

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SMARTSKY NETWORKS, LLC,

Plaintiff,

v.

GOGO BUSINESS AVIATION, LLC and
GOGO INC.,

Defendants.

Civil Action No. 22-266-GBW

REDACTED PUBLIC VERSION
DATED OCTOBER 4, 2022

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MEMORANDUM OPINION

September 26, 2022
Wilmington, Delaware

GREGORY B. WILLIAMS
U.S. DISTRICT JUDGE

Pending before this Court is Defendants Gogo Business Aviation, LLC, and Gogo Inc.'s ("Gogo") Motion to Strike sections from Plaintiff SmartSky Networks, LLC's ("SmartSky") reply brief in support of SmartSky's Motion for a Preliminary Injunction and from the accompanying supplemental declaration of Dr. Steven Goldberg, SmartSky's technical expert (D.I. 97), and SmartSky's Motion for Preliminary Injunction (D.I. 6). For the reasons set forth below, the Court will deny Gogo's Motion to Strike and SmartSky's Motion for Preliminary Injunction.

I. BACKGROUND

On February 28, 2022, SmartSky brought this lawsuit against Gogo alleging infringement of United States Patent Nos. 9,312,947 (the "'947 patent"), 11,223,417 (the "'417 patent"), 10,257,717 (the "'717 patent"), and 9,730,077 (the "'077 patent"). D.I. 1. On the same day, SmartSky moved for a preliminary injunction seeking to enjoin Gogo from making, using, offering to sell, or selling its 5G Network. D.I. 6. The parties stipulated to a limited discovery schedule, permitting the parties to serve limited document requests and interrogatories and take the depositions of each parties' declarants. D.I. 40. The stipulation was entered by this Court on March 23, 2022. D.I. 41. Gogo filed its answering brief in opposition to SmartSky's Motion for Preliminary Injunction on May 5, 2022 (D.I. 76), and SmartSky filed its reply brief on June 3, 2022 (D.I. 93). On June 17, 2022, Gogo filed a Motion to Strike Sections II.A.1 and II.A.2 from SmartSky's reply brief and ¶¶ 20-45, 47-57, 65-66, and 70-119 from Dr. Goldberg's rebuttal declaration filed with SmartSky's reply brief. D.I. 97. SmartSky filed its answering brief in opposition to Gogo's Motion to Strike on July 1, 2022 (D.I. 106), and Gogo filed its reply brief on July 15, 2022 (D.I. 110).

II. LEGAL STANDARD

Delaware Local Rule 7.1.3(c)(2) provides, in relevant part, that “[t]he party filing the opening brief shall not reserve material for the reply brief which should have been included in a full and fair opening brief.” D. Del. LR 7.1.3(c)(2). “This provision exists, in part, to prevent litigants from engaging in impermissible ‘sandbagging,’ reserving crucial arguments for a reply brief to which an opponent cannot respond.” *Fifth Mkt., Inc. v. CME Grp., Inc.*, C.A. No. 08-520-GMS, 2013 WL 3063461, at *1 n.2 (D. Del. June 19, 2013) (citing *Rockwell Techs., LLC v. Spectra-Physics Lasers, Inc.*, C.A. No. 00-589-GMS, 2002 WL 531555, at *3 (D. Del. Mar. 26, 2002)). Arguments and evidence submitted in violation of this rule may be excluded. *See Bos. Sci. Scimed, Inc. v. Cordis Corp.*, 434 F. Supp. 2d 308, 314 (D. Del. June 15, 2006), *rev’d in part on other grounds*, 554 F.3d 982 (Fed. Cir. 2009). But, a party does not violate this provision when the new material in its reply brief responds to arguments raised in the answering brief. *Id.*; *see also Cornell Univ. v. Illumina, Inc.*, C.A. No. 10-433-LPS-MPT, 2018 WL 11427960, at *4 n.48 (D. Del. Feb. 23, 2018) (“[E]verything in plaintiffs’ reply memorandum is either in the original brief or in response to defendants’ arguments . . . Therefore, defendants’ motion is denied.”) (citing *In re Fleming Co., Inc.*, 316 B.R. 809, 815 n.3 (D. Del. 2004)).

Preliminary injunctive relief is an “extraordinary” remedy appropriate only in “limited circumstances.” *Kos Pharms., Inc. v. Andrx Corp.*, 369 F.3d 700, 708 (3d Cir. 2004) (citation omitted); *see also Intel Corp. v. ULSI Sys. Tech., Inc.*, 995 F.2d 1566, 1568 (Fed. Cir. 1993) (“[A] preliminary injunction is a drastic and extraordinary remedy that is not to be routinely granted.”) (citations omitted); *accord Cordis Corp. v. Medtronic, Inc.*, 780 F.2d 991, 996 (Fed. Cir. 1985) (“Only a viable threat of serious harm which cannot be undone authorizes exercise of a court’s equitable power to enjoin before the merits are fully determined.”) (internal quotation marks and

citations omitted). However, the Patent Act expressly provides that courts “may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.” 35 U.S.C. § 283.

A movant for a preliminary injunction pursuant to 35 U.S.C. § 283 must establish: “(1) a reasonable likelihood of success on the merits; (2) irreparable harm if an injunction is not granted; (3) a balance of hardships tipping in its favor; and (4) the injunction’s favorable impact on the public interest.” *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1350 (Fed. Cir. 2001) (citation omitted). No one of these factors is dispositive; “rather, the district court must weigh and measure each factor against the other factors and against the form and magnitude of the relief requested.” *Id.* (quoting *Hybritech, Inc. v. Abbott Labs.*, 849 F.2d 1446, 1451 (Fed. Cir. 1988)). However, “a movant cannot be granted a preliminary injunction unless it establishes *both* of the first two factors, *i.e.*, likelihood of success on the merits and irreparable harm.” *Id.* (emphasis in original) (citations omitted). Moreover, “[w]hile granting a preliminary injunction requires analysis of all four factors, [] a trial court may . . . deny a motion based on a patentee’s failure to show any one of the four factors—especially either of the first two—without analyzing the others[.]” *Jack Guttman, Inc. v. KopyKake Enters., Inc.*, 302 F.3d 1352, 1356 (Fed. Cir. 2002) (citations omitted); *see also Chrysler Motors Corp. v. Auto Body Panels of Ohio, Inc.*, 908 F.2d 951, 953 (Fed. Cir. 1990) (“If the injunction is denied, the absence of an adequate showing with regard to any one factor may be sufficient, given the weight or lack of it assigned the other factors, to justify the denial.”).

III. DISCUSSION

SmartSky's reply brief in support of its Motion for Preliminary Injunction and the accompanying rebuttal declaration by Dr. Goldberg are responsive to Gogo's arguments raised in its answering brief. Thus, the Court will deny Gogo's Motion to Strike portions of SmartSky's reply brief in support of SmartSky's Motion for Preliminary Injunction and from the accompanying rebuttal declaration of Dr. Goldberg. With respect to SmartSky's Motion for Preliminary Injunction, SmartSky failed to carry its burden of demonstrating a likelihood of success on the merits and that it will be irreparably harmed if an injunction is not granted. Thus, the Court will deny SmartSky's Motion for Preliminary Injunction.

A. Motion to Strike

Gogo contends SmartSky's reply brief in support of its preliminary injunction "abandons SmartSky's original interpretations of its claims, and advances new infringement theories under new, and much broader, interpretations of its claims, none of which were mentioned in SmartSky's motion." D.I. 98 at 1. Gogo asserts two arguments. First, Gogo alleges portions of SmartSky's reply brief and Dr. Goldberg's rebuttal declaration present a new interpretation of the "continuous and uninterrupted" limitation in the '947 patent and the '417 patent. *Id.* at 8-13. Second, Gogo alleges portions of SmartSky's and Dr. Goldberg's rebuttal declaration present an improper new theory of infringement for the '717 patent regarding the number of radios required by the claims and handovers between base stations. *Id.* at 13-16.

The infringement arguments contained in SmartSky's reply brief in support of its preliminary injunction and Dr. Goldberg's rebuttal declaration are consistent with SmartSky's opening brief and respond to arguments raised in Gogo's answering brief. In SmartSky's opening brief, it asserted that Gogo's 5G Network infringes claims 1 and 11 of the '947 patent because

[t]he different communication links provided by Gogo's 5G network are high speed links that are "maintained continuous and uninterrupted" while the aircraft transitions between steerable beams of different base stations having overlapping coverage areas. For example, Gogo's 5G system conducts "make before break" handoffs, which allow for uninterrupted connectivity to passengers.

D.I. 24 at 8.

In support of SmartSky's opening brief, Dr. Goldberg stated:

Gogo's "make before break" handoffs are one example of a communication link that is "maintained continuous and uninterrupted in time." Additionally, Gogo marketing literature states that the system provides "uninterrupted connectivity" to passengers.

D.I. 26 at ¶ 102.

Gogo responded in its answering brief that "Gogo's 5G Network will use a 'break-then-make' handover" and "[s]uch handovers are discontinuous and contain an interruption in time."

D.I. 76 at 6. Gogo concludes that, because its 5G Network uses a "break-then-make" handover, it does not infringe SmartSky's asserted patents. *Id.* In response, SmartSky states that, even if Gogo's 5G Network uses a "break-then-make" handover, "Gogo's technical documents confirm that 5G network handovers are conducted to maintain the continuity of the connection between the base stations and the aircraft." D.I. 93 at 1. SmartSky also filed a rebuttal report by Dr. Goldberg providing details about how a "break-then-make" handover meets the claim requirement "continuous and uninterrupted in time." *See* D.I. 94.

In support of its Motion to Strike, Gogo contends that SmartSky is asserting a new infringement theory and deviating from SmartSky's original argument that "continuous and uninterrupted in time" requires a "make before break" handoff. D.I. 98 at 8. SmartSky and Dr. Goldberg never argued that the "continuous and uninterrupted in time" claim limitation *requires* a "make before break" handoff. Dr. Goldberg stated that "make before break" handoffs "are *one*

example of a communication link that is ‘maintained continuous and uninterrupted in time,’” and SmartSky noted that Gogo’s 5G Network meets the claim elements of 1 and 11 of the ’917 patent, “*for example*,” by conducting make before break handoffs. *See* D.I. 24 at 8; D.I. 26 at ¶ 102 (emphases added). SmartSky’s reply brief and Dr. Goldberg’s rebuttal declaration are responsive to Gogo’s argument that Gogo’s 5G Network does not infringe SmartSky’s patents because Gogo’s 5G Network uses a “break then make” handover.

With respect to the ’717 patent, SmartSky argued in its opening brief in support of its preliminary injunction that Gogo’s 5G Network meets claims 1 and 12 of the ’717 patent because Gogo’s 5G Network has “a base station that employs unlicensed spectrum in the 2.4 GHz band, and another base station that employs licensed spectrum in the 850 MHz band.” D.I. 24 at 9. Dr. Goldberg submitted a declaration stating the same. *See* D.I. 26. In response, Gogo refutes SmartSky’s infringement argument by asserting that the claim language in the ’717 patent only requires the use of a single radio and contending the aircraft equipment used for Gogo’s 5G Network “will consist of two radios, one communicating on unlicensed spectrum and other communicating on licensed spectrum.” D.I. 76 at 8. Gogo also states that there are “no handovers in the Gogo 5G Network between a first base station employing unlicensed spectrum and a second base station employing licensed spectrum, or vice versa[.]” D.I. 76 at 8. Again, SmartSky’s reply brief merely responds to Gogo’s non-infringement arguments. Specifically, in SmartSky’s reply brief, it refutes Gogo’s argument that the claims in the ’717 patent require a single radio and Gogo’s handover argument. D.I. 93 at 3-4.

Thus, because SmartSky and Dr. Goldberg’s rebuttal declaration is responsive to Gogo’s arguments made in its answering brief, SmartSky’s reply brief does not violate Local Rule 7.1.3(c)(2). Accordingly, Gogo’s Motion to Strike is denied.

B. Preliminary Injunction

i. Likelihood of Success on the Merits

When seeking a preliminary injunction in an infringement suit, the patentee “must show that it will likely prove infringement, and that it will likely withstand challenges, if any, to the validity of the patent.” *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009). With respect to infringement, the court adheres to the same two-step analysis used at other stages of the case. *See Waters Corp. v. Agilent Techs, Inc.*, 410 F. Supp. 3d 702, 708 (D. Del. 2019). First, the court determines the asserted claim scope. *Amazon.com, Inc.*, 239 F.3d at 1351. Second, “the properly construed claim is compared with the accused device to determine whether all of the claim limitations are present either literally or by a substantial equivalent.” *Id.* When examining invalidity, the court will compare the asserted claims, as construed, to the prior art. *Waters Corp.*, 410 F. Supp. 3d at 708.

A defendant may succeed in defeating a patentee’s motion for a preliminary injunction if it raises a “substantial question” as to infringement or invalidity of the patent-in-suit. *Amazon.com, Inc.*, 239 F.3d at 1350. A “substantial question” means that the defendant “asserts an infringement or invalidity defense that the patentee cannot prove ‘lacks substantial merit.’” *Id.* at 1350-51 (quoting *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1364 (Fed. Cir. 1997)).

SmartSky argues that Gogo’s 5G Network literally infringes claims 1 and 11 of the ’947 patent and the ’417 patent, as well as literally infringing claims 1 and 12 of the ’717 patent and claims 1 and 2 of the ’077 patent. D.I. 24 at 7-10. However, rather than offering a substantive analysis of Gogo’s accused 5G Network on a claim-by-claim basis, SmartSky’s motion is littered with conclusory assertions and numerous citations to hundreds of pages of expert declarations.

In response, Gogo asserts three noninfringement arguments. D.I. 76 at 5-8. First, Gogo's 5G Network does not infringe claims 1 and 11 of the '947 patent and '417 patent because it does not maintain "continuous and uninterrupted in time" communication links between the aircraft and the air-to-ground ("ATG") base stations. *Id.* at 5-7. Second, and closely related to the first argument, Gogo's 5G Network cannot infringe claims 1 and 12 of the '717 patent because it utilizes two aircraft radios communicating with the ATG base stations that employ *both* licensed and unlicensed spectrum. *Id.* at 7-8 (emphasis added). Third, Gogo's 5G Network does not infringe claims 1 and 2 of the '077 patent because it lacks the "plurality of terrestrial base stations" limitation. *Id.* at 8. In addition to its noninfringement positions, Gogo argues that the '717 patent and the '077 patent are invalid for indefiniteness pursuant to 35 U.S.C. § 112, while the '077 patent is further invalid as obvious in view of Gogo's own prior art.

1. The '947 and the '417 Patents

The parties' respective briefing offers little argument as to the scope of the asserted claims of the '947 patent and the '417 patent. Nevertheless, the crux of the dispute on infringement is whether claims 1 and 11 of the '947 patent and the '417 patent encompass communication link handovers between an aircraft's radio and ATG base stations that are continuous and uninterrupted in time. SmartSky argues that Gogo's 5G Network infringes claim 1 and 11 because it uses "high speed links that are 'maintained continuous and uninterrupted' while the aircraft transitions between steerable beams of different base stations having overlapping coverages." D.I. 24 at 8. In response, Gogo argues that claims 1 and 11 require the aircraft's radio to make a communication link with a subsequent ATG base station before breaking the link with the current ATG base station—a "break-then-make" handoff—to meet the continuous and uninterrupted in time limitation. D.I. 76 at 5-6. SmartSky responds that short physical layer breaks with the aircraft's

radio and ATG base stations are continuous and uninterrupted in time because the higher layer communications links between the aircraft and the user is maintained. D.I. 93 at 1-3.

On this record, there is no reason to depart from the plain and ordinary meaning of the claim language. *See Aventis Pharm. Inc. v. Amino Chem. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (“There is a heavy presumption that claim terms are to be given their ordinary and customary meaning.”). Claim 1 recites, in relevant part:

wherein the respective different communication links are high speed data communications links that are enabled to be maintained continuous and uninterrupted in time while one of the respective different in-flight communication nodes transitions between a first steerable beam associated with a first coverage area defined by the network base station and a second steerable beam associated with a second coverage area defined by another network base station.

'947 patent at claim 1; '417 patent at claim 1.

Claim 11 recites, in relevant part:

wherein the respective different communication links are high speed data communications links that are enabled to be maintained continuous and uninterrupted in time while one of the respective different in-flight communication nodes transitions between corresponding steerable beams associated with respective ones of the coverage areas defined by the at least two base stations.

'947 patent at claim 11; '417 patent at claim 11.

A “high speed data communications links” that is maintained “continuous and uninterrupted in time” is one that is continuously maintained between the aircraft and the ground—the ATG base stations. *See, e.g.*, '947 patent at 4:67-5:2 (“The system may be accessed directly by an individual aboard an aircraft via a direct communication link that is continuous and uninterrupted in time with the ground.”). This preliminary construction is consistent with the portions of the prosecution history cited by SmartSky. Specifically, during the prosecution of the '947 patent, SmartSky distinguished prior art that

contemplated termination of the communication link between the ground—the ATG base station—and the aircraft. *See* D.I. 94 at ¶ 35; *see also* D.I. 77 at ¶¶ 57-80. Thus, considering the record before the Court, the “continuous and uninterrupted in time” limitation is encompassed by a continuous communication link between the aircraft and the ATG base station—a “make-before-break” handover—rather than a “continuous and uninterrupted in time” connectivity link between the aircraft and the user.

Next, the parties offer differing analyses of how Gogo’s 5G Network works. SmartSky’s experts assert that Gogo’s 5G Network employs a “make-before-break” handover between the aircraft and the first and second base stations, allowing for “continuous and uninterrupted” connectivity between the aircraft and the base stations. D.I. 24 at 8; D.I. 26 at ¶¶ 102-103. Gogo argues that these conclusions rely on misinterpretations of non-technical panel discussions and third-party misstatements rather than Gogo’s technical documents. D.I. 76 at 6-7. Instead, Gogo’s own experts aver that its 5G Network implements “break-before-make” handovers that require a physical disconnection between the aircraft and the first base station prior to connecting to the second base station. *Id.*; *see also* D.I. 79 at ¶¶ 12-24; D.I. 77 at ¶¶ 143-156. Although Gogo contends that this short disconnection is imperceivable to a network user and maintains the appearance of continuity, the short disconnection means that handovers are not “continuous and uninterrupted in time.” *Id.* In reply, SmartSky’s expert concedes that Gogo’s 5G Networks utilizes “break-before-make” handoffs between the aircraft and the base station (D.I. 94 at ¶ 73) but argues that Gogo still meets the “continuous and uninterrupted in time” limitation because the connection between the user and the aircraft is continuous and uninterrupted. D.I. 93 at 1-3; D.I. 94 at ¶¶ 51-56.

In light of SmartSky's cursory showing on infringement, SmartSky has failed to carry its burden of demonstrating a likelihood of success on the merits as to infringement of the '947 patent and the '417 patent. Gogo has raised substantial questions as to whether its accused 5G Network meets the "continuous and uninterrupted in time" limitation between the ATG base stations and the aircraft even though there is a short disconnection between the aircraft and the base station.

2. The '717 Patent

The parties once again offer little argument as to the scope of the asserted claims. However, the dispute centers around whether claims 1 and 12 of the '717 patent encompass multiple radios on the aircraft, and whether the claims encompass handovers between a first base station employing *only* unlicensed spectrum and a second base station employing *only* licensed spectrum. SmartSky argues that the claims contemplate multiple radios on the aircraft (D.I. 24 at 9; *see also* D.I. 93 at 3), while Gogo asserts that a plain reading of the claim language requires a single radio (D.I. 76 at 7). Further, SmartSky argues that claims 1 and 12 do not require one base station solely employing the unlicensed spectrum and a second base station solely employing the licensed spectrum (D.I. 93 at 3-4), while Gogo asserts that a plain reading of the claims demonstrates that the first base station only employs unlicensed spectrum and the second base station only employs licensed spectrum. D.I. 76 at 7-8. Claim 1 recites, in relevant part:

a first base station including a first antenna array defining a first directional radiation pattern that is oriented toward a horizon; and
a second base station including second antenna array defining a second directional radiation pattern that at least partially overlaps with the first base station,
wherein the first base station employs unlicensed spectrum,
wherein the second base station employs licensed spectrum,
wherein the first and second base stations are each configured to wirelessly communicate with a radio disposed on an aircraft flying

through respective cell coverage areas of the first and second base stations, and
wherein the first and second base stations are each configured to handover communication with the radio as the aircraft moves between the respective cell coverage areas of the first and second base stations.

'717 patent at claim 1.

Claim 12 recites, in relevant part:

a first base station including a first antenna array defining a first directional radiation pattern that is oriented toward a horizon; and
a second base station including second antenna array defining a second directional radiation pattern that at least partially overlaps with the first base station,
wherein one of the first base station or the second base station employs unlicensed spectrum, and the other of the first base station and the second base station employs licensed spectrum,
wherein the first and second base stations are each configured to wirelessly communicate with a radio disposed on an aircraft flying through respective cell coverage areas of the first and second base stations, and
wherein the first and second base stations are each configured to handover communication with the radio as the aircraft moves between the respective cell coverage areas of the first and second base stations.

'717 patent at claim 12.

Again, based on the record before the Court at this time, there is no reason to depart from the plain and ordinary meaning of the claim language. *Aventis Pharm. Inc.*, 715 F.3d at 1373. Although the claim language recites “a radio,” such a construction requiring “radio” to be limited to “a single radio disposed on the aircraft” is contrary to the general rule that the “words ‘a’ or ‘an’ in a patent claim carry the meaning of ‘one or more.’” *See, e.g., 01 Communique Lab., Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012) (quoting *TiVo, Inc. v. Echostar Commc’ns Corp.*, 516 F.3d 1290, 1303 (Fed. Cir. 2008)). This construction is supported by the claims’ later recitation of “the radio,” which reinvokes its non-singular meaning. *01 Communique*, 687 F.3d at

1297 (quoting *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d at 1338, 1342 (Fed. Cir. 2008)). Additionally, the '717 patent's specification contemplates multiple radios, further supporting SmartSky's construction that "a radio" can mean "one or more" radios. See '717 patent at 9:40-46 ("Moreover, it is to be appreciated that the radio(s) 416 can communicate using substantially any air interface in a licensed spectrum (e.g., third generation partnership project (3GPP) long term evolution (LTE), Wideband Code Division Multiple Access (WCDMA), and/or the like), unlicensed spectrum (e.g., 2.4 gigahertz (GHz), 5.8 GHz, and/or the like), etc."); see also *id.* at 6:25-28; 9:27-33.

However, the '717 patent's plain and ordinary meaning of the first base station which employs "unlicensed" spectrum and a second base station which employs "licensed" spectrum supports Gogo's proposed construction that the first base station solely employs unlicensed spectrum while the second base station solely employs licensed spectrum. SmartSky's own expert's declaration supports this construction. See D.I. 26 at ¶ 56 ("The first base station employs unlicensed spectrum, and the second base station employs licensed spectrum."); *id.* at ¶ 83 ("[T]he asserted '717 patent claims further specify that one base station employs unlicensed spectrum while another base station employs licensed spectrum.").

Next, in considering Gogo's accused 5G Network, the parties provide competing analyses of how Gogo's aircraft radios and base stations operate. As Gogo concedes, its aircraft equipment consists of multiple radios (D.I. 76 at 8; D.I. 79 at ¶¶ 26-29; D.I. 77 at ¶¶ 165-171), thus meeting the "one or more radios" limitation based on this preliminary construction. Further, SmartSky argues that because Gogo's base stations have antennas supporting both the unlicensed spectrum and the licensed spectrum, Gogo's handoffs necessarily require a handoff between a first base station employing licensed spectrum and a second base station employing unlicensed spectrum,

even if the base stations support both spectrums. *See* D.I. 93 at 3-4; D.I. 94 at ¶¶ 110-113. Gogo refutes SmartSky's characterization, arguing that there are no handoffs between a first base station employing solely unlicensed spectrum and a second base station solely employing licensed spectrum. D.I. 76 at 8; D.I. 77 at ¶¶ 172-175, D.I. 79 at ¶ 12. Further, Gogo contends that, although its base station antennas support both unlicensed and licensed spectrum, each of its two aircraft radios are solely dedicated to either the unlicensed or licensed spectrum. *See* D.I. 76 at 8; D.I. 79 at ¶ 9. Thus, Gogo asserts that the handoffs must be between licensed-licensed or unlicensed-unlicensed, rather than cross-network handoffs, i.e., unlicensed to licensed, as required by the claims 1 and 12 of the '717 patent. *Id.*

Based on the preliminary claim construction and factual disputes regarding how Gogo's 5G Network operates its handoffs, SmartSky has failed to meet its burden of demonstrating a likelihood of success on the merits as to infringement of the '717 patent. Additionally, Gogo contends that the '717 patent is invalid pursuant to 35 U.S.C. § 112. The Court acknowledges the parties' arguments concerning the validity of the '717 patent but concludes that it is unnecessary to evaluate its validity in light of SmartSky's failure to meet its burden of demonstrating a likelihood of success as to infringement. *See Mylan Institutional LLC v. Aurobindo Pharma Ltd.*, 857 F.3d 858, 866 (Fed. Cir. 2017) (the patentee must show both that it will likely prove infringement and that the claims will likely withstand the alleged infringer's invalidity challenge).

3. The '077 Patent

The parties offer differing constructions of claims 1 and 2 of the '077 patent. SmartSky argues that the claims require a system comprised of ATG base stations functioning in an ATG network. D.I. 24 at 9-10; D.I. 93 at 4. SmartSky also contends that the asserted claims on its face do not require separately providing a terrestrial network comprised of terrestrial base stations. D.I.

93 at 4. Gogo asserts that the plain language of the asserted claims require providing terrestrial base stations within the 5G system. D.I. 76 at 8; *see also* Gogo’s Motion to Dismiss SmartSky’s Complaint, D.I. 54, at 7-10.¹

At this stage and based on the present record, the Court cannot conclude that SmartSky has carried its burden of demonstrating a likelihood of success as to its alleged infringement of the ’077 patent in order to obtain the extraordinary relief of a preliminary injunction. The parties clearly contest the scope of claims 1 and 2 of the ’077 patent, particularly whether the claims require providing terrestrial base stations. But, without the benefits of comprehensive claim construction briefing or a *Markman* hearing—especially considering the parties’ scant briefing related to the scope of claims 1 and 2 of the ’077 patent—the Court cannot conclude that SmartSky has met its burden.

Moreover, Gogo raises, at a minimum, substantial questions of validity related to the ’077 patent. Gogo asserts that claims 1 and 2 of the ’077 patent are likely obvious under 35 U.S.C. § 103 and, thus invalid, over a combination of two prior art references, U.S. Patent Application No. 2006/0040660 (“Cruz”) and U.S. Patent No. 5,444,762 (“Frey”). D.I. 76 at 11; D.I. 77 at ¶¶ 103-108. Cruz purportedly discloses operating an ATG network containing networks of WiFi base stations (e.g., terrestrial base stations) near airports (D.I. 77 at ¶¶ 108-110), while Frey allegedly teaches that ATG networks may use the same spectrum (e.g., WiFi) employed by terrestrial base stations (D.I. 77 at ¶¶ 111-112). Gogo contends, albeit in a conclusory fashion, that a skilled person would be motivated to combine Cruz and Frey, which supplies each limitation required by the ’077 patent. D.I. 76 at 11; D.I. 77 at ¶¶ 113-116. In response, SmartSky argues that Gogo’s

¹ For purposes of deciding SmartSky’s Motion for Preliminary Injunction, the Court has not evaluated any arguments for, or against, granting Gogo’s Motion to Dismiss SmartSky’s Complaint.

alleged motivation to combine Cruz and Frey is “nonsensical” because Cruz already solves the problem of using common frequencies to avoid interference, and thus there is no reason to consult Frey. D.I. 93 at 5. Having reviewed the record, the Court concludes that SmartSky has not demonstrated that Gogo’s invalidity contention related to the ’077 patent “lacks substantial merit.” *See Amazon.com, Inc.*, 239 F.3d at 1350. Particularly, the Court finds that SmartSky has failed to meaningfully address, beyond mere conclusory assertions, whether Cruz discloses a solution to the interference problem that would obviate the motivation for a person skilled in the art to combine the teachings of Frey to Cruz.

ii. Irreparable Harm

The movant seeking the preliminary injunction must demonstrate “that it is likely to suffer irreparable harm if the preliminary injunction is not granted and there is a causal nexus between the alleged infringement and the alleged harm.” *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1368 (Fed. Cir. 2017). The alleged harm must not be compensable via monetary damages. *Id.* (stating that, where no monetary damage is calculable, “the harm cannot be adequately compensated and is irreparable.”).

SmartSky asserts three grounds of irreparable harm as a result of Gogo’s alleged infringement: (1) SmartSky will lose sales, market share, and its goodwill and reputation in the business aviation industry; (2) Gogo competing for consumers would erode the price SmartSky could charge without Gogo’s competition; and (3) Gogo’s competition will reduce SmartSky’s ability to recoup its research and development (“R&D”) costs and impair its ability to invest in future R&D. D.I. 24 at 11-18; D.I. 93 at 6-10.

SmartSky alleges that Gogo is the only other provider of comparable business aviation network services, and that allowing Gogo to compete with its allegedly infringing 5G Network

would greatly reduce SmartSky's sales and profits. D.I. 24 at 12; D.I. 93 at 7-8. SmartSky further asserts that due to the nature of the consumer-provider relationship and the costs associated with switching network providers, known as "stickiness," lost sales and profits are incalculable. *Id.* Gogo estimates that its consumer-relationships will last 17 years. *Id.*; *see also* D.I. 95 at ¶¶ 5-20. Further, as a result of SmartSky and Gogo's head-to-head competition and SmartSky's identity as a "disruptor" in a small market, SmartSky claims it stands to lose a large share of the market. *See* D.I. 24 at 14-15; D.I. 93 at 8-9; D.I. 27 at ¶¶ 34, 57. Due to SmartSky's loss of market exclusivity, it claims it will lose its earned reputation and goodwill as an "innovator" that arose from its years of developing a superior business aviation network. D.I. 24 at 15-16; D.I. 93 at 9.

In response, Gogo argues that SmartSky has produced no evidence of lost sales, and, if sales are indeed lost, they are calculable. D.I. 76 at 12-15; D.I. 78 at ¶¶ 22-23. Notably, Gogo cites to SmartSky's own expert, who concedes that the loss of equipment sales and service revenue associated with consumers choosing Gogo through the date of trial can be determined and quantified as damages. D.I. 76 at 12 (citing D.I. 27 at ¶¶ 40-42); *see Automated Merch. Sys., Inc. v. Crane Co.*, 357 F. Appx. 297, 300-01 (Fed. Cir. 2009) (without more, lost sales are "presumed to be compensable through damages."). Gogo further contends that any harm that may occur after trial, such as consumers remaining with Gogo even if SmartSky prevails, is purely speculative and cannot support a preliminary injunction. D.I. 76 at 12-13; D.I. 78 at ¶¶ 23-34; *see IGT v. Aristocrat Techs., Inc.*, 646 F. Appx. 1015, 1018-19 (Fed. Cir. 2016) (multiple contingencies existing prior to a patentee experiencing alleged harm militates a finding of irreparable harm).

Furthermore, Gogo asserts that SmartSky's claim that it is a "disruptor" in the market and stands to lose a large share of the market are purely hypothetical claims about future market shares rather than supporting evidence of lost market share. D.I. 76 at 14-15; *Abbott Cardiovascular Sys.*,

Inc. v. Edwards Lifesciences Corp., 2019 WL 2521305, at *19 (D. Del. June 6, 2019) (“[S]peculative loss of market share cannot support issuance of a preliminary injunction.”). Also, any potential loss of market share “correspond[s] to the same lost sales that were quantifiable as damages,” and cannot be counted twice. D.I. 76 at 14 (citing D.I. 27 at ¶¶ 56-57). Similarly, Gogo refutes SmartSky’s claims that it will lose its earned goodwill and reputation in the industry by pointing to evidence demonstrating SmartSky’s ability to secure investments and customers subsequent to Gogo’s announcement of its competing network. D.I. 76 at 16; *see also* D.I. 78 at ¶¶ 17, 26.

Next, SmartSky advances a price erosion argument. D.I. 24 at 13; D.I. 93 at 6-7. Following the announcement of Gogo’s competing network, SmartSky asserts that it must charge “less than Gogo and hence suffer[] price erosion on any sales that it makes while Gogo is in the market promoting and selling its infringing 5G service.” D.I. 24 at 13; D.I. 27 at ¶ 55. However, SmartSky offers no economic analysis, other than conclusory assertions, to support its price erosion theory, and, without such evidence, it is speculation to assert that competing with a disputed infringing product will drive down SmartSky’s prices. *Waters Corp.*, 410 F. Supp. 3d at 715-16 (price erosion argument without “concrete pricing evidence” was “too speculative”).

Lastly, SmartSky argues that, because it will lose market exclusivity, it will not be able to recover its nearly [REDACTED] R&D investment, further hindering its ability to invest in future R&D, such as its complementary product “Skytelligence.” D.I. 24 at 15; D.I. 93 at 9-10. Notably, SmartSky concedes that quantifying its lost R&D is not possible. *See* D.I. 95 at ¶ 35. Gogo asserts that SmartSky’s allegations concerning a return on R&D costs are purely speculative and duplicative of the alleged lost sales, which account for any proposed return-on-investment. D.I. 76 at 16. Generally, courts give little weight, if any, to claims of lost opportunity to conduct future

research and development because such claims are highly speculative. *See Eli Lilly & Co. v. Am. Cyanamid Co.*, 82 F.3d 1568, 1578 (Fed. Cir. 1996) (“If a claim of lost opportunity to conduct research were sufficient to compel a finding of irreparable harm, it is hard to imagine any manufacturer with a research and development program that could not make the same claim and thus be equally entitled to preliminary injunctive relief.”).

On this record, SmartSky has established that it competes directly with Gogo as a business aviation network provider, and that a loss of market share, and thus sales, to Gogo has the potential to be damaging due to the “stickiness” of the consumer. However, SmartSky has not demonstrated that such losses are imminent as a result of Gogo’s yet-to-be-released 5G Network or that its losses are non-compensable. In fact, Gogo has provided evidence demonstrating that regardless of Gogo’s promotion of its 5G Network, SmartSky has still secured investments and customers. *See* D.I. 76 at 16. SmartSky’s assertions that it stands to lose its reputation in the industry and its ability to recoup its R&D investments to fund its complementary product, Skytelligence, (D.I. 24 at 15-16; D.I. 93 at 9-10) is speculative and cannot serve as the grounds for finding irreparable harm without additional evidence. *See Eli Lilly & Co.*, 82 F.3d at 1578.

Given the above conclusions on the likelihood of success on the merits and on irreparable harm, the Court need not make any findings concerning the third and fourth factors. *Polymer Techs., Inc. v. Bridwell*, 103 F.3d 970, 973-74 (Fed. Cir. 1996) (“[A] trial court need not make findings concerning the third and fourth factors if the moving party fails to establish either of the first two factors.”). Thus, because SmartSky failed to establish the first two factors, i.e., likelihood of success on the merits and irreparable harm, the court denies SmartSky’s Motion for Preliminary Injunction.

The Court will issue an Order consistent with this Memorandum Opinion.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SMARTSKY NETWORKS, LLC,

Plaintiff,

v.

GOGO BUSINESS AVIATION, LLC and
GOGO INC.,

Defendants.

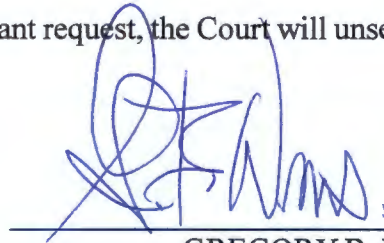
Civil Action No. 22-266-GBW

ORDER

At Wilmington this 26th day of September 2022:

For the reasons set forth in the Memorandum Opinion issued this day, IT IS HEREBY ORDERED that Defendants Gogo Business Aviation, LLC, and Gogo Inc.'s Motion to Strike Improper Reply Arguments from D.I. 85 and D.I. 86 (D.I. 97) is DENIED. Plaintiff SmartSky Networks, LLC's Motion for Preliminary Injunction (D.I. 6) also is DENIED.

Because the Memorandum Opinion is filed under seal, the parties shall meet and confer and, no later than October 3, 2022, submit a joint proposed redacted version, accompanied by a supporting memorandum, detailing how, under applicable law, the Court may approve any requested redactions. In the absence of a timely, compliant request, the Court will unseal the entire opinion.



GREGORY B. WILLIAMS
U.S. DISTRICT JUDGE