able to gain control over the communications line.

The voice communication system described in the specification of the '501 patent obviates the above problems. As described in the summary of the invention of the patent, a control circuit dedicates control of transmission to the tenant (interior) microphone. The control circuit allows the visitor to transmit when the tenant is not transmitting. The control circuit monitors the communication line to determine if there is a voice signal from the tenant microphone. If there is a signal, the control circuit resets and monitors a short time later. If there is no signal, the control circuit permits the visitor to transmit until the tenant again attempts to transmit. '501 patent, col. 3, ll. 34-46. However, at any time when there is an attempt by the tenant to transmit, the tenant will immediately assume transmit control of the line, and the visitor will only

be in receive mode. The visitor can only transmit when the tenant is no longer transmitting. Id. at ll. 46-52. Therefore, as stated in the specification, "the problem of excess background noise can be obviated since the [tenant] can always immediately assume transmit control." Id. at ll. 52-55. At any point in time when the circuit detects the tenant generating sound, it will immediately close the "transmit circuit" from the visitor microphone and permit the tenant to transmit. A switch that is associated with the visitor microphone will be "off" when transmit control is dedicated to the tenant microphone. Id. at col. 4, ll. 29-32.

The ’501 patent includes seven independent claims that are pertinent to this appeal. It is undisputed that claim 1 is representative of the independent claims at issue. Claim 1 reads as follows:

> 1. A voice communication system comprising:
>
> (a) a first speaker and a first microphone at a first location which is generally a relatively quiet location,
>
> (b) a second speaker and a second microphone at a second location which may have relatively substantial background noise,
>
> (c) a telephone line between the first speaker and first microphone and second speaker and second microphone,
>
> (d) monitor means for monitoring the telephone line to determine if audible sounds are being generated at the first microphone or at the second microphone while temporarily disabling one of said microphones, and
>
> (e) control means responsive to said monitor means for automatically transferring transmit control to the first microphone and disabling said second microphone such that transmission cannot occur through said second microphone when audible sounds are generated at said first microphone and for enabling said second microphone to transmit only when audible sounds are not generated at said first microphone.

’501 patent, col. 9, line 68 - col. 10, line 23 (emphases added).

II. Accused Devices

The accused voice communication systems of Sentex utilize a voice-switched speakerphone integrated circuit manufactured by Motorola, Inc. In the Sentex system, the visitor (or exterior) microphone is connected to a "transmit path," while the tenant (or interior) microphone is coupled to the "receive path" of the circuit. The signal from the visitor microphone is continuously monitored by a "transmit" detector, while the signal from the tenant microphone is continuously monitored by a "receive" detector. The levels of both signals are continuously monitored and compared by a transmit/receive comparator. Based on which signal is higher, an attenuator control in the comparator switches a pair of attenuators in a complementary manner so that the higher level signal is amplified by one attenuator while the lower level signal is attenuated by the second attenuator. In short, when the receive signal (from the tenant) is greater than the transmit signal (from the visitor), the receive attenuator goes to gain, and the tenant obtains control of the communication channel. When the transmit signal (from the visitor) becomes greater than the receive signal, the attenuators "flip" so that the visitor obtains control of the communication channel. Therefore, in the Sentex system, the visitor can always take control by speaking loudly enough even if the tenant is speaking, as long as the signal from the visitor (transmit signal) is greater than that from the tenant (receive signal).

However, the accused Sentex systems also include a tenant bias potentiometer for providing a preference to the tenant's voice signals. The tenant bias potentiometer adds a gain onto the signal from the tenant, the magnitude of which depends on the adjusted setting. The tenant bias potentiometer enables the tenant to adjust the amount of bias so that the signal from the tenant will be very high compared to a signal from the visitor, therefore making it difficult, if not impossible, for the visitor microphone to trump the tenant microphone, as we discuss in greater detail below.

III. Proceedings Below

In January 1998 DoorKing sued Sentex for infringement of the '501 patent. In July 1998, Sentex filed a motion for summary judgment of non-infringement. In February 1999, the district court issued an order construing the '501 patent claims. DoorKing, Inc. v. Sentex Sys., Inc., No. CV-98-372 (C.D. Cal. Feb. 22, 1999) (DoorKing I). In January 2000, the district court issued an order partially granting Sentex's motion for summary judgment. DoorKing II, slip op. at 1. In May 2000, after receiving supplemental briefing, the district court entered an order granting Sentex's motion for summary judgment of non-infringement in its entirety. DoorKing III, slip op. at 1. The district court entered a final judgment on June 2, 2000. DoorKing timely appealed to this court. Sentex filed a request for attorneys' fees that was denied by the district court on June 28, 2000. DoorKing IV, slip op. at 3. Sentex cross-appealed the attorneys' fees order to this court. Sentex's cross-appeal was then consolidated with DoorKing's appeal.

DISCUSSION

I. Claim Construction

The first step in an infringement analysis is the proper construction of the asserted claims. The claims at issue include means plus function limitations. The dispute is not whether the accused devices contain structure equivalent to the claimed means but whether the accused devices perform the function recited in the means plus function limitations. In its February 1999, claim construction order, the district court construed the term "disabling" that is found in the disputed claims. Claim 1, for example, recites "control means responsive to said monitor means for . . . disabling said second microphone such that transmission cannot occur through said second

microphone when audible sounds are generated at said first microphone . . . ." '501 patent, col. 10, ll. 15-20. The claims define the first microphone as being at a "generally quiet location," i.e., the tenant's apartment, and the second microphone as being at a location "which may have relatively substantial background noise," i.e., the visitor location. After discussing the language of the claims themselves, the specification, and the prosecution history, the district court held that "disabling as used in the '501 patent means: to de-activate, or cut-off, not mere attenuation." DoorKing I, slip op. at 10. DoorKing asserts that the district court erred in its claim construction, and that "disabling should be construed to have its ordinary dictionary meaning."

Citing one dictionary meaning, DoorKing urges that "disabling" should be construed to mean "to suppress, to make incapable or ineffective," and that the term is synonymous with the word "weaken." For example, Webster's Dictionary defines disable: "to make incapable or ineffective" and lists "weaken" as a synonym for "disable." Webster's New International Dictionary 642 (3d ed. 1968). Standard dictionary definitions indicate ordinary meaning. See, e.g., MSM Investments Co. v. Carolwood Corp., No. 00-1092, 2001 WL 893890, at *4 n.1 (Fed. Cir. Aug. 9, 2001). Of course, it is appropriate to look to the dictionary to help determine the ordinary meaning of "disable."

However, Sentex urges that the specification and prosecution require a narrower interpretation of "disabling." Of course, claim language must be interpreted in light of the specification and prosecution history. Biovail Corp. Int'l v. Andrx Pharms., Inc., 239 F.3d 1297, 1301, 57 USPQ2d 1813, 1816 (Fed. Cir. 2001). Sentex first directs our attention to the specification. The specification states that: "During each monitor of the phone line, the external microphone is temporarily disabled so that any signal on the line cannot be the result of external noise or someone talking on the external microphone." '501 patent, col. 4, ll. 6-10. Sentex urges that this portion of the specification requires a narrower interpretation.

Sentex also argues that the prosecution history requires the term "disabling" to mean that one of the microphones must be literally de-activated or cut-off. During prosecution of the patent, several claims, including the later allowed claim 1, were rejected as being anticipated by three separate prior art references: United States Patent No. 3,588,360 to Knox, U.S. Patent No. 4,467,143 to Warman, and U.S. Patent No. 4,513,177 to Nishino. In response to the rejection, DoorKing amended its claims, added new ones, and made several statements about the prior art. In distinguishing the invention from Knox, DoorKing stated: "In accordance with the present invention, one of the microphones is literally de-activated and that is the microphone in the noisy area for purposes of monitoring the telephone line. This clearly does not exist in the case of the Knox patent." With respect to Warman, DoorKing stated, in part, that: "In distinction, the system of the present invention is obviously quite different in that only one person can obtain transmit control." With respect to Nishino, DoorKing stated that:

> Of primary importance is the fact that Nishino et al. does not cut off a microphone or a speaker at any time. In other words, the microphone and the speaker are always on. . . . The references of record do not even remotely suggest the disabling of any one of the microphones to determine if audible sounds are being carried over the telephone line. In addition, Claim 1 calls for the control means which is responsive to the monitor means for disabling one of the microphones such that transmission cannot occur through that microphone.

Like the district court, we find that the prosecution history at least requires a narrower interpretation of the claim language than indicated by the dictionary definition. The proper interpretation is that "disabling" means "to make incapable or ineffective," but not "to weaken." The prosecution history is not consistent with a broad interpretation of disabling that includes merely weakening the signal from the visitor microphone. We construe "disabling" as requiring that the visitor microphone be rendered incapable of: (a) transmitting a signal that is audible at the tenant location; and (b) preventing the tenant microphone from controlling the system. This construction is similar to but not identical to the district court's construction.

II. Infringement

The district court granted summary judgment to Sentex, holding that "the Sentex device utilizes attenuation and not disabling as a means of assigning control between the microphones, and that, therefore, the Sentex device does not infringe." DoorKing III, slip op. at 3. The district court further held that: "[E]ven at maximum bias in favor of the tenant, the tenant's voice can be clipped by exterior sound. This is not possible in a device that is described in the patent because the visitor's microphone is shut off." Id. On appeal, DoorKing urges that there are genuine issues of material fact as to whether the accused devices infringe. The focus of both parties is on the term "disabling," which we have construed above. Specifically, DoorKing argues that if the potentiometer is set at maximum bias, Sentex's systems cut-off or literally deactivate the exterior microphone so that it does not transmit, no matter how loud the visitor speaks, "even an extreme pulsing 120 dBA sound."

Sentex agrees, as it must, that infringement must be determined at the maximum tenant bias setting. However, Sentex argues that, even when the tenant bias potentiometer is at its maximum bias setting, the visitor still can obtain control over the communication line from the tenant. This claim is based entirely on the testimony of an expert who performed tests of Sentex's system with the tenant bias potentiometer at maximum preference in favor of the tenant. These tests showed that at an external noise level of 120 dBA at the visitor microphone, the tenant's voice would be "clipped" and no longer transmitted to the visitor for a very brief period. Both parties agree that this "clipping" does not occur until noise levels of 120 dBA are reached. Sentex argues that these noise levels can occur in the real world, citing a jet engine at an airport or a diesel truck at an outdoor security gate as examples.

We do not find Sentex's arguments persuasive. Even if Sentex's assertion is correct that the tenant briefly loses control over the communication line when decibel levels are above 120 dBA, Sentex has made no showing that decibel levels above 120 dBA are within the range of sound levels that would occur during normal operation of the communication system. Sentex relies on the fact that DoorKing's expert, Dr. Kayton, testified 120 dBA "is equated to the sound generated by a loud rock band at close proximity." At oral argument Sentex argued that a jet airplane or diesel truck positioned immediately adjacent the tenant microphone for an apartment building generally in excess of 120 dBA is a real world situation. At oral argument Sentex further admitted that there is nothing in the record concerning whether a decibel level of 120 dBA is a normally occurring situation. Indeed, DoorKing submitted expert testimony that a 120 dBA sound level is not normal, stating that "[t]hose extremely loud test sounds would not normally occur at an entry system," and that 120 dBA "is so extraordinarily high that it exceeds even the loudest possible street noise . . . ." Sentex simply failed to submit evidence showing that decibel levels above 120 dBA are normally (or, in fact, ever) reached in real world conditions at a visitor microphone.

Our precedent establishes that an accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of non-infringing modes of operation. See Intel Corp. v. United States Int'l Trade Comm'n, 946 F.2d 821, 832, 20 USPQ2d 1161, 1171 (Fed. Cir. 1991); Key Pharms., Inc. v. Hercon Labs. Corp., 981 F. Supp. 299, 310 (D. Del. 1997), aff'd 161 F.3d 709, 48 USPQ2d 1911 (Fed. Cir. 1998); Huck Mfg. Co. v. Textron, Inc., 187 USPQ 388, 408 (E.D. Mich. 1975) ("The fact that a device may be used in a manner so as not to infringe the patent is not a defense to a claim of infringement against a manufacturer of the device if it is also reasonably capable of a use that infringes the patent."). Correspondingly, in High Tech Medical Instrumentation, Inc. v. New Image Industries, Inc., 49 F.3d 1551, 1556, 33 USPQ2d 2005, 2009 (Fed. Cir. 1995), we found that an accused device does not infringe if it does not infringe in its normal configuration, even if it may be altered into an infringing configuration under unusual circumstances. Because Sentex has made no showing that its devices do not infringe at the maximum bias setting in normal operation, much less an undisputed showing, we must reverse the grant of summary judgment of non-infringement. In light of the fact that sound levels in excess of 120 dBA appear not to fall within the range of normal use, we do not need to determine if "clipping" during normal use would be sufficient to preclude a finding of infringement. We remand to the district court for a determination of whether the devices infringe under the claim construction we have adopted here.

On remand, the district court may entertain a motion for summary judgment of infringement based on the present record. If that motion is denied, a trial on infringement may be necessary.

III. Attorneys' Fees

In light of the disposition above, we conclude that the suit by DoorKing was not frivolous, and accordingly affirm the district court's denial of the request for attorneys' fees and costs by Sentex.

CONCLUSION

For the foregoing reasons, we affirm the district court denial of attorneys' fees to Sentex, but vacate and remand to the district court for further proceedings consistent with this opinion.

COSTS

No costs.

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SCHALL, Circuit Judge, concurring-in-part and dissenting-in-part.

The majority vacates the district court's grant of summary judgment that the defendants' device did not infringe, either literally or by equivalents, U.S. Patent No. 4,604,501 (the " '501 patent") and remands the case for further proceedings. I agree with the majority's construction of the term "disabling" in the asserted claims. However, I believe that, under that construction, the defendants, as a matter of law, cannot infringe the '501 patent.

The majority construes the term "disabling" in the asserted claims to mean "to make incapable or ineffective," but not simply "to weaken." Majority, slip op. at 8. The majority then concludes that there are genuine issues of material fact regarding infringement of this claim limitation. Id. at 9-11. The majority points out that Doorking presented evidence that when the defendants' device's tenant bias potentiometer is at its maximum bias setting, the device "disabl[es]" the second, exterior microphone, when a tenant speaks on the first, interior, microphone because under those circumstances, in normal operation, any noise at the second microphone cannot be heard by the tenant. Id. at 9-10.

The majority is correct that Doorking presented evidence, through its expert Dr. Myron Kayton, that in the accused device, the tenant bias potentiometer, in conjunction with an attenuator, prevents any noise at the second microphone from being heard by a tenant when the tenant is speaking on the first microphone. However, the claims at issue require "disabling [the] second microphone such that transmission cannot occur though said second microphone when audible sounds are generated at [the] first microphone . . . ." '501 patent, col. 10, ll. 17-20. The claims require the second microphone to be disabled, i.e., incapable or ineffective?not merely weakened, "such that transmission cannot occur through said second microphone." Id., col. 10, ll. 18-19.

The accused system never prevents transmission from the second microphone; it merely attenuates the output of the second microphone when the tenant is speaking so that the output cannot be heard through the tenant's speaker. Dr. Kayton stated that the accused device uses an attenuation circuit "to prevent the visitor from being heard as long as the tenant speaks . . . ." Dr. Kayton agreed with the defendants, however, that their device allows the second microphone to "operate[] at all times," even when noise is detected at the first microphone. Dr. Kayton stated that, in the accused system, the second microphone is always "operative," and that "when the visitor speaks, there is a voltage output at the visitor's microphone, but if the tenant is speaking that voltage output cannot be perceived by the tenant." It may be true that, in the accused device, the second microphone, as Dr. Kayton noted, "is effectively 'disabled' when the tenant is speaking." Dr. Kayton acknowledged, though, that there is still an electrical output from the second microphone when the tenant speaks. Significantly, Doorking presented no evidence that suggested that the accused device was even capable of "disabling" the second microphone so that "transmission cannot occur through [the] second microphone," as recited in the claims. The accused device weakens the signal transmitting from the second microphone through the use of an attenuator, but it never makes the second microphone "incapable or ineffective" of transmitting a signal when "audible sounds are generated at [the] first microphone." Thus, the accused device cannot be found to literally infringe the '501 patent.

I also believe that Doorking is estopped from asserting that the defendants' device infringes the '501 patent under the doctrine of equivalents. We noted in Bayer AG v. Elan Pharm. Research Corp., 212 F.3d 1241, 1252-53, 54 USPQ2d 1711, 1719 (Fed. Cir. 2000), that statements made during prosecution can evince a clear and unmistakable surrender of subject matter that cannot be recaptured through the doctrine of equivalents. During prosecution of the '501 patent, the inventors, in response to a prior art rejection, described the claimed invention as "literally de-activat[ing]" the second microphone when sound was present at the first microphone. In addition, the inventors distinguished a prior art reference, the Nashino reference, on the ground that Nashino "does not cut off a microphone or a speaker at any time. In other words, the microphone and speaker are always on." Such statements evince a clear surrender of devices that leave the second microphone on when the tenant is speaking, systems that do not "literally de-activate[]" or "cut off" the second microphone. As acknowledged by Doorking's expert, the accused device's second microphone is on at all times. The accused device thus falls within the scope of the surrendered subject matter. It therefore cannot infringe the '501 patent under the doctrine of equivalents.

For the foregoing reasons, I respectfully dissent from the majority's vacatur of the grant of summary judgment of non-infringement. I would affirm the grant of summary judgment. However, like the majority, I would affirm the district court's denial of the request for attorneys' fees and costs.