UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO. 05-61225-CIV-MARRA/HOPKINS

COBRA INTERNATIONAL, INC.,

Plaintiff,

vs.

BCNY INTERNATIONAL, INC., *et al*,

Defendants.
_____/

AMENDED OPINION AND ORDER[1]

This cause is before the Court upon Defendants' Motion to Exclude Testimony of Plaintiff's Expert Witness, Michael Anthony (DE 430). The motion is fully briefed and ripe for review, and the Court held hearings on the motion. The Court has carefully considered the briefs, the record, and the oral argument of the parties, and is otherwise advised in the premises.

I. Background

This is a patent infringement case brought by Plaintiff Cobra International, Inc. ("Cobra") against Defendants BCNY International, Inc., Jordara Far East, Inc., Fred's Stores of Tennessee, Inc., Family Dollar Stores, Inc., Dollar General Corporation, Inc., Bruce Cagner, and Larry Roth (collectively "BCNY" or "Defendants") for an alleged infringement of U.S. Patent No. 5,821,858.

The patent, filed on October 13, 1998, presents a design for lighted footwear. The object of the patent is to "provid[e] lighted footwear such as a slipper having a lighting assembly including outwardly directed and externally visible lighting elements, means for powering the lighting

[1] This Order amends the Opinion and Order entered on July 29, 2013 (DE 485) by revising footnote 5 of that order (which is footnote 6 of this order).

elements, and means for sequencing the activation of the lighting elements in a repeating cycle." Patent at col. 3.

Defendants produce children's shoes that contain a small electrical module with an integrated circuit mounted on a chip. (DE 430 at 5). The chip, which is mounted on a circuit board and covered by a dot of epoxy, is a small rectangular piece of silicon less than one-quarter of an inch across on which the various electrical components are formed through a multi-layer process. The chip is connected to a switch, a battery, and a number of LED lights on the outside of the shoe. When the switch is triggered, the LEDs flash in a pattern for a short period and then stop.

Cobra contends that Defendants' children's shoes with flashing lights infringe the patent. To defend against this accusation, Defendants produced schematics that allegedly show the structural details and connections of their product. (DE 325, Attach. 3). The first schematic is claimed to be a diagram of a ROM chip allegedly in Defendants' circuit. The other two schematics are claimed to be representations of the circuit itself in the accused products.

The parties disagree over whether these schematics are representative of the circuitry in the accused products. Joseph McAlexander, an expert witness for the Defendants, testified that the latter two are representative of the circuitry in the accused products. McAlexander Testimony at 34 (DE 322). One of Cobra's two expert witnesses, Michael Anthony, expressly testified that he did not believe the ROM outlined in the first schematic was in the accused device. (Anthony Deposition at 180–81).

In denying Defendants' motion for summary judgment, the Court found that—based on Michael Anthony's testimony—a genuine issue of material fact existed as to whether the circuits relied on by Defendants were in the accused products. (DE 357 at 18–19: Ct.'s Op. and Order

Granting in part and Denying in part Defs.' Mot. for Summ. J.). Defendants now move to exclude two of Anthony's expert opinions: (1) that the schematics relied on by Defendants do not accurately represent the circuit in the accused product; and (2) that the circuit in the accused product uses the same "logic" as Cobra's patent. (DE 463 at 183: Tr. of Continuation of Daubert Hr'g).[2] To that end, Defendants argue that Anthony's opinion that the circuit in the accused product is not what is represented in the diagrams produced by Defendants is not sufficiently reliable. For the reasons that follow, Defendants' motion is granted in part and denied in part.

II. Legal Standard

The Federal Rules of Evidence provide that a witness "who is qualified as an expert by knowledge, skill, experience, training, or education" may offer opinion testimony if (1) the expert's specialized knowledge "will help the trier of fact to understand the evidence"; (2) "the testimony is based on sufficient facts or data"; (3) "the testimony is the product of reliable principles and methods"; and (4) "the expert has reliably applied the principles and methods to the facts of the case." Fed. R. Evid. 702. "[T]he task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand" is assigned to the district court. *United Fire & Cas. Co. v. Whirlpool Corp.*, 704 F.3d 1338, 1341 (11th Cir. 2013) (quoting *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993)).

[2] The Court characterizes the two opinions at issue in this way to clear up confusion among the parties. As will be set forth in greater detail below, the Court recognizes a distinction between a "logic" circuit and the physical structure of a circuit. For example, when Anthony opines that he can determine the "logic" of the accused product based on nothing more than an observation of its external lights, the Court does not interpret that opinion as speaking to the physical structure of the circuit in the accused product. To the extent that Anthony's second opinion could be construed as an opinion that the accused product infringes upon Cobra's patent under the Doctrine of Equivalents, the Court expresses no view on whether a product that uses certain "logic" infringes upon another product merely because both products use the same logic.

District courts should consider four factors when assessing the reliability of an expert's testimony: (1) whether the expert's methodology has been tested or is capable of being tested; (2) whether the theory or technique used by the expert has been subjected to peer review and publication; (3) whether there is a known or potential error rate of the methodology; and (4) whether the technique has been generally accepted in the relevant scientific community. *See id.* (citing *Daubert*, 509 U.S. at 593–94. "At the same time, the [Supreme] Court has emphasized that these factors are not exhaustive and are intended to be applied in a 'flexible' manner." *Id.* (quoting *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999)).

III. Analysis

The crux of Defendants' position is that Anthony, unlike Defendants' expert, never physically analyzed the circuit on the accused chip: Anthony never performed a detailed physical examination of the accused circuit, never reverse engineered the circuit design on the chip in the accused products, never analyzed the chip under a microscope, never identified the various circuit components, and never mapped those circuit components to the corresponding depictions in Defendants' circuit diagrams. This "look under the hood" approach that Anthony failed to employ is, according to Defendants, "essential to any effort to identify the physical structure and elements of an integrated circuit like the one in the accused products." (DE 430 at 7: Defs. Mot. to Exclude Test. of Pl.'s Expert Witness, Michael Anthony).

In response, Cobra argues that Anthony determined the logic circuit—as opposed to the physical circuit that Defendants focus on—simply by observing the accused product's LED flashing pattern. According to Cobra, Anthony's method (which the Court shall refer to as "logic analysis") allows one to reverse engineer a circuit by cycling through all possible inputs, observing the output,

and drawing up a truth table.[3] Based on the content of the truth tables, Cobra asserts it is possible to determine the logic circuit elements and their functional interrelationships. "Thus from truth tables constructed by observing the flashing pattern, the logic circuit in the device producing that flashing pattern can be determined." (DE 441 at 4: Pl.'s Opp. Resp. to Defs.' Mot. to Exclude Test. of Pl.'s Expert Witness, Michael Anthony). In other words, Cobra's position is that Anthony reverse engineered the *logic* of the accused product and determined that the *logic* of the accused product necessarily matches the *logic* of the patent.[4] The Court does not construe Cobra's position to be at all related to the physical structure of the circuit in the accused product.

As should be apparent, the problem with the parties' arguments is that they speak past each other. Defendants focus exclusively on the physical structure of their circuit and how Anthony's method of "logic analysis" could not possibly provide a basis for his opinion that the circuit diagrams do not accurately reflect what is in the accused product.[5] As set forth above, however, the Court does not interpret Anthony's opinion as speaking to the physical structure of the circuit in the accused product. Rather, the Court construes Anthony's opinion as expressing his view that, based on logic

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[3] For a more in-depth explanation of Boolean logic, truth tables, and logic gates, see Peter D. Junger, *You Can't Patent Software: Patenting Software Is Wrong*, 58 Case W. Res. L. Rev. 333, 433–38 (2008).

[4] At oral argument, Cobra's counsel stated that Cobra's and Anthony's position was that "the logic circuit schematic, as illustrated and specifically as claimed in the . . . patent, is necessary to produce that lighting sequence regardless of the physical circuit used. That's why all this discussion of the physical circuit is almost irrelevant, because you can know the logic by the output, by the behavior of the circuit." (DE 450 at 20: Tr. of Daubert Hr'g).

[5] *See* (DE 444 at 2: Defs.' Reply in Supp. of Mot. to Exclude Test. of Pl.'s Expert Witness, Michael Anthony) ("Anthony did not follow an accepted scientific methodology for evaluating [Defendants'] circuit to understand its internal structure—the components and how they are connected. Anthony's methodology is based on only looking at the circuit input and output and the wires and LEDs connected to the circuit. This methodology cannot determine the internal structure of [Defendants'] circuit."); *see also id.* at 3 ("Anthony's methodology does not 'fit,' as required by *Daubert*, because it does not answer the ultimate question in the case, namely: Does the internal structure of [Defendants'] circuit match each and every one of the limitations in the patent claims at issue, either literally or under the Doctrine of Equivalents?").

analysis of the accused product's external lights, the logic of the accused product must necessarily correspond to the logic of the patent *regardless of the physical structure of the circuit in the accused product.* The Court's interpretation is consistent both with Anthony's testimony and Cobra's response to Defendants' motion to exclude Anthony's testimony (DE 441), which does not speak to Anthony's ability to render an opinion on the physical structure of the circuit. In fact, Cobra's response expressly distinguishes between physical circuits and logic circuits, stating that "[Defendants] make [their] case by confusing physical circuits with logic circuits. . . . To determine the *physical* circuit in a chip, one must look at the physical circuit. But . . . the [patent] illustrates and describes a *logic* circuit." (DE 441 at 8–9) (emphasis in original).[6]

At no point do Defendants argue against the reliability of Anthony's "logic analysis" method as applied to determining the *logic* of a circuit.[7] Rather, Defendants focus exclusively on the method's inability to provide insight as to the physical structure of the circuit in the accused

[6] Defendants attempt to address the "logic circuit" vs. "physical structure" distinction by arguing that the patent's claims "do not recite a generic flashing light function, but instead require a circuit comprised of various specific components that are connected to each other in a specific way." (DE 444 at 3). And Defendants correctly point out that these details would be irrelevant "if Cobra had a patent on any circuit that can flash lights on a shoe." (DE 444 at 4). But even if the Court were to conclude that Cobra does not hold a patent on the logic, that conclusion would not be dispositive on the issue of whether Defendants' circuit infringes under the Doctrine of Equivalents. In other words, Anthony's inability to determine the physical structure of the circuit in the accused product through logic analysis does not necessarily render his opinion irrelevant as it relates to logic and infringement.

[7] *See* (Tr. of Continuation of Daubert Hr'g at 184) ("And so if the question is do these two lights flash in some way that's comparable, I think the science that Mr. Anthony used was fine. He's got a logic analyzer, and it actually keeps track of light, light, light, light, light, light, and he gets a pattern, and he can say, well, these seem similar, and if we had a patent that just said flashing lights with none of these Claim 1, limitation, you know, circuit, AND gates, then that science is probably good enough."); *see also id.* at 226 ("The one piece of science that you did hear about the logic analyzer, very simplistic. We don't dispute for a minute it's a great way to capture the flashing pattern, and if all you care about is outputs and inputs that's all you need.") The Court accordingly does not find it necessary or appropriate to address Anthony's qualifications as an expert or the reliability of his testimony as it relates to deducing the logic of a circuit under Federal Rule of Evidence 702 or *Daubert.*

product.[8] To the extent Defendants argue that Anthony's method of "logic analysis" has not been proven to be a reliable method of determining the physical structure of a circuit, the Court agrees. Anthony's testimony will be excluded to the extent that it purports to state a view on whether Defendants' diagrams accurately represent the circuit in the accused product. However, to the extent Anthony opines on the logic of the accused circuit and the correspondence of that logic to the logic of the patent, Defendants' motion to exclude Anthony's testimony is denied.[9]

To be sure, Anthony testified (during both his deposition and at oral argument) that he believed the diagrams did not accurately reflect the circuit in the accused product for various reasons, not all of which were based on logic analysis.[10] The Court need not address this particular testimony, however, because Cobra abandoned it as irrelevant during Cobra's counsel's closing at oral argument:

> **The Court**: I don't think the defense is really quarreling with [Anthony's] background and experience and training. It's really with the method he used to arrive at his conclusions. I think that's really where their complaint is, not that he doesn't have the other—would otherwise be qualified to give an opinion.

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[8] *See* (Defs.' Reply in Supp. of Mot. to Exclude Test. of Pl.'s Expert Witness, Michael Anthony at 9) ("Anthony's methodology applies to coming up with a design for a circuit. However, *its use to determine the internal structure of a particular circuit on a chip* has not been tested, peer reviewed, or published, and is not generally accepted in the circuit or reverse engineering community by anyone or any authority.") (emphasis added).

[9] The Court notes that notwithstanding Anthony's Bachelor of Arts Degree in Mechanical Engineering, his course work in electronic engineering, and his over 20 years of patent experience, Defendants argue that he is not qualified to give certain opinions related to electrical engineering in this case. The Court need not address this argument, however, because it is premised on Anthony's lack of qualifications as related to determining *the physical structure* of the circuit in the accused product through logic analysis. Because the Court excludes Anthony's testimony as related to that determination—and the Court does not construe Defendants' argument as challenging Anthony's qualifications as related to determining the *logic* of the circuit in the accused product through logic analysis—the Court need not address whether Anthony is qualified to make the latter determination (particularly when it appears undisputed that logic analysis is a reliable method for determining logic).

[10] For example, Anthony testified that, in his opinion, the circuit in the accused product was too complicated and more expensive than it needed to be, and that the Chinese would never manufacture a circuit like that when they could just manufacture a circuit like the one in the patent. (Anthony Dep. at 92–93, 125); (Tr. of Continuation of Daubert Hr'g at 54–55, 59, 76).

> **[Cobra's counsel]**: I guess the one thing I would like to say about that, then, is that we've spent probably the better part of the day on these pieces of paper that they've presented these fragmented parts of a circuit, and that really has nothing to do with Michael Anthony's method of analysis that we have to look at here for the Daubert test. That's not how we concluded what was in the shoe. He did the logic analyzer from the circuit output and followed the procedures done in the industry. Had nothing to do with looking at those papers. So all that part of today we spent doing that was irrelevant to determining whether his methodology was scientifically valid.
>
> What we should have been talking, or what they should have been talking about is whether you can use a logic analyzer and totally reliably, as we say you can, know what that logic circuit is and know that it's the Stone circuit. That's the whole question, and yet we're diverting onto all this stuff and this blown up part of this what's supposedly i[n] this chip. It's irrelevant to what he did to perform his analysis. And he didn't have to do any of that, because this is all you have to do in the industry to know what the circuit logic is, which is what [the] patent covers.

(Tr. of Continuation of Daubert Hr'g at 209–10).

Cobra's counsel later stated:

> So to me it's almost a diversion to talk about all this stuff on paper they've given us which may or may not be in the shoe or may not be functional. We don't have to go there at all. It's already been established through the method that Michael Anthony used by putting the output on one of these machines and analyzing it that way, and it's backed up by peer-reviewed articles. This is how they reverse engineer the logic and circuits in the industry, and all this other stuff is sort of, you know, they're distractions. They're kind of irrelevant arguments, because you already have the answer.

Id. at 220. As made plain by Cobra, the only testimony Anthony gave that was based on sufficient facts or data and that was the product of reliable principles and methods was his opinion that the circuit in the accused product uses the same logic as the logic in Cobra's patent. That opinion is therefore the only opinion Anthony shall be permitted to offer as an expert.

IV. Conclusion

Accordingly, it is hereby **ORDERED AND ADJUDGED** that Defendants' Motion to Exclude Testimony of Plaintiff's Expert Witness, Michael Anthony (DE 430) is **GRANTED in part**

and DENIED in part. Anthony's testimony related to the circuit in the accused product using the same logic as the logic in Cobra's patent may be offered. Anthony's remaining testimony is excluded. Plaintiff's Motion to Continue Daubert Hearing (DE 445) is **DENIED AS MOOT.**

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 29th day July, 2013.

KENNETH A. MARRA
United States District Judge