UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SCIENTIFIC APPLICATIONS & RESEARCH ASSOCIATES (SARA), INC.,

Plaintiff,

v.

ZIPLINE INTERNATIONAL, INC.,

Defendant.

Case No. 22-cv-04480-JSC

ORDER RE: DEFENDANT'S MOTION FOR JUDGMENT ON THE PLEADINGS AND PLAINTIFF'S MOTION TO DISMISS

Re: Dkt. Nos. 92, 95

Plaintiff sues Zipline for alleged infringement of U.S. Patent No. 7,606,115 (the '115 patent) and trade secret misappropriation. (Dkt. No. 86.)[1] Before the Court is Defendant's motion for judgment on the pleadings and Plaintiff's motion to dismiss and strike. (Dkt. Nos. 92, 95.) Having carefully considered the briefing, and with the benefit of oral argument on May 29, 2024, the Court (1) DENIES Defendant's motion for judgment on the pleadings because the '115 patent survives *Alice* Step 2 and (2) DENIES Plaintiff's motion to dismiss and strike because Zipline adequately pleads the alleged references' materiality and Plaintiff's specific deceptive intent.

BACKGROUND

Plaintiff owns the '115 patent, which is entitled "Acoustic Airspace Collision Detection System." (Dkt. No. 86 ¶¶ 7, 30.) Its abstract describes:

> An acoustic collision detection system that enables an aircraft to detect an approaching target, recognize the potential for collision and change course to maintain a safe separation distance, with or without operator invention. The acoustic collision detection system consists of an array of acoustic probes and a digital signal processor which receives acoustic data from the approaching target. The digital signal processor is configured to receive acoustic data from the array of

[1] Record citations are to material in the Electronic Case File ("ECF"); pinpoint citations are to the ECF-generated page numbers at the top of the documents.

> acoustic probes; filter out noise and its own acoustic signals; extract the acoustic signals emanating from the approaching target; calculate the intensity, the bearing and the bearing angle rate of change of the approaching target, and determine whether the aircraft and the approaching target are on a potential collision course.

'115 patent, abstract.

The invention claims a system for piloted and unmanned aircraft that uses sound emitted from approaching aircraft to detect approaching aircraft, assess the risk of collision, and avoid collision. '115 patent, col. 1 ll. 16-22. "The '115 patent contains one independent claim (Claim 1) and 10 dependent claims (Claims 2-11)." (Dkt. No. 86 ¶ 86.) Claim 1 of the '115 patent states:

> An acoustic collision detection system for avoiding a potential collision between an aircraft and an approaching target comprising:
>
> an array of acoustic probes;
>
> a digital signal processor configured to receive acoustic data from the array of acoustic probes, wherein said digital signal processor filters out noise and its own acoustic signals; extracts the acoustic signals emanating from the approaching target, calculates the intensity, the bearing and the bearing angle rate of change of the approaching target, and determines whether the aircraft and the approaching target are on a potential collision course.

'115 patent, col. 5 ll. 47 – col. 6 ll. 10.

Plaintiff accuses Zipline of infringing "at least claim 1 of the '115 patent by making, using, selling, and/or offering to sell [unmanned aerial vehicles] incorporating acoustic [detect and avoid] technology" and using Plaintiff's "trade secret information regarding Acoustic [Detect and Avoid] technology in development and testing of Zipline's own products." (Dkt. No. 86 ¶¶ 52, 93.) Zipline moves for judgment on the pleadings on the grounds the asserted claims of the '115 patent are invalid because they recite patent-ineligible subject matter under 35 U.S.C. § 101." (Dkt. No. 92 at 6.) Plaintiff moves to dismiss Zipline's counterclaims and strike Zipline's affirmative defense of unenforceability due to inequitable conduct. (Dkt. No. 95.)

DISCUSSION

A. Motion for Judgment on the Pleadings

Under Federal Rule of Procedure 12(c), "[a]fter the pleadings are closed--but early enough not to delay trial--a party may move for judgment on the pleadings."

> The standard for deciding a Rule 12(c) motion is the same as a Rule 12(b)(6) motion to dismiss. The court accepts all well-pleaded facts as true, viewing them in the light most favorable to the plaintiff, which must plead enough facts to state a claim to relief that is plausible on its face.

SAP Am., Inc. v. InvestPic, LLC, 898 F.3d 1161, 1166 (Fed. Cir. 2018) (cleaned up). Dismissal "may be based on either a lack of a cognizable legal theory or the absence of sufficient facts alleged under a cognizable legal theory." *Johnson v. Riverside Healthcare Sys.*, 534 F.3d 1116, 1121 (9th Cir. 2008) (cleaned up). Though the Court must accept the complaint's factual allegations as true, conclusory assertions are insufficient to state a claim. *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). A claim is facially plausible when the plaintiff pleads enough factual content to justify the reasonable inference the defendant is liable for the misconduct alleged. *Id.* "Judgment on the pleadings is properly granted when, accepting all factual allegations in the complaint as true, there is no issue of material fact in dispute, and the moving party is entitled to judgment as a matter of law." *Chavez v. United States*, 683 F.3d 1102, 1108 (9th Cir. 2012) (cleaned up). In deciding a motion for judgment on the pleadings, the Court may consider the pleadings, documents attached to the pleadings, and facts "contained in materials of which the court may take judicial notice." *Threshold Enterprises Ltd. v. Pressed Juicery, Inc.*, 445 F. Supp. 3d 139, 145 (N.D. Cal. 2020).

A patent is presumed valid. 35 U.S.C. § 282; *see Microsoft Corp. v. I4I Ltd. P'ship*, 564 U.S. 91, 100 (2011) ("[B]y its express terms, § 282 establishes a presumption of patent validity, and it provides that a challenger must overcome that presumption to prevail on an invalidity defense."). "This presumption reflects the fact that the Patent and Trademark Office has already examined whether the patent satisfies 'the prerequisites for issuance of a patent,' including § 101." *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1319 (Fed. Cir. 2019). Any fact "pertinent to the invalidity conclusion must be proven by clear and convincing evidence." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

"A patent may be obtained for 'any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.'" *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1347 (Fed. Cir. 2016) (quoting § 101). "The

Supreme Court has 'long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.'" *Id*. (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). The concern driving this exclusionary principle is "one of pre-emption," as monopolization of "the basic tools of scientific and technological work . . . might tend to impede innovation more than it would tend to promote it, thereby thwarting the primary object of the patent laws." *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (cleaned up).

"Eligibility under 35 U.S.C. § 101 is a question of law, based on underlying facts." *SAP Am., Inc.*, 898 F.3d at 1166. In *Alice*, the Supreme Court set forth a two-step analytical framework to determine whether a patent is ineligible under § 101. 573 U.S. at 217.

> A claim falls outside § 101 where (1) it is "directed to" a patent-ineligible concept, *i.e.*, a law of nature, natural phenomenon, or abstract idea, and (2), if so, the particular elements of the claim, considered "both individually and 'as an ordered combination,'" do not add enough to "'transform the nature of the claim' into a patent-eligible application."

SAP Am., Inc., 898 F.3d at 1166-67 (quoting *Alice*, 573 U.S. at 217). The first step of the *Alice* analysis considers the character of the claims as a whole, and the second step "(where reached) looks more precisely at what the claim elements add—specifically, whether, in the Supreme Court's terms, they identify an 'inventive concept' in the application of the ineligible matter to which (by assumption at stage two) the claim is directed." *Id*. at 1167.

For the purposes of the *Alice* analysis, the '115 patent's only independent claim, Claim 1, is representative of all other claims because Plaintiff does not argue for the "distinctive significance of any claim limitations not found in the representative claim." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018).

1. *Alice* Step 1

Whether a patent is directed to a patent-ineligible concept depends on whether the claims "focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir.

2016); *see also Yu v. Apple Inc.*, 1 F.4th 1040, 1043 (Fed. Cir. 2021) ("We have approached the Step 1 directed to inquiry by asking what the patent asserts to be the focus of the claimed advance over the prior art. In conducting that inquiry, we must focus on the language of the asserted claims themselves, considered in light of the specification." (cleaned up).) The Court must "articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful." *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1347 (Fed. Cir. 2017); *see also Alice*, 573 U.S. at 217 ("[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law."). To determine whether a patent impermissibly claims an abstract idea at *Alice* Step 1, both the Federal Circuit and "Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

The '115 patent's claimed advance over prior art is a collision detection system enabling comparatively small unmanned aerial vehicles equipped with the system to be flown with "the equivalent level of safety comparable to the see-and-avoid requirements for manned aircraft," which allows those vehicles to operate beyond predetermined flight corridors and restricted access zones. '115 patent, col. 1 ll. 34 – col. 2 ll. 12. Prior art collision detection systems, "including optical and radar," had not "been readily successful on smaller [unmanned aerial vehicles], such as Class I or Class II [unmanned aerial vehicles], because of the power requirements, weight, and costs of the systems." '115 patent, col. 2 ll. 7-12. But the claimed invention

> is not limited to operation within predetermined flight corridors and restricted access zones because it can accurately detect a target within a spherical instantaneous coverage volume. Targets approaching from any angle can be easily detected, in contrast with narrow field-of-view sensors, such as optically-based collision detection systems, which must limit their operation to frontal sectors.

'115 patent, col. 2 ll. 51-57. Because the system is "economical and compact," "weigh[ing] approximately two hundred and fifty grams and consum[ing] approximately seven watts of six volt DC power," it "can be incorporated into a Class I, II or III [unmanned aerial vehicle], in addition to manned aircraft." '115 patent, col. 2 ll. 39-50.

Assuming the truth of the specification's assertions, the invention embodied in the '115

patent overcame the geographic limitations placed on the operation of small unmanned aerial vehicles by providing a collision detection system suitable for such vehicles capable of ensuring a level-of-safety comparable to that of manned aircraft. *See Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1261 (Fed. Cir. 2017) (holding on a 12(b)(6) *Alice* motion "all factual inferences drawn from the specification must be in favor" of the non-moving party). Specifically, the '115 patent discloses an apparatus through which aircraft can accurately detect targets "within a spherical instantaneous coverage volume . . . from any angle . . . at any time of day or night and in all weather conditions, including clouds or fog." '115 patent, col. 2 ll. 51-60. As recited in Claim 1, the '115 patent's contribution is a system "for avoiding a potential collision between an aircraft and approaching target" comprised of "an array of acoustic probes" and "a digital signal processor configured to receive acoustic data from the array of acoustic probes, wherein" the processor (1) filters out noise and its own acoustic signals; (2) extracts the acoustic signals emanating from the approaching target; (3) calculates the intensity, the bearing, and the bearing angle rate of change of the approaching target; and (4) determines whether the aircraft and the approaching target are on a potential collision course. '115 patent, col. 5 ll. 47 – col. 6 ll. 10.

"When read as a whole, and in light of the written description," representative Claim 1 is directed to the use of acoustic signals to detect potential mid-air collisions between aircrafts and approaching targets. *CardioNet, LLC v. InfoBionic, Inc*, 955 F.3d 1358, 1368 (Fed. Cir. 2020). Whereas prior art optical and radar collision detection systems collect and analyze light and electromagnetic waves respectively, the '115 patent's claimed system collects and analyzes acoustic information to achieve the same goal. The core of the '115 patent's advance over prior art, as recited in Claim 1, is the use of sound information in airspace collision detection.

The collection, filtration, and extraction of sound information to detect potential collisions in airspace through calculations performed on that extracted information is an abstract concept. Collecting, filtering, and analyzing information is abstract. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) ("[M]erely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis."); *see also Bascom*

Glob. Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1348 (Fed. Cir. 2016) ("[F]iltering content is an abstract idea because it is a longstanding, well-known method of organizing human behavior, similar to concepts previously found to be abstract."); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("The concept of data collection, recognition, and storage is undisputedly well-known. Indeed, humans have always performed these functions."). Performing mathematical calculations on an existing dataset to generate additional information is also abstract. *See Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) ("Without additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible."). So, the '115 patent is directed to a patent-ineligible concept.

Relying on *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), Plaintiff insists Claim 1 focuses "on a specific means of receiving and processing acoustic signals to determine whether the host aircraft and the approaching target are on a potential collision course." (Dkt. No. 98 at 11.) *McRO* involved a patent "focused on a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type." 837 F.3d at 1314. The patent's "claimed process uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters." *Id*. at 1315. The Federal Circuit ruled the patent was not directed to ineligible subject matter because the patent's incorporation of the claimed rules "improved the existing technological process by allowing the automation of further tasks." *Id*. at 1314 (cleaned up). But unlike in *McRO*, the '115 patent is not directed to an improvement in an existing technological process. Nor is the '115 patent directed to a "specific improvement to the way computers operate." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016). Rather, the '115 patent's acoustic probes and digital signal processor "are invoked merely as [] tool[s]." *Id*. The '115 patent is directed to a different way of detecting potential airspace collisions (using acoustic instead of light or electromagnetic information), not an improvement to existing airspace collision detection technology.

Next, Plaintiff analogizes the '115 patent to patents found to be patent-eligible in *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017) and *Google LLC v. EcoFactor, Inc.*, 602 F. Supp. 3d 1265 (N.D. Cal. 2022). In *Thales Visionix Inc.*, the Federal Circuit found a patent that specified "a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform" to be directed to patent-eligible subject matter. 850 F.3d at 1349. The patent's claims survived *Alice* Step 1 because they sought "to protect only the application of physics to the unconventional configuration of sensors as disclosed." *Id*. The configuration of the disclosed inertial sensors "d[id] not use the conventional approach of measuring inertial changes with respect to the earth" and instead "directly measure[d] the gravitational field in the platform frame." *Id*. at 1345. So, the district court had erred in finding the claims were "directed to the abstract idea of using 'mathematical equations for determining the relative position of a moving object to a moving reference frame.'" *Id*. at 1348. "Rather, the claims are directed to systems and methods that use inertial sensors in a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame." *Id*. at 1348-49. But here, unlike in *Thales Visionix Inc.*, nothing in the '115 patent indicates the acoustic probes are used or arranged in a nonconventional manner or receive sound data unconventionally. *See Automated Tracking Sols., LLC v. Coca-Cola Co.*, 723 F. App'x 989, 994 (Fed. Cir. 2018) (rejecting analogy to *Thales Visionix Inc.* because "[t]he representative claims simply do not require a particular configuration or arrangement of RFID system components.").

In *Google LLC v. EcoFactor, Inc.*, the district court considered a patent claiming "a device that receives and stores inside temperature measurements, calculates a predicted rate of change based on the stored temperature, status of the HVAC system, and outside temperature, then determines whether to direct the HVAC to pre-cool the structure before the HVAC reduces electricity." 602 F. Supp. 3d 1265, 1271 (N.D. Cal. 2022) (cleaned up). The court found the patent was not directed to an abstract result that merely invoked generic processes or machinery, but "the non-abstract improvement of using thermal mass calculations and predicted rate of change in the technological process of directing programmable HVAC thermostats." *Id*. "By

requiring the determination of whether to direct the HVAC control system to pre-cool the structure based on thermal mass calculation, [the representative claim] recites a specific implementation of pre-cooling that improves the operation of the technological HVAC system process." *Id.* But here, unlike in *Google LLC v. EcoFactor, Inc.*, the '115 patent is not directed to a "specific implementation of improved devices and systems."

For the same reason, Plaintiff's references to *SEMICAPS Pte Ltd. v. Hamamatsu Corp.*, 393 F. Supp. 3d 802, 815 (N.D. Cal. 2019) and *CardioNet, LLC v. InfoBionic, Inc*, 955 F.3d 1358 (Fed. Cir. 2020) are unpersuasive. The nonconventional advance the '115 patent claims over the prior art is abstract: the use of sound information—instead of visual or electromagnetic information—to detect potential collisions.

2. *Alice* Step 2

At *Alice* Step 2, the elements of claims directed to a patent-ineligible concept are considered "both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1289 (Fed. Cir. 2018) (cleaned up). "The 'inventive concept' may arise in one or more of the individual claim limitations or in the ordered combination of the limitations." *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016). The "transformative elements must supply an inventive concept that ensures the patent amounts to significantly more than a patent upon the [ineligible concept] itself." *BSG Tech LLC*, 899 F.3d at 1289-90 (cleaned up). Claim limitations reciting "conventional, routine and well understood applications in the art are insufficient to supply an inventive concept." *Id.* at 1290.

The inventive concept described and claimed in the '115 patent is a specific implementation of acoustic collision detection in airspace. Claim 1 does not merely recite the abstract idea of collision detection through use of acoustic data, it discloses "a specific, discrete implementation of the abstract idea" through an ordered combination of elements performed by computer components. *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). Claim 1 does not preempt all manner of acoustic collision detection, only that which is achieved through the claimed specific sequence of steps. *Id.*

Zipline insists the '115 patent fails to supply an inventive concept because "the recited steps invoke conventional components of an acoustic probe array and a standard [digital signal processor] to achieve the intended result with conventional means." (Dkt. No. 101 at 16.) "If a claim's only inventive concept is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea." *BSG Tech LLC*, 899 F.3d 1281, 1290-91. But Zipline fails to persuade the '115 patent's application of the abstract idea of acoustic airspace collision detection is conventional or employs well-understood techniques. Specifically, neither the pleadings nor the '115 patent itself indicate Claim 1's ordered elements "were in context obvious, already in use, or purely conventional." *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 81 (2012). Zipline does not argue Claim 1's acoustic means of detecting potential collisions was a "well-understood, routine, conventional activity previously engaged in by scientists who work in the field." *Mayo Collaborative Servs.*, 566 U.S. at 79. Indeed, Zipline's own founder and Chief Technology Officer explained, "there is one fundamental technical challenge that has never been solved before. . . . a solution to efficiently and reliably enable drones to detect and avoid other aircraft in the air." (Dkt. No. 98-4 at 3.)[2] He continued, "[w]e kept coming back to a crazy idea. . . . using microphones to listen for surrounding aircraft." (*Id*. at 9-10.)

Zipline argues the '115 patent lacks an inventive concept because it fails to specify how the result of collision detection is accomplished. But Claim 1 explains collision detection is accomplished by receiving acoustic data, filtering out noise from that acoustic data, extracting the acoustic signals emanating from the approaching target, and calculating the intensity, the bearing, and the bearing angle rate of change of the approaching target. '115 patent, col. 6 ll. 2-10. This is a "specific, discrete implementation of the abstract idea of" acoustic airspace collision detection. *Bascom Glob. Internet Servs., Inc.*, 827 F.3d at 1350. Even if Claim 1's structural components are generic, "an inventive concept can be found in the non-conventional and non-generic arrangement

[2] The Court takes judicial notice of Zipline's publicly available press releases. *See Glenbrook Capital Ltd. Partnership v. Kuo*, 525 F. Supp. 2d 1130, 1137 (N.D. Cal. 2007) (citing *In re Homestore.com, Inc. Securities Litigation*, 347 F. Supp. 2d 814, 817 (C.D. Cal. 2004)).

of known, conventional pieces." *Id*. Zipline fails to identify any support within the '115 patent or the pleadings to establish, as a matter of law, the ordered steps are not inventive in combination. Here, unlike in *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, nothing suggests Claim 1 "uses a conventional ordering of steps." 874 F.3d 1329, 1339 (Fed. Cir. 2017). So, as an ordered combination, Claim 1's "elements transform the nature of the claim into a patent-eligible application." *BSG Tech LLC*, 899 F.3d at 1289 (cleaned up). At this stage, the '115 patent survives *Alice* Step 2.

* * *

Because the '115 patent survives *Alice* Step 2, Zipline's motion for judgment on the pleadings is DENIED.

B. Motion to Dismiss and Strike

Zipline brings six counterclaims and an affirmative defense against Plaintiff seeking to render the '115 patent unenforceable due to inequitable conduct for failure to disclose six prior art references: (1) Cline I, (2) Cline II, (3) Muller, (4) Milkie, (5) Wes, and (6) Cline III. (Dkt. No. 90 at 28 ¶ 153, 113-19 ¶¶ 104-56.) Plaintiff moves to dismiss Zipline's counterclaims and strike Zipline's affirmative defense of unenforceability due to inequitable conduct. (Dkt. No. 95.)

Dismissal under Rule 12(b)(6) "may be based on either a lack of a cognizable legal theory or the absence of sufficient facts alleged under a cognizable legal theory." *Johnson*, 534 F.3d at 1121 (cleaned up). For Zipline's challenged claims to survive, the complaint's factual allegations must raise a plausible right to relief. *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 554-56 (2007). Though the Court must accept the complaint's factual allegations as true, conclusory assertions are insufficient to state a claim. *Iqbal*, 556 U.S. at 678. A claim is facially plausible when the counterclaimant pleads enough factual content to justify the reasonable inference the counterdefendant is liable for the misconduct alleged. *Id*. "Within this district, there is widespread agreement" the *Iqbal*/*Twombly* standard applies to affirmative defenses. *Finjan, Inc. v. Juniper Network, Inc.*, No. C 17-05659 WHA, 2018 WL 4181905, at *1 (N.D. Cal. Aug. 31, 2018).

Under Rule 12(f), "[t]he court may strike from a pleading an insufficient defense or any

redundant, immaterial, impertinent, or scandalous matter." Fed. R. Civ. P. 12(f). "The function of a 12(f) motion to strike is to avoid the expenditure of time and money that must arise from litigating spurious issues by dispensing with those issues prior to trial." *Whittlestone, Inc. v. Handi-Craft Co.*, 618 F.3d 970, 973 (9th Cir. 2010). For the purposes of Rule 12(f), an affirmative defense is insufficiently pled if it fails to give the plaintiff fair notice of the defense. *See Wyshak v. City Nat. Bank*, 607 F.2d 824, 827 (9th Cir. 1979) ("The key to determining the sufficiency of pleading an affirmative defense is whether it gives plaintiff fair notice of the defense.").

"Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability." 37 C.F.R. § 1.56. A breach of the duty of candor may lead to a finding of inequitable conduct rendering the entire patent unenforceable. *See Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1288 (Fed. Cir. 2011).

> The substantive elements of inequitable conduct are: (1) an individual associated with the filing and prosecution of a patent application made an affirmative misrepresentation of a material fact, failed to disclose material information, or submitted false material information; and (2) the individual did so with a specific intent to deceive the PTO.

Exergen Corp. v. Wal-Mart Stores, Inc., 575 F.3d 1312, 1327 n.3 (Fed. Cir. 2009).

Inequitable conduct must be pled with particularity under Rule 9(b). *Id*. at 1326. "A pleading that simply avers the substantive elements of inequitable conduct, without setting forth the particularized factual bases for the allegation, does not satisfy Rule 9(b)." *Id*. at 1326-27. So, Zipline's counterclaims must set forth the particularized factual bases for the allegations, and "must identify the specific who, what, when, where, and how of the material misrepresentation of omission committed before the [Patent and Trademark Office]." *Id.* at 1327-28.

> Moreover, although "knowledge" and "intent" may be averred generally, a pleading of inequitable conduct under Rule 9(b) must include sufficient allegations of underlying facts from which a court may reasonably infer that a specific individual (1) knew of the withheld material information or of the falsity of the material misrepresentation, and (2) withheld or misrepresented this information with a specific intent to deceive the [Patent and

Trademark Office].

Id. at 1328-29; *see also Delano Farms Co. v. California Table Grape Comm'n*, 655 F.3d 1337, 1350 (Fed. Cir. 2011) (same). "A reasonable inference is one that is plausible and that flows logically from the facts alleged, including any objective indications of candor and good faith." *Exergen Corp.*, 575 F.3d at 1329 n.5. "Intent and materiality are separate requirements." *Therasense, Inc.*, 649 F.3d at 1290. Intent may not be inferred "solely from materiality." *Id*.

Plaintiff attacks the sufficiency of Zipline's allegations as to materiality but argues "the central deficiency of Zipline's pleadings" is the lack of "specific facts supporting the alleged specific intent to deceive." (Dkt. No. 100 at 8.)

1. Specific Intent

Zipline alleges named inventors Duane M. Cline and Thomas T. Milkie and Plaintiff's Chief Executive Officer Parviz Parhami intentionally withheld material prior art references from the Patent and Trademark Office during the prosecution of the '115 patent. (Dkt. No. 90 at 36-37 ¶¶ 31-32, 40-41 ¶ 46, 111-13 ¶¶ 92-103.) Zipline alleges specific intent on the grounds (1) the named inventors and Dr. Parhami knew the references "had been presented, published, and distributed before the filing date" of the '115 patent's application, (*Id*. at 111 ¶ 92), (2) the disclosure of the six references "would have undermined their goals of obtaining, publicizing, and asserting patent rights relating to the '115 patent," (*Id*. ¶¶ 93-95), (3) the six references "were material to the patentability of the '115 patent," (*Id*. at 112 ¶ 99), and (4) "the '115 patent would not have issued but for the fact [Plaintiff] failed to make the Examiner aware" of the six references." (*Id*. at 112-13 ¶ 100.) Zipline argues its allegations are sufficient to support the inference the named inventors and Dr. Parhami "had knowledge of the withheld references, as well as their materiality." (Dkt. No. 99 at 23-24.) Zipline also argues Plaintiff's alleged discovery conduct supports an inference of specific intent because Plaintiff "only produced Cline II with improper confidentiality designations and without dates, and only produced the other five references after Zipline's document requests had been pending for over a year." (Dkt. No. 99 at 26; *see* Dkt. No. 90 at 32-36 ¶¶ 15-28.)

To plead specific intent, Zipline must allege with particularity "the applicant[s] knew of

the reference[s], knew [they were] material, and made a deliberate decision to withhold [them]." *Therasense*, 649 F.3d at 1290. Plaintiff does not contest Zipline's allegations are sufficient to show the named inventors and Dr. Parhami knew of the references; instead, Plaintiff disputes the named inventors and Dr. Parhami knew of the references' materiality when the '115 patent was prosecuted and withheld them from the Patent and Trademark Office with deceptive intent. (Dkt. No. 95 at 14-15.) "A court can no longer infer intent to deceive from non-disclosure of a reference solely because that reference was known and material." *1st Media, LLC v. Elec. Arts, Inc.*, 694 F.3d 1367, 1372-73 (Fed. Cir. 2012). So, even assuming the references' materiality, Zipline's counterclaims still must allege facts supporting the named inventors' and Dr. Parhami's knowledge of the references' materiality and deliberate decision to withhold them. "A court may infer intent from indirect and circumstantial evidence because direct evidence of deceptive intent is rare." *TransWeb, LLC v. 3M Innovative Properties Co.*, 812 F.3d 1295, 1304 (Fed. Cir. 2016) (cleaned up).

Zipline's allegations are sufficient to support the reasonable inference Plaintiff knew of the references' materiality. The named inventors of the '115 patent, who were Plaintiff's employees when the application that became the '115 patent was filed, are listed as authors of five of the six alleged references. (Dkt. No. 90 at 30-31 ¶ 8, 36 ¶ 30, 37 ¶ 32, 42 ¶ 57, 54-55 ¶ 63, 70 ¶ 74, 79-80 ¶ 80, 98 ¶ 86.) Mr. Cline is listed as an author on the Cline I-III, Muller, and Milkie references; Mr. Milkie is listed as an author on the Cline I-II, Muller, and Milkie references. (*Id*.) One of the listed authors of the sixth reference, Jim Wes, is described in the reference as Plaintiff's employee. (*Id*. at 98 ¶ 86.) Dr. Parhami verified Cline II's relevance to the '115 patent's conception and reduction to practice, described himself as "the primary decision-maker at SARA as to what innovative technologies SARA will seek to patent," claimed to be involved in "all matters concerning the filing and prosecution of patent applications on behalf of SARA" since 2004, and stated he received communications from patent counsel regarding the prosecution of the '115 patent. (Dkt. Nos. 90 at 112 ¶ 98, 90-8 at 3-4.) Plaintiff's employees having authored all six references, invented the '115 patent, and been involved in the prosecution of the '115 patent raises the reasonable inference Plaintiff "knew of the specific material *information* contained in" the

alleged references. *Exergen Corp.*, 575 F.3d at 1329.

Zipline's allegations are also sufficient to support the reasonable inference Plaintiff withheld the alleged references from the Patent and Trademark Office with deceptive intent. In May 2023, in response to Zipline's interrogatory on the '115 patent's conception and reduction to practice, Plaintiff identified a set of slides it had produced with the "Highly Confidential – Attorneys' Eyes Only" designation permitted only for non-public documents. (Dkt. No. 90 at 33 ¶¶ 16-18.) However, after some investigation, Zipline determined Plaintiff had publicly presented, distributed, and published a presentation identical to the identified slide set at the August 2006 Association for Unmanned Vehicle Systems International North American Conference. (*Id*. at 34 ¶ 19.) That presentation is the alleged Cline II reference, the lead author of which "is the same Duane M. Cline who is the first named inventor[] of the '115 patent." (*Id*.) Zipline then found Plaintiff had publicly presented and published Cline I at the June 2005 Association for Unmanned Vehicle Systems International North American Conference. (*Id*. ¶ 20.) Zipline alleges Plaintiff improperly designated Cline II to mask the reference's public disclosure and status as prior art, and obscured Cline I's public presentation for the same reason. (*Id*. at 34-35 ¶¶ 18-19, 21; 113 ¶ 103.)

Courts must consider the totality of the circumstances in evaluating deceptive intent. *Luv n' Care, Ltd. v. Laurain*, 98 F.4th 1081, 1097 (Fed. Cir. 2024). Construing the allegations in Zipline's favor, Plaintiff's knowledge of the alleged references and improper designation of Cline II as "Highly Confidential – Attorneys' Eyes Only" are sufficient on this record to support the reasonable inference Plaintiff withheld material information during the '115 patent's prosecution with deceptive intent. Plaintiff's attempt to hide the public nature of Cline II, a reference Plaintiff admits is relevant to the '115 patent's conception and reduction to practice, raises doubt about Plaintiff's candor toward the Patent and Trademark Office and makes plausible the inference Plaintiff also intentionally hid Cline II and the other alleged references during prosecution of the '115 patent. So, Zipline has adequately pled specific deceptive intent.

2. Materiality

To adequately plead materiality, Zipline's allegations must "identify which claims, and

which limitations in those claims, the withheld references are relevant to, and where in those references the material information is found—i.e., the 'what' and 'where' of the material omissions." *Exergen Corp.*, 575 F.3d at 1329. Zipline's allegations must also "identify the particular claim limitations, or combination of claim limitations, that are supposedly absent from the information of record. . . . to explain both 'why' the withheld information is material and not cumulative, and 'how' an examiner would have used this information in assessing the patentability of the claims." *Id*. at 1329-30. Plaintiff argues Zipline fails to (1) explain how an examiner would have used the purportedly material documents to formulate obviousness rejections and (2) demonstrate how the documents would enable a person skilled in the art to anticipate the '115 patent.

For each of the six purported prior art references, Zipline provides charts linking the elements of representative Claim 1 to information disclosed in the references. (Dkt. No. 90 at 43 ¶ 60; 55 ¶¶ 66, 67; 71 ¶ 77; 80 ¶ 83; 99 ¶¶ 90, 91.) So, Zipline's allegations fulfill the "what" and "where" requirements of Rule 9(b) by identifying "which claims, and which limitations in those claims, the withheld references are relevant to, and where in those references the material information is found." *Exergen Corp.*, 575 F.3d at 1329; *see, e.g.*, *Avocent Huntsville, LLC v. ZPE Sys., Inc.*, No. 3:17-CV-04319-WHO, 2018 WL 4859527, at *9 (N.D. Cal. July 23, 2018) (finding "claim charts detailing an element by element comparison against a prior art reference" sufficient to allege materiality); *iLife Techs. Inc v. AliphCom*, No. 14-CV-03345-WHO, 2015 WL 890347, at *5 (N.D. Cal. Feb. 19, 2015) (finding claim charts "provid[ing] a detailed comparison of the relevant prior art limitations . . . and the corresponding claims in the Asserted Patents" to sufficiently allege "the 'what' and 'where' of an inequitable conduct claim under *Exergen*.").

Zipline alleges the examiner who considered the '115 patent allowed the claims because

> the prior art d[id] not disclose a digital signal processor configured to receive acoustic data from the array of acoustic probes, wherein said digital signal processor filters out noise and its own acoustic signals; extracts the acoustic signals emanating from the approaching target; calculates the intensity, the bearing, and the bearing angle rate of change of the approaching target, and determines whether the aircraft and the approaching target are on a potential collision course as recited in claim 1.

(Dkt. Nos. 90 at 42-43 ¶ 58, 90-7 at 6.) Zipline's charts allege "how" the references disclose a digital signal processor configured to do exactly what the examiner concluded the prior art did not disclose. (Dkt. No. 90 at 42-54 ¶¶ 58-61 (Cline I), 55-69 ¶¶ 64-68 (Cline II), 70-79 ¶¶ 75-78 (Muller), 80-98 ¶¶ 81-84 (Milkie), 98-111 ¶¶ 88-91 (Wes and Cline III).) These allegations support the inference the references were material to patentability "by [themselves] or in combination with other information." 37 C.F.R. § 1.56(b)(1). So, Zipline's allegations fulfill the "how" requirement of Rule 9(b) by explaining how the examiner would have used the references "in assessing the patentability of the claims." *Exergen Corp.*, 575 F.3d at 1330.

Plaintiff argues Zipline's allegations fail to sufficiently detail how the examiner would have used the six purported prior art references to formulate any obviousness or anticipation rejections. (Dkt. No. 95 at 12.) But Zipline is not required to allege obviousness combinations or "how these references serve to enable anyone to make the invention of the [']115 patent without undue experimentation" at this stage. (*Id*. at 13); *see, e.g.*, *AbCellera Biologics Inc. v. Bruker Cellular Analysis*, No. 20-CV-08624-JST, 2024 WL 37213, at *8 (N.D. Cal. Jan. 2, 2024) (rejecting argument the "how" requirement mandates an inequitable conduct claimant plead how the examiner would have found motivation to combine the alleged references with other art of record with reasonable expectation of success because there was "no support for such a high standard at this stage in the proceedings."); *Hangzhou Chic Intelligent Tech. Co., Ltd. Razor USA LLC*, No. 216CV06359RGKAJWX, 2016 WL 10518582, at *4 (C.D. Cal. Dec. 19, 2016) (rejecting argument inequitable conduct claimant must allege enablement to adequately allege materiality).

In sum, Zipline has adequately pled materiality.

* * *

Because Zipline's allegations are sufficient to support an inference of Plaintiff's deceptive intent and the materiality of the alleged references, Plaintiff's motion to dismiss Zipline's counterclaims and strike Zipline's 21st affirmative defense is DENIED.

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CONCLUSION

For the reasons stated above, Defendant's motion for judgment on the pleadings is DENIED and Plaintiff's motion to dismiss and strike is DENIED.

This Order disposes of Docket Nos. 92 and 95.

IT IS SO ORDERED.

Dated: June 4, 2024

JACQUELINE SCOTT CORLEY
United States District Judge

United States District Court
Northern District of California