

NOTE: This disposition is nonprecedential

**United States Court of Appeals
for the Federal Circuit**

**PARADOX SECURITY SYSTEMS, LTD.,
SHMUEL HERSHKOVITZ, AND PINHAS SHPATER,**
Plaintiffs-Appellants,

v.

**ADT SECURITY SERVICES, INC. AND
DIGITAL SECURITY CONTROLS, LTD.,**
Defendants-Appellees,

AND

MONITRONICS INTERNATIONAL, INC.,
Defendant,

AND

PROTECTION ONE, INC.,
Defendant-Appellee.

2010-1012

Appeal from the United States District Court for the
Eastern District of Texas in case no. 06-CV-0462, Judge
T. John Ward.

Decided: July 19, 2010

JOSEPH J. MUELLER, Wilmer Cutler Pickering Hale and Dorr LLP, of Boston, Massachusetts, argued for plaintiffs-appellants. With him on the brief were MICHAEL A. DIENER, MEGAN BECK BARBERO and CHRISTOPHER M. STRAW.

J. MICHAEL JAKES, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., of Washington, DC, argued for defendants-appellees ADT Security Services, Inc., et al. With him on the brief was EDWARD J. NAIDICH.

MAX CICCARELLI, Thompson & Knight LLP, of Dallas, Texas, argued for defendant-appellee Protection One, Inc. With him on the brief were JANE POLITZ BRANDT and J. MICHAEL HEINLEN.

Before NEWMAN, SCHALL, and BRYSON, *Circuit Judges*.
SCHALL, *Circuit Judge*.

Plaintiffs-Appellants Paradox Security Systems, Ltd., Shmuel HersHKovitz, and Pinhas Shpater (collectively “Paradox”) appeal the final decision of the United States District Court for the Eastern District of Texas granting judgment as a matter of law (“JMOL”) of noninfringement of claims 1, 2, and 5 of Paradox’s U.S. Patent No. RE39,406 (the “406 patent”). The court granted JMOL of noninfringement in favor of defendants-appellees Digital Security Controls, Ltd. (“DSC”) and ADT Security Services, Inc. and Protection One, Inc. (individually “ADT” and “Protection One,” respectively, and, collectively, the “monitoring defendants”). *Paradox Sec. Systems, Ltd. v. ADT Sec. Services, Inc.*, Case No. 06-CV-0462, Final Judgment Order (E.D. Texas, Aug. 27, 2009). *We affirm.*

DISCUSSION

I.

The '406 patent relates to protective elements for home security systems that communicate with a central security office via telephone lines. Protective elements are frequently integrated into the circuitry of such systems to prevent damage from power surges. The preferred embodiment disclosed in the '406 patent employs two opto-couplers, in contrast to the four or more employed in the prior art. These opto-couplers protect elements of a home security system during both incoming calls from the central security office and outgoing calls from the home.

Claim 1 of the '406 patent recites, in relevant part:

A telephone line coupler circuit for connecting telephone subscriber equipment to a telephone line, the circuit comprising:

...

means for controllably providing a low level DC bias signal to said transmit signal input and generating sufficient current on said transmit signal output to substantially saturate said gated line switch and seize said telephone line;

...

means for providing an outgoing AC signal to said transmit signal input;

....

'406 patent col.4, ll.10-34. Claim 2 employs the same language. '406 patent, col.4, ll.49-54.

Claim 5 of the '406 patent recites, in relevant part:

A telephone line coupler circuit for connecting telephone subscriber equipment to a telephone line, the circuit comprising:

...

a line side transmit signal and DC bias signal combining circuitry receiving a transmit communications signal and a DC bias signal and outputting a combined signal to said transmit signal input; and

a DC bias voltage generator responsive to a control signal to provide a low level DC signal as said DC bias signal, wherein sufficient current is generated on said transmit signal output to substantially saturate said gated line switch and seize said telephone line.

'406 patent, col.5-6, ll.65-28. Claims 1, 2, and 5 all require that the DC bias source be controllable (i.e., responsive to a control signal) as a requirement for seizing the telephone line.

On November 7, 2006, Paradox filed an infringement suit against DSC and ADT. Paradox accused DSC of manufacturing and selling home security alarm system equipment incorporating the circuitry taught by the '406 patent. It accused ADT of installing, monitoring, and otherwise "using" the equipment containing the accused circuitry. Subsequently, in a second amended complaint, Paradox added defendants Protection One and Monitronics International, Inc. ("Monitronics"), accusing them, like ADT, of installing and monitoring systems incorporating the accused circuitry.¹

¹ Paradox subsequently settled with Monitronics.

As trial approached, ADT and the monitoring defendants filed a motion *in limine* with respect to the testimony of Paradox's expert witness, Dr. Tim Williams ("Dr. Williams"). The defendants contended that Dr. Williams should be precluded from testifying about the "means for controllably providing a low level DC bias signal" limitation of claims 1 and 2 because his expert report failed to (1) identify any components in the accused devices that performed the recited function or (2) explain why the structure in the accused devices was the same or equivalent to the structure disclosed in the '406 patent. The defendants also contended that, in his deposition three weeks before trial, Dr. Williams did not or could not identify the specific structure in the accused devices that performed the function recited in claims 1 and 2 of "controllably providing a low level DC bias signal," and that he did not identify a "DC bias voltage generator responsive to a control signal," as recited in claim 5.

The district court granted the motion *in limine*, noting that "expert testimony will be limited to the scope of the expert's timely filed reports." *Paradox Sec. Systems, Ltd. v. ADT Sec. Services, Inc.*, Case No. 06-CV-0462, Order, at 2 (E.D. Texas, April 3, 2009). Ultimately, both parties stipulated to the preclusion at trial of expert witness testimony that was not disclosed in their Fed. R. Civ. P. 23(a)(2)(B) expert reports.

At the close of Paradox's case, the district court granted JMOL of noninfringement with respect to claims 1 and 2, finding that there was insufficient proof in the record that any reasonable jury could find infringement with respect to those claims. At the same time, the court also granted JMOL of noninfringement with respect to claim 5 because Paradox had failed to present any evidence that the accused devices met the "combining circuitry" limitation of that claim. The district court also

granted JMOL of noninfringement to the monitoring companies because Paradox had not presented any evidence that the monitoring defendants had made, used, or sold any of the accused devices. This appeal timely followed.

II.

Paradox's first issue on appeal arises from the district court's exclusion of Dr. Williams' testimony. As noted, the court excluded testimony of Dr. Williams relating to matters that were not within the scope of his expert report. In the absence of this expert testimony, the district court held, no reasonable juror could find infringement of two limitations recited in claims 1 and 2: (1) "means for controllably providing a low level DC bias signal to said transmit signal input and generating sufficient current on said transmit signal output to substantially saturate said gated line switch and seize said telephone line"; and (2) "means for providing an outgoing AC signal to said transmit signal input." '406 patent col.4, ll.10-34.

Paradox does not challenge the district court's exclusion of those portions of Dr. Williams' testimony that the court found were not contained within the scope of his expert report. Rather, it contends that the expert witness testimony that was not excluded, in addition to non-expert evidence that was offered, was sufficient to establish the necessary links between the structures of the accused devices and the limitations of means-plus-function claims 1 and 2 of the '406 patent.² We do not agree.

² Paradox argues that the district court erred by ruling that expert testimony is required as a matter of law to link each claim limitation to the corresponding

The means-plus-function limitation in claims 1 and 2 reads as follows:

[M]eans for controllably providing a low level DC bias signal to said transmit signal input and generating sufficient current on said transmit signal output to substantially saturate said gated line switch and seize said telephone line.

'406 patent, col.4, ll. 25-29, 50-54. The district court construed the limitation to mean:

[C]ontrollably providing a low level bias signal to said transmit signal input and generating sufficient current on said transmit signal output to substantially saturate said gated line switch and seize said telephone line.

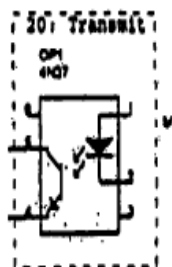
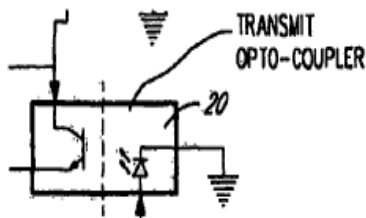
Paradox Sec. Systems, Ltd. v. ADT Sec. Services, Inc., --- F.Supp.2d ----, Civil Action No. 2:06-CV-462 (TJW), 2008 WL 5378053, at *12 (E.D. Texas Dec. 23, 2008). The court determined the corresponding structure to be:

A DC bias source coupled to the transmit opto coupler input, a transmit opto coupler output coupled to a gated line switch input, or equivalents thereof.

Id.

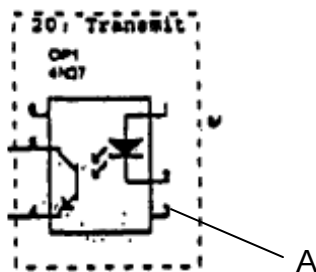
Paradox maintains that both the DSC circuitry and that of the preferred embodiment in the '406 patent contain a transmit opto-coupler and that such a component is readily apparent in the following schematics:

accused structure. We do not read the judge's ruling in that manner, but instead interpret his ruling as being simply that the evidence, after the exclusion of Dr. Williams' testimony, was not sufficient to support a finding of infringement.

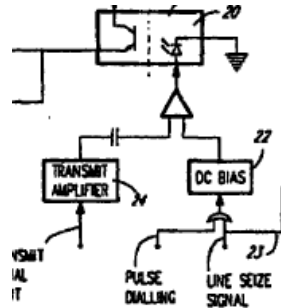
DSC Circuitry**'406 Preferred Embodiment**

Referring to other portions of the DSC circuitry and the '406 preferred embodiment, Paradox points out that DSC's circuitry includes a gated line switch acting as a "line seize switch" and that the output of DSC's transmit opto-couplers is connected to the gate input of DSC's line seize switch.

However, another structure that is recited by the limitations in claim 1 and 2, as construed by the district court, is "[a] DC bias source coupled to the transmit opto coupler input." Such a component is missing from the DSC schematic circuitry shown above and is not discernible in other DSC schematics introduced into evidence by Paradox. The transmit opto-coupler and its inputs are depicted thus in Paradox's exemplary schematic:



And thus in the '406 preferred embodiment schematic:



It is evident that there is an input, here labeled “A,” in the schematic of the DSC transmit opto-coupler. However, it is not evident that that input is a DC bias input that is “coupled to the transmit opto coupler input,” as recited in the district court’s construction of the structure disclosed in the limitation. Such a DC bias input “coupled to the transmit opto coupler input” is depicted in the ’406 patent’s preferred embodiment as originating in the DC bias source (22) and being paired with the signal from the transmit amplifier (24) via an comparator (the triangle depicted in the ’406 patent schematic). Nor is it evident that input A in the DSC schematic performs the recited function of “generating sufficient current on said transmit signal output to substantially saturate said gated line switch and seize said telephone line.”

Paradox maintains, though, that Dr. Williams testified that the input to the opto-coupler receives the DC bias signal. Dr. Williams testified on direct examination as follows:

Mr. Meeker: How do they satisfy the limitation?

Dr. Williams: By circuitry which provides the DC bias signal and the transmit line signal and combining those two,

presenting those to the transmit opto-coupler here.

Q: Where can we find the combining circuitry? Withdrawn. And let's go to your report for this. Well, I tell you what, let me ask you this: Why is this limitation satisfied?

A: Because DSC circuitry provides a long signal and a DC bias signal, which are combined and presented to the transmit opto-coupler.

Q. With respect to this limitation, where does this appear in your report? I'm trying to find it myself. I tell you what, we'll come back to this. Let's just -- let's go on, I'll come right back to this. Sorry about that, Dr. Williams. What's the next limitation?

J. App. at A4714-15. Shortly thereafter, Dr. Williams testified further:

Q. What is the next element of that claim, sir?

A. Adding a DC bias to the electronic equipment transmit signal coming from the electronic equipment to obtain a combined signal and feeding the combined signal to the transmit

opto-coupler, said DC bias being sufficient to generate a low-level DC bias -- DC output on the line side of said opto -- transmit opto-coupler.

Q. Do the accused products perform that step?

A. Yes, they do.

Q. What is the next step, sir -- well, wait. Excuse me. Back up. How do they perform that step?

A. They perform it by creating these signals and providing those signals to the transmit opto-coupler.

Q. Okay. And where is that shown in the exemplary circuit?

...

A. That is provided to the transmit opto-coupler right here in the lower right-hand corner of ... loop 7.

J. App. at 4724-25. However, Dr. Williams' "loop 7" does not disclose a DC bias source, but merely an undefined input to the transmit opto-coupler, as disclosed in the DSC circuitry schematic with the "A" marking above.

Paradox argues that it is “axiomatic” that any signal must have a source and that, accordingly, a DC bias source must be coupled to the input of the transmit opto-coupler. Although the initial premise of this statement is correct, the conclusion hardly follows from it. Indeed, Dr. Williams’ statements were entirely conclusory; he pointed to no structure in the DSC schematic shown above, or in any of the other schematics of DSC accused circuitry that were admitted into evidence, that identified a “DC bias source coupled to the transmit opto coupler input” as construed by the court.

Paradox also argues that it introduced sufficient evidence supporting infringement of the “means for providing an outgoing AC signal to said transmit signal input” in claims 1 and 2. The district court construed this limitation to mean: “[p]roviding an outgoing AC signal to said transmit signal input”, which is the input to the transmit opto-coupler. *Paradox*, 2008 WL 5378053, at *12. The district court identified the corresponding structure as “[w]ires connecting the source of AC signal to the transmit opto-coupler 20 input through any capacitor or comparator circuit elements.” *Id.* Paradox contends that all of the constituent elements of this limitation are met by DSC’s accused device, *viz.*: (1) there is a transmit opto-coupler; (2) there are wires connected to the input of the transmit opto-coupler; and (3) the transmit opto-coupler receives an AC signal through those wires from an AC signal source.

As noted above, it is not disputed that the DSC circuitry has a transmit opto-coupler and connecting wires, however, Paradox could not demonstrate the presence of an AC signal source that is comparable to the transmit amplifier (24) depicted above in the schematic of the preferred embodiment of the ’406 patent. Paradox argues that “Dr. Williams testified that the DSC transmit opto-coupler receives an AC signal on its input. Accordingly,

an AC signal source must be coupled to the input of the transmit opto-coupler.” Appellant’s Br. at 41 (internal citation omitted). Apart from making this conclusory statement, though, Paradox points to no structure in the schematics of the DSC accused devices that is the “source of [the] AC signal” and that is connected via wires to the transmit opto-coupler. Nor can it point to any capacitor or comparator through which the AC signal is passed.

As noted, Paradox contends that it produced non-expert evidence that the accused devices infringed the ’406 patent. Specifically, Paradox points to the testimony of a Mr. Pildner, a lead designer of DSC’s accused devices. Mr. Pildner testified that the president of DSC observed Paradox’s circuitry panel at a trade show. Mr. Pildner also testified that he believed that copying was commonplace within the industry and that schematics of Paradox’s circuitry panels were found in DSC’s possession. Paradox urges that Mr. Pildner’s testimony is evidence that DSC’s accused devices infringe the ’406 patent. However, nothing in Mr. Pildner’s testimony identifies a structure in any of the accused devices constituting a “DC bias source coupled to the transmit opto coupler input,” as required by the limitations of claims 1 and 2 of the ’406 patent.

Because Paradox can point to no structure introduced into evidence that unequivocally identifies a “DC bias source coupled to the transmit opto coupler input,” or any “source of [an] AC signal,” the accused DC circuitry fails to meet every limitation of asserted claims 1 and 2. Consequently, we affirm the district court’s order granting JMOL of noninfringement with respect to claims 1 and 2.

III.

Paradox next argues that the district court erred in its construction of the claim 5 limitation “line side transmit signal and DC bias signal combining circuitry.” According to Paradox, the district court erred in requiring that the circuitry combining the “line side transmit signal” and “DC bias signal” must be on the “line side” of the telephone line coupler (i.e., on the opposite side of the opto-coupler breaks from the circuitry of the “equipment side”). Paradox notes that the district court explicitly “recognized that this claim construction [does] not encompass the preferred embodiment disclosed in the patent specification.” *Paradox Sec. Systems, Ltd, v. ADT Sec. Services, Inc.*, Case No. 06-CV-0462, Order, at *3 n.2 (E.D. Texas, April 13, 2009). Paradox maintains that this incorrect claim construction led directly to the district court’s erroneous grant of JMOL with respect to claim 5.

There are two reasons why we need not resolve this claim construction issue, however. First, assuming that the district court did err in construing claim 5 to mean that the circuitry combining both the AC transmit signal and the DC bias signal must be on the line side, that error was harmless. The reason is that Paradox produced no evidence that either the ’406 patent’s preferred embodiment or DSC’s accused devices conform to either the construction adopted by the court or to Paradox’s proposed construction. Second, the final limitation of claim 5 requires “a DC bias voltage generator responsive to a control signal to provide a low level DC signal as said DC bias signal.” As discussed in Part II above, Paradox failed to identify this structure in the accused device. We therefore affirm the judgment of noninfringement of claim 5.

IV.

Paradox also maintains that the district court erred by requiring expert testimony to support its claim that the monitoring defendants infringed the '406 patent through their use of DSC's accused devices. Paradox argues that the imposition of a *per se* requirement for expert testimony is contrary both to statutory law and this court's precedent. However, because we affirm the district court's grant of JMOL that the accused devices do not infringe the '406 patent, we need not reach the question of whether the monitoring defendants' use of the accused devices was infringing.

V.

For the foregoing reasons, the final judgment in favor of DSC and the monitoring defendants is affirmed.