

NOTE: This disposition is nonprecedential.

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

ALEKSANDR L. YUFA,
Plaintiff-Appellant,

v.

LOCKHEED MARTIN CORPORATION,
Defendant-Appellee,

AND

DOE DEFENDANTS, 1 through 10,
Defendants.

2014-1256

Appeal from the United States District Court for the
Central District of California in No. 2:06-cv-03923-BRO-
FFM, Judge Beverly Reid O'Connell.

Decided: August 6, 2014

ALEKSANDR L. YUFA, of Colton, California, pro se.

RYAN KEN YAGURA, O'Melveny & Myers LLP, of Los
Angeles, California, for defendant-appellee. With him on
the brief were VISION WINTER and MICHAEL KOPLOW.

Before MOORE, REYNA, and TARANTO, *Circuit Judges*.

PER CURIAM.

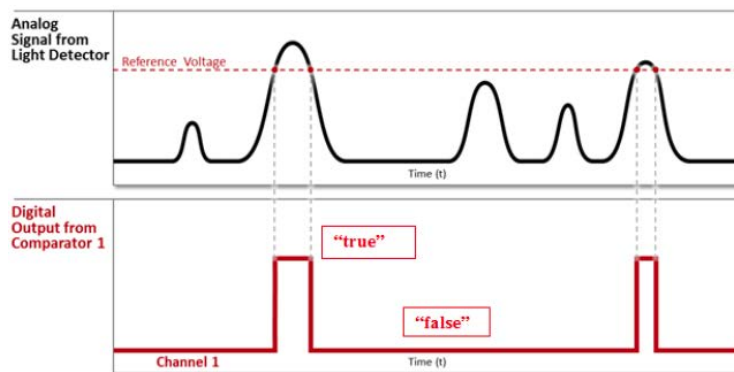
Aleksandr Yufa sued Lockheed Martin, alleging patent infringement. The district court granted summary judgment of non-infringement with respect to all five Lockheed Martin products that Mr. Yufa alleged to be infringing. Because the district court correctly held that there was no genuine issue of material fact for trial, we affirm.

BACKGROUND

Mr. Yufa owns U.S. Patent Nos. 6,034,769 and 6,346,983, both of which claim methods and devices for counting particles in gases or fluids and measuring their size. Such particle detectors are useful for determining the cleanliness of gas or fluid samples, because contaminating particles are often known to fall within certain size ranges. J.A. 1558. For example, the semiconductor industry uses particle detectors to monitor the cleanliness of fabrication rooms, known as “clean rooms,” where electronic circuits are manufactured. *See* ’769 patent, col. 2, lines 49-63; ’983 patent, col. 3, lines 6-21.

Many particle detectors use a “light scattering” method: a light is shined onto a stream of particles and the reflections are measured. Because larger particles reflect (or “scatter”) more light than smaller ones, the amount of light reflected by a particle provides information about its size. J.A. 1559-61. A light detector measures the intensity of the reflected light and outputs an analog electrical current with a voltage proportional to the measured intensity. The larger the particle, the greater the intensity of the reflected light measured by the light detector, and the greater the output voltage.

The patent describes prior-art particle detectors that, using the “light scattering” method, convert the (amplified) analog electrical current sent by the light detector into a digital signal that represents the number of particles of a given size. A standard method—well-known in the prior art and referenced in both patents, *see* ’769 patent, col. 3, lines 3-15; ’983 patent, col. 2, lines 18-29—is to compare the voltage of the analog current with a reference voltage that corresponds to a particular particle size. If the light detector’s voltage output is greater than the reference voltage—indicating that the particle exceeds the threshold size determined by the reference voltage—a digital value of “true” is output. On the other hand, if the light detector’s voltage output is less than the reference voltage—indicating that the particle does not meet the threshold size—a digital value of “false” is output. The figure below illustrates how a particle detector converts the analog electrical current that is sent from the light detector into a digital signal that corresponds to the particle’s size.



Br. of Appellee 17. In this way, a particle detector can use a reference voltage to count particles exceeding a specified threshold size. If it uses multiple reference voltages at different levels, it can count the number of particles within each of several different ranges.

The '769 and '983 patents identify problems with this process, specifically that “compar[ison] with the predetermined reference voltage for the particle size qualifying . . . cannot provide a sufficiently high sensitivity related to the increasing environmental requirements, because of the non-precise analog method of comparison.” ’769 patent, col. 3, lines 12-18; ’983 patent, col. 2, lines 28-33. The patents, therefore, “provide an improved method and device for counting and measuring particles.” ’769 patent, col. 3, lines 24-25; *see also* ’983 patent, col. 3, lines 50-52 (“It is the object of the invention to provide an improved method and apparatus for increasing the sensitivity of the particle counting and measuring means.”). It is not necessary to describe the details of the “improved method” here, except to say that all the asserted claims of the ’769 and ’983 patents, as originally issued, required use of “strobe pulse packs”—or “strobe pulses” in a “strobe pulse sequence.” *E.g.* ’769 patent, col. 4, lines 34-38; ’983 patent, col. 6, lines 22-28.

In June 2006, Mr. Yufa sued Lockheed Martin in the Central District of California, alleging that Lockheed Martin infringed certain claims in the ’769 and ’983 patents. During litigation, Mr. Yufa named what amount to five allegedly infringing Lockheed Martin products (or groups of products), some that Lockheed Martin acknowledged contain and use particle detectors (though Lockheed Martin disputed that those detectors infringe) and others that Lockheed Martin said contained no particle detectors at all.

Lockheed Martin conceded that particle detectors are part of its Biological Aerosol Warning System (“BAWS”), an anti-terrorism warning system that monitors an area for signs of a biological threat. Lockheed Martin has marketed different BAWS models, many of which were alleged by Mr. Yufa to infringe, including the MetroGuard®; the Chemical, Biological, Radiological Early Warning System (“CBREWS”); and the AbleSentry.

In addition to that group of products, Lockheed Martin conceded that particle detectors are part of its Building Protection Systems Integration (“BPSI”), a system that detects chemical, biological, and radiological airborne hazards.

Lockheed Martin advanced evidence that the remaining three accused products do not have particle detectors of any kind. One of those products, the Multipurpose Integrated Chemical Agent Alarm System (“MICAD”), designed for use by ground troops and in vehicles and shelters, automatically detects and reports chemical, biological, and radiological threats. The second of those products, LaserNet Fines, uses laser imaging techniques and advanced image processing software to detect signs of wear in mechanical systems. The remaining product group asserted to infringe consists of Lockheed Martin’s unmanned aerial vehicles (“UAVs”). In support of that generic allegation, Mr. Yufa never identified any specific Lockheed Martin UAV model as infringing.

In February 2007, the United States Patent & Trademark Office ordered the ex parte reexamination of all claims in the ’769 and ’983 patents, and in March 2007, the district court stayed proceedings in this case to await the PTO’s determinations. During reexamination of the ’769 patent, which originally issued with 6 claims, Mr. Yufa cancelled claims 2 and 3 and amended claims 1, and 4-6. J.A. 97. During reexamination of the ’983 patent, which originally issued with 8 claims, Mr. Yufa cancelled claims 1-5 and amended claims 6-8. J.A. 126. To overcome prior-art rejections made in both reexamination proceedings, Mr. Yufa (as relevant here) amended the surviving claims of each patent to include a negative claim limitation—requiring that the particle detector *not* use a reference voltage. The surviving claims of the ’769 patent require (with some minor variations in language) “converting each amplified signal to a digital form pulse *without using a reference voltage*,” J.A. 97-98 (emphasized

language added during reexamination), while the surviving claims of the '983 patent require “conversion of each of said voltage value signals to a digital form *pulse without a reference voltage to convert each of said voltage value signals.*” J.A. 126 (same).

After the district-court action resumed, Mr. Yufa amended his complaint to allege direct infringement of all of the reexamined claims.¹ In October 2013, Lockheed Martin moved for summary judgment of non-infringement with respect to all of the accused products. It argued that the evidence would not support a finding that some of the products even contain a particle detector or a finding that the other products met either one, let alone both, of the two limitations present in every asserted claim: the “without using a reference voltage” limitation; and the “strobe pulse” limitation.

In an opinion granting summary judgment of non-infringement, the district court first construed “without using a reference voltage.” Mr. Yufa argued that the language was not a substantive limitation, but the district court disagreed, concluding that the '769 and '983 patents “require a system that converts a light detector’s amplified output into a digital signal without comparing the light detector’s amplified output to a predetermined reference voltage.” J.A. 10. The district court next turned to whether each of the accused products infringe the '769 and '983 patents. For two accused products—MICAD and

¹ In addition, Mr. Yufa sought leave from the district court to add claims of indirect infringement, direct infringement under the doctrine of equivalents, and willful infringement, and claims for enhanced damages, attorneys’ fees, and injunctive relief—none of which were included in his original complaint. The district court denied his motion in those respects, and Mr. Yufa does not appeal that order here.

UAV—the district court held that the evidence would not support a finding that the products contained any particle detector whatsoever. J.A. 11. For two additional accused products—the BAWS systems and BPSI—the district court concluded that, as a matter of law, the products “use[] a reference voltage to convert analog particle signals into digital pulses,” and thus do not meet the negative, “without using a reference voltage” limitation present in some form in every asserted claim. J.A. 14. With respect to the fifth and final accused product—LaserNet Fines—the district court concluded, again as a matter of law, that “LaserNet Fines determines the detected particles’ size through an analysis and comparison of captured images, not strobe pulse packs, and therefore does not embody a limitation of the ’769 and ’983 [p]atents,” namely, using “strobe pulse packages”—or “strobe pulses” in a “strobe pulse sequence”—to convert the analog electrical current output by the light detector into a digital representation of the particle’s size. J.A. 15-16. The district court thus concluded that there was insufficient evidence, as to each accused product, that it met at least one claim limitation. Because infringement requires meeting all claim limitations, the district court granted summary judgment of non-infringement with respect to all of the accused products.

After Lockheed Martin agreed to dismiss its counterclaims for a declaratory judgment of invalidity, unenforceability, and non-infringement of the ’769 and ’983 patents, the district court entered final judgment of non-infringement on January 23, 2014. Mr. Yufa timely appeals. This court has jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

A determination of infringement requires a two-step analysis. “First, the claim must be properly construed to determine its scope and meaning.” *Carroll Touch, Inc. v.*

Electro Mech. Sys., Inc., 15 F.3d 1573, 1576 (Fed. Cir. 1993). “Second, the claim as properly construed must be compared to the accused device or process.” *Id.* Mr. Yufa alleges that the district court erred only with respect to the latter, which—when only literal infringement is alleged, as in this case in its present posture—“requires a factual determination that every claim limitation . . . is found in the accused device.” *Int’l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1369 (Fed. Cir. 2004).

We review a district court’s grant of summary judgment de novo. *Crown Packaging Tech., Inc. v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1311 (Fed. Cir. 2009). Summary judgment of non-infringement is proper if and only if “no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device.” *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1339 (Fed. Cir. 2001). It has long been established that the patent owner has the burden to prove infringement. *Medtronic, Inc. v. Mirowski Family Ventures, LLC*, 134 S. Ct. 843, 849 (2014). Lockheed Martin, in moving for summary judgment, bore the initial burden of either “providing evidence that would preclude a finding of infringement” or “showing that the evidence on file fails to establish a material issue of fact essential to [Mr. Yufa’s] case.” *Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001). Once Lockheed Martin did so, the summary-judgment question is whether there is evidence—not argument—that a reasonable jury could find sufficient given Mr. Yufa’s burden of proof. *Ander-son v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986).

The district court in this case applied the proper standards in granting summary judgment of non-infringement for all five accused Lockheed Martin (groups of) products. It concluded that there was insufficient proof to support a reasonable finding that any of the products met every limitation of any of the asserted claims: two products did not have any particle detectors

whatsoever, two products that did have particle detectors used a reference voltage to convert the analog signal output by the light detector to a digital signal, and the fifth and final product did not use “strobe pulse packages” or “strobe pulses” in a “strobe pulse sequence. Because we agree with the district court that Mr. Yufa has failed to raise a triable issue with respect to any of those products, we affirm.

The district court properly held that there was no evidence that two of the accused products—MICAD and UAV—contain any particle detectors, as the claims require. With respect to MICAD, Lockheed Martin submitted the sworn declaration of one of its senior engineers that states: “The MICAD system itself does not include any nuclear, biological, or chemical sensors. MICAD interfaces with various sensors but did not actually include any such sensors.” J.A. 527. With respect to the UAVs, Lockheed Martin submitted declarations from two of its engineers, both stating that they were unaware of any UAVs made or sold by Lockheed Martin that contain particle detectors. J.A. 530; J.A. 2138. Mr. Yufa cites to no evidence contrary to the submitted declarations. Accordingly, we affirm summary judgment with respect to those two accused products.

We turn next to BAWS and BPSI, the two accused products that the district court held do not meet the “without using a reference voltage” limitation present (with some minor variations) in every asserted claim. Lockheed Martin submitted the sworn declaration of an expert witness, who reviewed the schematics and source code of the particle detectors used in those two products. According to the expert, neither of the products converts an analog signal to a digital signal “without using a reference voltage.” J.A. 1576-81. Mr. Yufa did not supply evidence creating a genuine evidentiary dispute about the issue. He merely asserted that he “believes that no company would continue to use old technology,” *i.e.*, a

reference voltage, and that “consequently . . . there must have been . . . changes that infringe his patents.” Br. of Appellant 5; *see also, e.g.*, J.A. 2068-69 (Mr. Yufa opposing Lockheed Martin’s contention that “us[ing] reference voltages [is] the only means for determining particle sizes” in the accused devices by stating: “Disputed . . . due [to] incorrect language of [Lockheed Martin’s proposed] fact and not identified type of comparator”). Such bare allegations and denials are not sufficient to establish a genuine issue of material fact. *E.g., Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1337 (Fed. Cir. 2010) (“When a motion for summary judgment is properly made and supported, an opposing party may not rely merely on allegations or denials in its own pleading; rather, its response must—by affidavits or as otherwise provided in this rule—set out specific facts showing a genuine issue for trial.”). We therefore affirm summary judgment of non-infringement with respect to BAWS and BPSI.

What remains is the fifth accused product, LaserNet Fines, which the district court concluded as a matter of law “determines the detected particle’s size through an analysis and comparison of captured images, not strobe pulse packs,” which all asserted claims require. J.A. 16. In the district court, Mr. Yufa neither submitted nor identified any substantial evidence that the strobe-pulse limitation is met by LaserNet Fines. In this court, Mr. Yufa raises a new series of arguments that LaserNet’s image comparison meets the strobe-pulse limitation, basing his arguments only on what he claims are general principles “widely known” in the industry. Br. of Appellant 52-53. Not only is his appeal too late to present important new analyses of facts, but a party’s argument in its legal brief “is no substitute for evidence” and “is insufficient” to withstand a motion for summary judgment. *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005) (making this point as to attorney argument). Nor do Mr. Yufa’s arguments in his

brief merely enable us to recognize what the record evidence already says. Evidence would have been needed to establish that the image comparisons of LaserNet Fines involve strobe pulses as the asserted claims require. There is no such evidence. We therefore affirm the grant of summary judgment with respect to LaserNet Fines.

CONCLUSION

For the foregoing reasons, we affirm the judgment of non-infringement with respect to every accused product.

AFFIRMED

No costs.