IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SMARTSKY NETWORKS, LLC, *Plaintiff,* **v.** **GOGO BUSINESS AVIATION, LLC and GOGO INC.,** *Defendants.*	**Case No. 1:22-cv-00266-JDW**

MEMORANDUM

In days gone by, before getting on a flight, you could tell people you were about to leave, and then you could disconnect. Without internet connectivity, a flight was a time to read a book, watch a movie, or just go full David Puddy and stare ahead, doing nothing.[1] There's plenty of blame to go around for disturbing that solitude, but at least some of it goes to the Parties in this case, who have worked for years to enable air-to-ground ("ATG") internet service. Now, they are fighting about who invented the technology. SmartSky Networks, LLC, claims that Gogo Business Aviation, LLC, and Gogo Inc. (together, "Gogo") infringe several patents pertaining to ATG service. They have filed six different summary judgment motions, five of which relate to validity and infringement. For the reasons below, I conclude that the asserted claims in one patent are indefinite. But a jury will have to resolve the rest of the validity and infringement issues.

[1] Seinfeld: The Butter Shave (NBC Television Broadcast Sept. 25, 1997).

I. BACKGROUND

A. The ’077 Patent

U.S. Patent No. 9,730,077 issued on August 8, 2017, based on an application filed on October 7, 2016, which, in turn, continued from an application filed on January 13, 2015. Claim 1 of the ’077 Patent recites an ATG network with ATG base stations defining radiation patterns by “focusing energy toward the horizon.” (D.I. 380-1 at Ex. 19, 22:10–16.) Base stations and aircraft antennas are “mutually optimized to communicate.” (*Id.* at 11:65–67.) The specification describes aircraft radiation patterns that extend from the horizon to approximately 10 to 15 degrees below the horizon. (*Id.* at 12:5–8.) It also describes a steering assembly that is able to tilt an aircraft’s antenna assembly as the aircraft moves to “maintain the side panels oriented to communication with ATG base stations proximate to the horizon (e.g., within about 15 degrees below the horizon).” (*Id.* at 13:54–60.)

B. The ’717 And ’639 Patents

U.S. Patent Nos. 10,257,717 and 11,533,639 are part of the same family and share the same specification. They describe “Wedge Shaped Cells In A Wireless Communication System” directed to address problems with providing continuous wireless communication to aircraft at various distances and altitudes. (D.I. 380-1 at Exs. 1, 2.) The ’717 Patent issued on April 9, 2019, based on an application filed on January 23, 2018, which is a continuation

of several applications, the earliest of which was filed on April 8, 2015. The '639 Patent issued on December 20, 2022, based on an application filed on March 4, 2021.

The '717 Patent describes "a plurality of antennas [that] can each transmit signals having a radiation pattern … to form a wedge-shaped sector." (*Id.* at Ex. 1, 2:2–6.) These wedge-shaped sectors "then may be overlapped with each other to progressively build in the altitude for providing communications with continuous coverage at high altitudes." (*Id.*) Figures 2 and 3 of the '717 Patent show an example of the radiation patterns that extend between two elevation angles above and below the horizon.

Claim 1 of the '717 Patent recites a network of base stations that provides ATG communication. The network includes a first base station that employs unlicensed spectrum that defines a radiation pattern "oriented toward a horizon." (*Id.* at Ex. 1, 12:7–9.) The network employs a second base station that employs licensed spectrum and partially overlaps with the first base station. (*Id.* at Ex. 1, 12:10–12.) Judge Hall construed the term "a radio" to mean one or more radios for Claims 1 and 12 of the '717 Patent and Claims 1 and 11 of the '639 Patent. (D.I. 233 at 4.)

C. The Alcorn Patents

U.S. Patent Nos. 9,312,947; 11,223,417; and 11,558,108 (collectively, the "Alcorn Patents") are a family of patents that each lists Donald Alcorn as the inventor. SmartSky owns the Alcorn Patents, which share the same specification and which describe a network of base stations for providing high speed data communications to aircraft. The '947

Patent, entitled "Terrestrial Base High Speed Data Communications Mesh Network," describes a network of base stations that provide aircraft passengers with "high speed data communications link" between the passenger and the ground that allows for a "direct link that is continuous and uninterrupted in time." (D.I. 380-1 at Ex. 22, 1:44–47.)

Claims 1–3 describe a "network base station within a network including at least one in-flight communication node." (*Id.* 10:2–26.) The network base station includes "a radio configured via software defined radio to utilize beamforming to generate a plurality of steerable beams." (*Id.* 10:5–6.) This configuration enables reuse of the same frequency range to communicate with "respective different in-flight communication nodes via respective different communication links." (*Id.* 10:8–9.) The communication links allow "continuous and uninterrupted" connection "while one of the in-flight nodes transitions between a first steerable beam associated with a first coverage area … and second steerable beam associated with a second coverage area." (*Id.* 10:10–19.) Claims 11, 12, 17, and 18 of the '417 Patent and Claims 1, 6, 7, and 8 of the '108 Patent recite similar features as Claims 1–3 of the '947 Patent.

D. Gogo's 5G Network

Gogo has marketed, but not activated, a 5G wireless ATG network that includes 150 base stations capable of communicating with in-flight aircraft. It also makes radios and the associated hardware and software—Line Replaceable Units ("LRUs")—named the "Avance LX5" and "X3" that communicate with the base stations. The LRUs contain two

radios that operate on a 2.4 GHz unlicensed spectrum and 850 MHz licensed spectrum. Those radios conduct a hand-over between base stations to maintain coverage. Gogo's system architecture allows up to 30 in-flight communication nodes to connect to a single base station beam simultaneously, with each node maintaining a separate communication link.

Gogo advertises its LRUs and 5G connectivity system through marketing materials and public communications, including a press release that it issued in October 2021 announcing the first sale of its 5G solution. Gogo's website and other promotional channels solicit customer interest and provide technical and commercial information about its 5G products. Gogo has entered commercial arrangements with aviation service providers Jet Edge and NetJets to provide LRUs for their fleets. It has also provided MB-13 antennas that customers will need to communicate with Gogo's 5G network but which they can use at present to connect with Gogo's currently available EV-DO Network, which operates only in the 850 MHz spectrum.

E. Procedural History

SmartSky filed this suit on February 28, 2022. It amended its Complaint on February 21, 2023. Gogo asserts counterclaims, including invalidity and non-infringement. Judge Jennifer L. Hall issued a claim construction decision on March 25, 2024. Judge Hall noted

there was an open question whether the terms "focusing energy toward the horizon" and "oriented toward a horizon" were indefinite but did not construe those terms.

Both Parties moved for summary judgment. Gogo seeks judgment that the asserted claims of the '717 Patent and '077 Patents are invalid because they contain indefinite terms. Gogo also seeks judgment that the '947, '417, and '108 Patents are invalid in view of prior art that discloses nearly all elements of the Asserted Claims and because they are obvious. SmartSky seeks summary judgment that Gogo infringed the '947, '417, and '108 Patents with its 5G Network and LRU sales. It also seeks summary judgment of no inequitable conduct.[2] The Motions are ripe for disposition.

II. LEGAL STANDARD

Federal Rule of Civil Procedure 56(a) permits a party to seek, and a court to enter, summary judgment "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." FED. R. CIV. P. 56(a). In ruling on a summary judgment motion, a court must "view the facts and draw reasonable inferences in the light most favorable to the party opposing the [summary judgment] motion." *Scott v. Harris*, 550 U.S. 372, 378 (2007) (citation modified). However, "the non-moving party may not merely deny the allegations in the moving party's pleadings; instead, he must show where in the record there exists a genuine dispute over

[2] Gogo filed an additional summary judgment motion directed at SmartSky's claim for lost profits, and the Parties have filed three *Daubert* motions between them. I will deal with those motions separately.

a material fact." *Doe v. Abington Friends Sch.*, 480 F.3d 252, 256 (3d Cir. 2007) (citation modified); *see also* FED. R. CIV. P. 56(c)(1)(A)–(B). If it fails to make this showing, then the court may "consider the fact undisputed for purposes of the motion" and/or "grant summary judgment if the motion and supporting materials—including the facts considered undisputed—show that the movant is entitled to it." FED. R. CIV. P. 56(e)(2)–(3) (citation modified).

III. DISCUSSION

A. Invalidity

Courts presume that patents are valid. To invalidate a patent at summary judgment, the moving party must show by clear and convincing evidence that the asserted claims are either indefinite, anticipated, or obvious to a person of ordinary skill in the art. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014).

1. Indefiniteness

A patent is invalid for indefiniteness "if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc.* 572 U.S. at 901. "Definiteness is measured from the viewpoint of a person skilled in the art *at the time the patent was filed*." *Id.* at 908 (emphasis in original) (citation modified). Patent law allows terms of degree or descriptive language where the specification provides context. A descriptive term is definite if it conveys enough certainty to a POSITA when read in light

of the invention. *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1347 (Fed. Cir. 2022). Although a patentee does not have to use exact measurements, he must describe his invention "in a way that distinctly identifies the boundaries of their claims." *Halliburton Energy Servs., Inc. v. M-1 LLC*, 514 F.3d 1244, 1253 (Fed. Cir. 2008).

a. '077 Patent

SmartSky has evidence that could give a POSITA a basis to understand the term "focusing energy toward the horizon" in Claim 1 of the '077 Patent. SmartSky's expert, Dr. Steven Goldberg, examines the specification, including at various references to a low range of 10-15 degrees above the horizon, and concludes that a POSITA would understand that the complementary base station radiation patterns would extend approximately 10 to 15 degrees above the horizon. (D.I. 380-1, Ex. 16 ¶ 296.) His opinion, which Gogo has not moved to exclude and which rests on specific references in the specification, creates a factual dispute about the meaning of this term.

Gogo counters that the descriptions in the specification are vague and asserts that Dr. Goldberg's opinion is conclusory. At the summary judgment stage, SmartSky only needs to demonstrate the existence of a genuine factual dispute, which it does. *See Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1379–80 (Fed. Cir. 2017). Absent a basis for me to exclude Dr. Goldberg's opinion, there is a factual dispute about the validity of this term. Gogo can cross-examine Dr. Goldberg about the patent's figures and his

interpretation of the radiation pattern, and the jury will resolve the dispute. *See EcoFactor, Inc. v. Google LLC*, 137 F.4th 1333, 1339–40 (Fed. Cir. 2025).

b. '717 Patent

Claim 1 of the '717 Patent requires a radiation pattern that is "oriented toward a horizon."[3] (D.I. 380-1 at Ex. 1, 12:1–24, 12:56–13:8.) But the patent offers no way for a POSITA to know what that means. The specification does not use the phrase "oriented toward a horizon." When it uses the word "oriented," it just describes a radiation pattern that is "oriented in a first direction" or a similar formulation. (*E.g.*, *id.* at 2:44, 2:50, 4:47, 6:7, 7:53.) None of these descriptions permits a POSITA to know the boundary for when a particular orientation is "toward" a horizon. Therefore, Claim 1 of the '717 Patent is invalid.

SmartSky points me to evidence related to the '077 Patent to inform the meaning of the '717 Patent, but the application that led to the '077 Patent was filed two years after the application that led to the '717 Patent. That is, it didn't exist when the application for the '717 Patent was filed. Therefore, by definition, it could not have informed a POSITA about the meaning of the '717 Patent at the time of the '717 Patent's filing. It doesn't matter that the '717 Patent and the '077 Patent have similar figures or a common inventor, as Gogo points out, because those two facts shed no light on how a POSITA would have

[3] SmartSky asserts Claims 1 and 2 of the '717 Patent. Claim 2 depends from Claim 1, so on this issue it rises and falls with the analysis of Claim 1.

understood the '717 Patent; at most, they shed light on how the inventor might have understood it subjectively. That's not enough.

SmartSky also points to Dr. Goldberg's report, which explains that Figure 2 shows radiation patterns that extend toward the horizon at an angle of approximately 15 degrees above the horizon and shows where the wedge tops out. But that's not an objective boundary. He estimated the angle based on visual approximation rather than any measurement grounded in the specification. (D.I. 380-1 at Ex. 5, 158:1–19.) Federal Circuit precedent bars reliance on "patent drawings that do not define the ***precise*** proportions of the elements … if the specification is completely silent on the issue[.]" *Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000) (citation modified) (emphasis added). Because SmartSky presents no other evidence identifying an objective boundary for "oriented toward a horizon," Gogo meets the clear and convincing standard for indefiniteness for Claim 1 of the '717 Patent.

2. Anticipation and obviousness

To prove obviousness under 35 U.S.C. § 103(a), a defendant must show by clear and convincing evidence that the claimed invention would have been obvious to a POSITA at the time of invention. *Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1320 (Fed. Cir. 2011). To prove anticipation under 35 U.S.C. § 102, a defendant must show that a prior art reference discloses—either explicitly or inherently—each element of the asserted claims. *See e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*,

851 F.3d 1270, 1273 (Fed. Cir. 2017). To inherently disclose a claim element, the element must be "necessarily present, not merely probably or possibly present, in the prior art." *Guangdong Alison Hi-Tech Co. v. Int'l Trade Comm'n,* 936 F.3d 1353, 1364 (Fed. Cir. 2019) (citation modified). A prior art reference does not anticipate a claim element merely because it does not exclude it. *Enplas Display Device Corp. v. Seoul Semiconductor Co., Ltd.*, 909 F.3d 398, 405 (Fed. Cir. 2018).

The Alcorn Patents contain a limitation requiring communication with an in-flight node. WiMAX[4] discloses mobile stations capable of seamless hand-offs between base stations for vehicles traveling faster than 120 km/h. A common, plain-English meaning of "vehicle" would encompass an airplane. However, Dr. Goldberg explains that aspects of WiMAX could lead a POSITA to understand that WiMAX only addresses terrestrial vehicles, not aircraft, because it does not disclose the unique aspects of ATG communication. Although Gogo seeks to minimize that opinion, its arguments go to the weight of Dr. Goldberg's opinion, and I can't weigh it at this stage of the proceedings. Instead, the jury will have to resolve questions about whether the WiMAX reference anticipates the Alcorn Patents or renders them obvious.

[4] WiMAX is a mobile, wireless communications technical overview, based on the IEEE 802.16e standard, designed to deliver high-speed broadband internet access over extended distances. (D.I. 376 ¶ 11.) The Parties agree that it is a prior art reference.

B. Infringement

Infringement occurs when a person "without authority makes, uses, offers to sell, or sells any patented invention, within the United States[.]" 35 U.S.C. § 271(a). Determining infringement requires two steps: "first, a court construes the scope and meaning of the asserted patent claims, and then compares the construed claims to the accused product or process." *Medgraph, Inc. v. Medtronic, Inc.*, 843 F.3d 942, 949 (Fed. Cir. 2016) (citation omitted). Infringement is a question of fact unless there is no genuine factual dispute. *See Devex Corp. v. Gen. Motors Corp.*, 667 F.2d 347, 357 (3d Cir. 1981).

An accused product may infringe literally or via the doctrine of equivalents. For literal infringement, the accused product must "contain[] every limitation in the asserted claims;" "[i]f even one limitation is missing or not met as claimed, there is no literal infringement." *Mas-Hamilton Grp. v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998) (citations omitted). Alternatively, a device infringes by equivalents "if, and only if, the differences between the claimed and accused products or processes are insubstantial." *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1517 (Fed. Cir. 1995), *rev'd on other grounds*, *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997). For instance, the change in the accused device might be "so facially unimportant and insubstantial that little additional guidance is needed for a fact finder to determine whether an accused device includes an equivalent of a claim limitation." *Toro Co. v. White Consol. Indus., Inc.*, 266 F.3d 1367, 1370 (Fed. Cir. 2001) (quotation omitted). Another test

for equivalency is whether "each element of the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result." *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1317 (Fed. Cir. 2003). Regardless of the method, "proof of the substantiality of the differences rests on objective evidence rather than unexplained subjective conclusions, whether offered by an expert witness or otherwise." *Hilton Davis Chem. Co.*, 62 F.3d at 1519 (citation modified).

1. Claim construction disputes

The Parties present three threshold claim construction disputes that bear on whether Gogo's accused products infringe on the Alcorn Patents. I must address those claim construction disputes to resolve Gogo's non-infringement motion. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008). Because I will decline to adopt any of Gogo's proposed constructions, none of these disputes is a basis for me to grant Gogo summary judgment of noninfringement.

When construing patent claims, judges may depart from a word's ordinary and customary meaning only when a patentee (i) sets out a definition and acts as his own lexicographer, or (ii) disavows the full scope of a claim term either in the specification or during prosecution. *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Otherwise, words "are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the

specification and prosecution history." *Id.* (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed Cir. 2005) (*en banc*)).

"In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. "In such circumstances, general purpose dictionaries may be helpful." *Id.* If, however, "determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art," the judge should look to "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.* (quotation omitted). Finally, the judge must interpret the claim "with an eye toward giving effect to all terms in the claim." *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010) (citation omitted). Readings that render claim language superfluous or meaningless are disfavored. *See id.* (collecting cases).

a. "In-flight communication node"

Whether infringement requires actual performance of the recited functions by the accused device depends on the claim language. *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1204–05 (Fed. Cir. 2010). For example, an apparatus claim might only require capability, but a system claim might require implementation. *See, e.g., IOENGINE,*

LLC v. PayPal Holdings, Inc., 607 F. Supp. 3d 464, 494–95 (D. Del. 2022). Courts must interpret the claim language to determine whether the patent demands that the accused product perform the function or whether the claim merely describes capability.

The Alcorn Patents require in-flight communication nodes. Claim 1 of the '947 Patent, for example, states "a network base station within a network including at least one in-flight communication node, the network base station comprising: a radio configured … to communicate with respective different in-flight communication nodes." (D.I. 380-1 at Ex. 22, 10:2–9.) The claim language treats the node as the object of the base station's affirmative function, creating and maintaining "continuous and uninterrupted" links. (*Id.* at 10:10–19.) This language does more than treat the node as part of the environment; it treats the node as an essential part of the system.

The language and grammatical structure mirror the one Judge Bryson found to indicate an additional limitation in *IOENGINE*. In that case, he drew a distinction between claims employing "configured to" language that claims employing "implementing" language. Judge Bryson reasoned that "configured to" language in one patent indicated that a terminal was part of the environment, but "implementing" language a second patent meant that the claim required terminals. 607 F. Supp. 3d at 494–95. Like the second claim, Claim 1 of the '947 Patent includes implementing language. The claim ties the base-station system to the existence of another concrete device (the in-flight node) and assigns the base station an affirmative obligation—maintaining links—that requires the node. This

is more than environmental description; it is structural coupling. Therefore, to prove infringement, the accused product must include both the base station and at least one in-flight communication node.

b. "Respective different communication links"

Claim 1 of the '947 Patent describes "a radio configured via software defined radio to utilize beamforming to generate a plurality of steerable beams, to enable multiple reuses of a same frequency to communicate with respective different in-flight communication nodes via respective different communication links." (D.I. 380-1 at Ex. 22, 10:8–9.) There is a difference between the "respective different communication links" and the "beams" that this language references. In ruling on claim construction, Judge Hall construed the term "data communications links" to mean "connections for transferring data." (D.I. 233 at 2–3.) She construed the term "beams" as radio waves. (*Id.*) This means "link" is an information or data connection between a base station and the aircraft different from a beam. That construction is consistent with the plain language of Claim 1, which distinguishes between beams (the radio energy that enables frequency reuse) and links (the data connections). While the radio waves that form a beam might provide the mechanism for transmitting the information, they are not themselves the information connection. Because the claim language distinguishes between beams and links, that construction makes the most sense. *See Phillips*, 415 F.3d at 1315. To the extent that Gogo

argues that the communication link and the beams are equivalent, its argument ignores this distinction.

c. "Generate one or more steerable beams"

The Parties agreed that the term "generate one or more steerable beams" means "form and/or steer radio waves in a particular direction." (D.I. 233 at 2.) That construction resolves the dispute. The "and/or" language in the claim construction indicates that the claim applies to any product that either forms beams in a particular direction or forms them and then steers them in a particular direction after formation. That was Judge Hall's interpretation, and I don't see any reason to change that.

Gogo argues that the term "steerable" requires the ability to steer, even if not used in practice. That position conflicts with the agreed-upon construction, though. Gogo agreed to a construction that permits just the formation of beams, and it has to live with that construction. Even if Gogo's 5G Network cannot steer beams, the record shows it can form them in a specific direction. That functionality falls within the agreed-upon construction. Because no ambiguity exists, and claim construction remains settled, I won't revisit the issue.

2. Infringement of the accused products

a. Sold or offered for sale

With these constructions settled, SmartSky has a case to make that Gogo's accused products meet every claim limit in the asserted claims of the Alcorn Patents. But I don't

have to decide that now because there's an open question whether Gogo sold or offered for sale infringing products. *See Tesco Corp. v. Weatherford Int'l Inc.*, 904 F. Supp. 2d 622, 630 (S.D. Tex. 2012). Neither party disputes that Gogo has built over 150 5G base stations. What the Parties disagree over is whether Gogo has sold or offered to sell the LRUs. The record contains conflicting evidence. Among other things, it is not clear whether Gogo's online marketing statements constitute offers for sale or mere invitations to negotiate. A jury will have to resolve that question to determine infringement.

b. '639 Patent

There's also a factual dispute on whether Gogo's Avance LRUs infringe the '639 Patent.[5] Dr. Goldberg explains that Gogo's two-radio configuration achieves substantially the same function as the single-radio limitation described in SmartSky's patents. According to him, they function as a single, cohesive system within one housing, with the 2.4 GHz radio controls switching communications across both licensed and unlicensed spectrums, which mimics the results of SmartSky's single radio design. Both solutions ensure continuous and seamless wireless aircraft communication. (D.I. 380-1 at Exhibit 3, ¶¶ 192–196.) Based on this, Dr. Goldberg concludes Gogo's two-radio configuration performs substantially the same function, in substantially the same way, to achieve

[5] The Parties also argue about infringement of the '717 Patent, but because I've determined that it is invalid, I have not addressed infringement theories about it.

substantially the same result. That's enough to make out a claim of infringement of the '639 Patent under the doctrine of equivalents.

Gogo hasn't moved to exclude Dr. Goldberg's testimony but challenges its admissibility because it is conclusory and unsupported by evidence. I disagree. Dr. Goldberg examines the technical function of Gogo's radios and explains how they work together to achieve the claimed result. Gogo also argues that a finding of equivalence would rewrite the claim by eliminating the single radio limitation. But the vitiation argument raised is not a separate threshold test; it is a legal conclusion that two products are not equivalent. *Cadence Pharms. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1371 (Fed. Cir. 2015). And that is the factual dispute that a jury has to resolve.

C. Inequitable Conduct—'639 and '077 Patents

The inequitable conduct defense bars enforcement of a patent if, during the prosecution of that patent, the patentee misrepresented or omitted material information with the specific intent to deceive the Patent and Trademark Office. *In re Rembrandt Techs. LP Patent Litig.*, 899 F.3d 1254, 1272 (Fed. Cir. 2018). Intent and materiality are separate elements that a defendant must prove by clear and convincing evidence. *Id.* "Intent to deceive must be the single most reasonable inference able to be drawn from the evidence." *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1290 (Fed. Cir. 2011) (citation modified). Materiality means but-for materiality and "prior art is but-for

material if the PTO would have denied a claim had it known of the undisclosed prior art." *Id*.

Gogo has provided sufficient evidence that SmartSky's inventors knew that Qualcomm's FCC Petition disclosed material prior art describing the patented "wedge" architecture but failed to disclose it to the PTO. This evidence supports a reasonable inference of specific intent to deceive the PTO, creating a factual issue requiring a jury's determination.

SmartSky emphasizes that its witnesses do not recall Qualcomm's FCC Petition and notes it did disclose two other Qualcomm patents to the PTO. But that creates a factual dispute when I consider Gogo's evidence. Even if the evidence presented doesn't mandate a finding of specific intent, it's still *a* reasonable inference and, at this stage, that's enough.[6] *Cf. Therasense*, 649 F.3d at 1290.

IV. CONCLUSION

Claim 1 of the '717 Patent is indefinite, so I will enter summary judgment on SmartSky's claims about that patent. A jury will have to resolve the rest of the Parties' disputes about validity and infringement. An appropriate Order follows.

[6] The dispute over SmartSky's intent is enough to sustain Gogo's inequitable conduct defense, so I won't address SmartSky's additional arguments at this stage. SmartSky can object to evidence of that conduct *in limine* or at trial. Because there's a factual dispute without Dr. Shoemake's testimony, I will defer ruling on admissibility of his testimony.

BY THE COURT:

/s/ Joshua D. Wolson
JOSHUA D. WOLSON, J.

August 7, 2025