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**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA**

VIASAT, INC., VIASAT
COMMUNICATIONS, INC., f/k/a
WILDBLUE COMMUNICATIONS,
INC.,

Plaintiffs,

vs.

SPACE SYSTEMS/LORAL, INC.,
LORAL SPACE &
COMMUNICATIONS INC.,

Defendants.

Case No. 3:12-cv-00260-H-WVG
Hon. Marilyn L. Huff

**DEFENDANTS' RULE 50
MOTION FOR JUDGMENT AS A
MATTER OF LAW ON NON-
INFRINGEMENT**

Date: April 10, 2014
Time: 9:00 a.m.
Place: Courtroom 15A

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I. INTRODUCTION

Pursuant to Federal Rule of Civil Procedure 50, defendants Space Systems, Loral, LLC and Loral Space & Communications, Inc., ("SS/L") hereby move the Court for entry of judgment as a matter of law on non-infringement in their favor.

ViaSat, Inc. ("ViaSat") asserts that SS/L infringes claims 1 and 12 of the '875 patent, claims 7 and 8 of the '827 patent, and claims 1, 3, and 7 of the '043 patent, but ViaSat has not carried its burden of proof as to these claims. Because there is no legally sufficient evidentiary basis for a reasonable jury to find that any of SS/L's accused products meet each and every claim limitation of the asserted claims, SS/L is entitled to judgment as a matter of law.

II. LEGAL STANDARD

The “grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law, reviewed under the law of the regional circuit in which the appeal from the district court would usually lie.” *Summit Tech, Inc. v. Nidek Co.*, 363 F.3d 1219, 1223 (Fed. Cir. 2004). “A motion for judgment as a matter of law . . . in an action tried by jury is a challenge to the legal sufficiency of the evidence supporting the jury's verdict.” *Ford v. Cimarron Ins. Co.*, 230 F.3d 828, 830 (5th Cir. 2000) (internal quotations omitted). Judgment as a matter of law is appropriate when a party has been fully heard on an issue and “there is no legally sufficient evidentiary basis for a reasonable jury to have found for that party with respect to that issue.” Fed. R. Civ. P. 50(a). To avoid judgment as a matter of law, the non-moving party must set forth “substantial evidence” on each claim or issue. *TGIP, Inc. v. AT&T Corp.*, 527 F. Supp. 2d. 561, 569 (E.D.

1 Tex. 2007). “A mere scintilla is insufficient to present a question for the jury.”
2 *Hagan v. Echostar Satellite, L.L.C.*, 529 F.3d 617, 622 (5th Cir. 2008).

3 Because each element contained in a patent claim is deemed material to
4 defining the scope of the patented invention, to prove infringement, it is Plaintiff’s
5 burden to prove by a preponderance of the evidence that Defendants’ accused
6 products contain every limitation in the asserted claims. *See Warner-Jenkinson Co.*
7 *v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997); *see also Inpro II Licensing,*
8 *S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1357-58 (Fed. Cir. 2006);
9 *Centricut, LLC v. Esab Group, Inc.*, 390 F.3d 1361, 1367 (Fed. Cir. 2005).
10 “[F]ailure to meet a single limitation is sufficient to negate infringement of the
11 claim. . . .” *Nomos Corp. v. Brainlab USA, Inc.*, 357 F.3d 1364, 1367 n.1 (Fed. Cir.
12 2004) (citation omitted). Where, as here, the patentee fails to present the jury with
13 evidence of infringement, judgment as a matter of law is appropriate. *Southwest*
14 *Efuel Network, LLC v. Transaction Tracking Techs., Inc.*, No. 2:07-cv-311 (E.D.
15 Tex. Jan. 13, 2010).

16 III. ARGUMENT

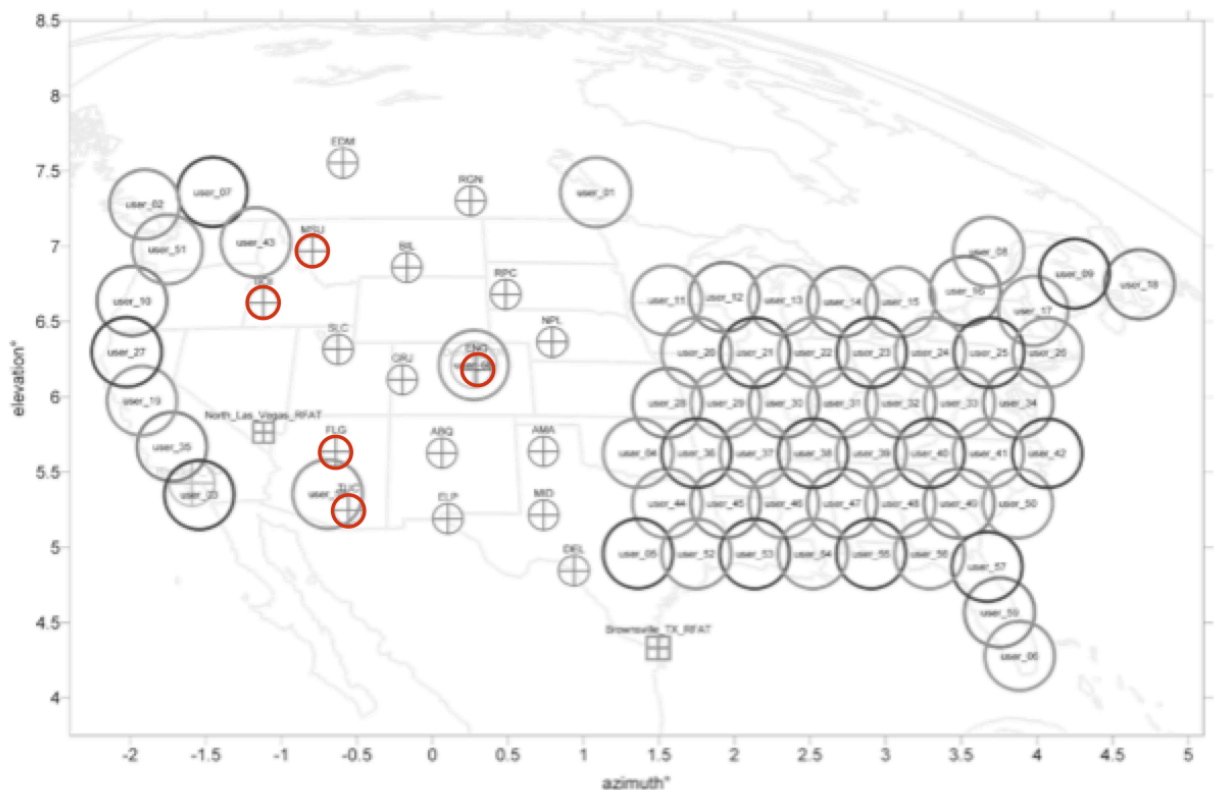
17 As a threshold matter, there can be no infringement of the '875, '827, or '043
18 patents prior to the launch of the satellites because each patent reads on how a
19 satellite functions or what a satellite does in operation. S-81; V-1290; V-1289.
20 Setting that aside, the trial evidence shows SS/L does not infringe the '875, '827, or
21 '043 patents for the additional reasons set forth below.

A. SS/L Does Not Infringe the '875 Patent.

1. All of the Proximate Gateway and User Beams in the Jupiter-1 Satellite System Share a "Same" Color, which Negates Infringement as a Matter of Law.

The claims of the '875 patent require gateway beams that are proximate to user beams, as well as gateway beams that are not proximate to user beams. V-1291. They further require that the gateway beams that are proximate to user beams cannot share a same color as the user beams to which they are proximate. *Id.* The Court has ruled that "proximate" means "at least partially overlapping, such that color re-use among the beams is not permitted." Doc. No. 206 at 8.

The proximate gateway and user beams in the Jupiter-1 satellite system are those identified in red below:



1 See, e.g., Ex. V-240; April 7, 2014, Tr. T. at 1982-84. Thus, under the claim
2 language of the '875 patent, Jupiter-1 cannot infringe if—for each proximate
3 gateway and user beam identified above—the gateway shares a color with the
4 proximate user beam. *E.g.*, April 7, 2014, Tr. T. at 1970.

5 They do. For example, Dr. Helgert testified, based upon the Jupiter-1
6 technical design documents (e.g., Ex. V-240), that the proximate gateway and user
7 beams in the Jupiter-1 satellite system do share a color:

8 Q: So these overlapping gateway and user beams are using the
9 same colors, sir?

10 A: That's correct.

11 Q: Wouldn't these beams interfere?

12 A: Yes, they would.

13 Q: Wouldn't that be a problem?

14 A: It would be a problem unless you did something about it, and
15 what you have to do basically has to be done on the ground. . . .

16 Q: Professor Helgert, is that the way that the Jupiter satellite
17 system avoids interference?

18 A: Well, the Jupiter satellite system plays absolutely no role in any
19 of this because it is a fixed constellation. It doesn't know whether
20 you transmitted in FB2 or not. It doesn't change its behavior when
21 you transmit in FB2 or when you [do] not transmit in FB2. So this
22 entire interference prevention is done on the ground and is,
23 therefore, not germane to the patent, which is purely a satellite
24 patent.

Q: Well, how about how the patent solve interference, is this -- the
solution you just described on the ground, is that the idea taught in
claim one of the '875 patent?

A: The '875 patent teaches the idea that there not be any overlap
period in the whole design of the system.

Q: Wen you say overlap in the whole design of the system what do
you mean sir? Do you mean that there'd be -- well --

1 A: It means simply that when you have overlapping gateway and
2 user beams, you do not transmit the same colors. That's what the
patent demands.

3 Q: I see. Thank you. So what's your ultimate conclusion on claim
4 one of the '875 patent? Does the Jupiter-1 satellite infringe that
claim?

5 A: My conclusion is it does not.

6 Q: And why is that?

7 A: Simply because it does not satisfy the requirement that when
8 you have overlapping gateway and user beams, it uses different
colors. It uses the same color as we just demonstrated here.

9 Q: And is that true of every overlapping gateway and user beam in
the Jupiter-1 satellite system?

10 A: Yes. If you look at the beam plan for Jupiter-1, then you'll find
11 that there are five gateways, and these five gateways overlap with
12 three user beams. So there is a certain number of combinations of
gateways and user beams that have this overlap situation.

13 Q: And in every case is there a shared color between the two of
them?

14 A: Yes. In every case there is a shared color between the two of
15 them.

16 April 7, 2014, Tr. T. at 1979-81. That disposes of any potential jury finding of
17 infringement of claim 1 of the '875 patent, and entitles SS/L to judgment as a
matter of law under Rule 50.

18 Dr. Helgert's infringement analysis applies to claim 12 as well. It is black-
19 letter law that if an independent claim is not infringed, then a dependent claim
20 cannot be infringed as a matter of law. *Kim v. ConAgra Foods, Inc.*, 465 F.3d
21 1312, 1316, n.1 (Fed. Cir. 2006) (dependent claims are not infringed when
22 independent claim not infringed). And that is the case here:

23 Q: Is it your understanding that Claim 12 is also a dependent
24 claim?

1 A: Yes. It's my understanding that claim 12 depends on claim one
2 and that because of that, claim 12 could not be infringed if claim
3 one was not infringed. . . .

4 *Id.* at 1981-82; see also V-1291.

5 Further, ViaSat's expert, Dr. Bartone, did not identify sufficient evidence to
6 support ViaSat's infringement allegation. For example, he did not identify a set of
7 beam colors that comply with the purported teachings of the '875 patent or provide
8 any support for his proposed color assignment, which would be required to show
9 infringement. The coloring scheme discussed by Dr. Helgert, however, showed the
10 Jupiter-1 satellite does not comply with the limitation of Claim 12 that "the second
11 at least one feeder beam is allocated all of the colors of the beam pattern" because
12 it would not be allocated any of the service beam colors, and therefore Jupiter-1
13 does not infringe Claim 12 for this additional reason.

14 No reasonable juror looking at these facts could conclude that the Jupiter-1
15 satellite infringes claims 1 or 12 of the '875 patent. The patent undisputedly
16 requires that proximate gateway and user beams be allocated different colors, yet
17 the Jupiter-1 beam plan and Dr. Helgert's testimony plainly show that—for Jupiter-
18 1—the proximate gateway and user beams are allocated a same color. V-1291; *see*
19 *also, e.g.*, April 7, 2014, Tr. T. at 1980-81. SS/L is therefore entitled to judgment
20 as a matter of law.

21 **2. *Jupiter-1 Does not "Allocate" Colors, which Claims 1 and 12 of the***
22 ***'875 Patent Require.***

23 Claim 1 of the '875 patent claims a "satellite" wherein colors are "allocated"
24 to spot beams. V-1291. But the uncontroverted facts at trial show that Jupiter-1 is

1 a bent-pipe satellite, which is to say that it does no processing or assigning of
2 frequencies or colors to beams in orbit. Any "allocation" of colors aboard the
3 Jupiter-1 satellite is done either by the FCC prior to licensing, or by design
4 engineers prior to manufacture. Once that subjective design process is complete the
5 allocation is "fixed" and immutable. April 7, 2014, Tr. T. at 1973-75. A reasonable
6 jury, looking at these facts, cannot conclude that the Jupiter-1 satellite "allocates"
7 colors; a point upon which infringement of the '875 patent depends and upon which
8 SS/L is therefore entitled to judgment as a matter of law.

9 **3. *ViaSat has Failed to Present Evidence Sufficient for a Reasonable***
10 ***Juror to Find By a Preponderance of the Evidence on the***
11 ***Remaining Claim Elements.***

12 ViaSat has failed to carry its burden of proof with respect to the remaining
13 elements of claims 1 and 12 of the '875 patent. As to claim 1, ViaSat has failed to
14 produce sufficient evidence to show that Jupiter-1 meets each claim limitation.

15 As an example, as to claim 1, ViaSat's expert, Dr. Bartone, offered no
16 testimony on the "antenna" element or how Jupiter-1 is actually "configured to
17 receive" signals from feeder and user terminals. April 2, 2014, Tr. T. at 1485-87.
18 As to the second limitation, he offered no evidence that the coverage areas are
19 "proximate" to each other within the meaning of this Court's claim construction.
20 April 2, 2014, Tr. T. at 1486-87. The same is true for his discussion of the second
21 element's requirement that beams not be proximate. April 3, 2014, Tr. T. at 1529-
22 40. As to claim 12, Dr. Bartone testified to "groupings" of feeder beams—
23 terminology that is not within the claim—but did not offer testimony as to what is
24 in the claim: a satellite "configured to receive" data from proximate and non-

1 proximate user and feeder beams. April 2, 2014, Tr. T. at 1481-1483. He offered
2 no testimony about the actual configuration of the satellite at all. *Id.* Nor did he
3 offer evidence to show that the "at least one feeder beam is allocated all of the
4 colors of the beam pattern" as the claim required. He merely announced it. *Id.*

5 **B. SS/L Does Not Infringe the '827 Patent.**

6 **1. Claim 7.**

7 No reasonable juror could review the facts in evidence and conclude that
8 SS/L infringes the '827 patent, because it is beyond serious dispute that the Jupiter-
9 1 satellite does not include a switch configured to operate based on the presence or
10 absence of interference information—ViaSat's expert testified only to commands
11 sent to the satellite, and not to "circuitry" on the satellite as the patent requires.

12 Claim 7 of the '827 patent requires that the satellite be equipped with
13 "circuitry configured to" operate "based on information indicating a presence or an
14 absence of an interference situation with an NGSO satellite system." V-1290. In its
15 claim construction order (Doc. 206 at 21) the Court identified the patent's
16 specification as setting forth the types of information that constitute "information
17 indicating a presence or an absence of an interference situation." *Id.* citing '827 col.
18 8:1-60 (explaining that "the interference severity can be measured using RF
19 equipment, estimated using known data, or simulated using known simulation
20 models."). *See also* April 7, 2014, Tr. T. at 1985-86.

21 Dr. Helgert's testimony and the Jupiter-1 design documents show that none
22 of this information is present on the Jupiter-1 satellite, nor is any of the Jupiter-1
23 circuitry configured to operate "based on" it:
24

1 Q: What type of switch does Jupiter-1 have?

2 A: Jupiter-1 is a simple on/off switch, and we can see that in the
3 diagram that is shown here on the slide which happens to be
4 gateway four, but similar diagrams are available for other kinds of
gateways and other situations.

5 Q: Does this diagram sort of represent any information that
6 indicates the presence or absence of an interference situation with
an NGSO satellite?

7 A: Well, if we look to the switch, which is indicated there in
8 yellow and shown as a kind of baseball as a witness called it the
9 other day, yesterday I guess, we see what that switch does is
10 something very simple. It is basically a toggle switch. It can switch
11 to one position where it allows the passing of energy that is within
12 the NGSO band, and then it can switch to the opposite direction
13 where it blocks the transmission of the energy in the NGSO band.
So it's that simple toggle back and forth, and there is nowhere in
that entire circuit diagram where there is any indication of why that
switching is being done. So the satellite itself has no idea why a
particular switch flips to one side or the other and plays absolutely
no role in that decision.

14 Q: Well, then does this circuitry infringe claim seven of the '827
patent?

15 A: It does not, and the reason it does not is because the switches
16 don't switch based on the presence or absence of an interference
situation.

17 April 7, 2014, Tr. T. at 1988-89. Indeed, it bears noting that the ViaSat's best
18 evidence on this is a mere letter of intent Hughes sent to the FCC four years before
19 Jupiter-1 was even launched—not the actual design documents that describe the
20 actual, launched satellite. Similarly, ViaSat's expert, Mr. Sturza, implied that
21 Jupiter-1 infringes because it could be programmed to operate dynamically in
22 response to interference information—but that testimony amounts only to
23 testimony that Jupiter-1 might infringe under a configuration different than the one
24

1 it has. This does not carry ViaSat's burden of proof on actual infringement of the
2 current configuration.¹

3 More fundamentally, the fatal flaw in ViaSat's infringement analysis is that
4 Juptier-1 is not configured for "dynamic switching," which ViaSat concedes the
5 '827 patent claims. Jupiter-1 is not equipped with hardware capable of repeated
6 on/off switching and includes no redundancy or back-up switching mechanism to
7 act as a contingency in the event its switch fails. April 7, Tr. T. at 1989-1993.
8 Fundamentally, as recognized by Mr. Sturza, the '827 claims a switch with
9 circuitry that operates at a higher level of complexity than what is aboard Jupiter-1.

10 No reasonable juror could review that testimony and the Jupiter-1 design
11 documents and conclude that they somehow describe circuitry that is in fact
12 entirely absent from those documents or the satellite—there is nothing in evidence
13 to suggest that Jupiter-1's NGSO switch is configured to operate "based on" the
14 type of information the '827 patent identifies, because it is not. *Id.*

15 In fact, there is no evidence in the record that Juptier-1 switches "based on"
16 anything at all—the evidence shows that Jupier-1 has a switch that can be activated
17 for any reason at all. April 7, 2014, Tr. T. at 1988-89. It does not "select" (to use
18 the Court's claim construction language, Doc. No. 206) "based on" anything—it
19

20
21 ¹ In addition, the circuitry on the Jupiter-1 satellite does not "establish an
22 activated frequency mode to activate one of a GSO frequency band mode and an
23 extended frequency spectrum mode" because the GSO frequency spectrum is
24 never activated or deactivated. Instead Jupiter-1 only activates or deactivates an
NGSO frequency band in addition to the GSO frequency spectrum (which is
always active). *See* April 7, Tr. T. at 1985.

1 merely operates whenever a person on the ground tells it to, and for whatever
2 reason the person on the ground decides to send the instruction. April 7, 2014, Tr.
3 T. at 1988-89. No reasonable jury could conclude that this design is "circuitry
4 configured to" operate "based on the presence or absence" of actual information.
5 SS/L is therefore entitled to judgment as a matter of law as to non-infringement of
6 claim 7.

7 **2. ViaSat has Failed to Present Evidence Sufficient for a Reasonable**
8 **Juror by a Preponderance of the Evidence on the Remaining Claim**
9 **Elements.**

10 ViaSat has failed to carry its burden of proof with respect to the remaining
11 elements of claims 7 and 8 of the '827 patent. As to those claims, ViaSat has failed
12 to produce sufficient evidence to show that Jupiter-1 meets each claim limitation.²

13 For example, as to the first limitation, ViaSat's expert, Mr. Sturza, did not
14 put on any evidence of the "receiver" or how it is actually configured to receive in
15 the GSO band and the extended frequency spectrum. April 3, 2014, Tr. T. at 1677-
16 78. As to the second limitation, he did not explain where the circuitry "configured"
17 to "activate" actually was in the Jupiter-1 design documents—he identified a
18 "switch" but no circuitry that acts upon the switch. April 3, 2014, Tr. T. at 1677-
19 79. And as to the third limitation, he offered no testimony about the actual

20
21 ² ViaSat has purported to assert infringement of claim 8 but it offered no
22 evidence of infringement of any element of that claim at all; this is a clear failure
23 of proof that warrants judgment as a matter of law in SS/L's favor on this claim.
24 See April 3, 2014, Tr. T. at 1677-80.

1 "transmitter" that transmits in the "GSO frequency band" or in the "NGSO
2 frequency spectrum." April 3, 2014, Tr. T. at 1680.

3 **C. SS/L Does Not Infringe the '043 Patent.**

4 There are a multitude of reasons that no reasonable juror could conclude that
5 SS/L infringes the '043 patent but the most fundamental is that ViaSat's own
6 infringement data proves it: no reasonable juror, reviewing ViaSat's own evidence
7 and the testimony in this case, could arrive at any other conclusion.

8 ***1. Claims 1 and 3 of the '043 Patent.***

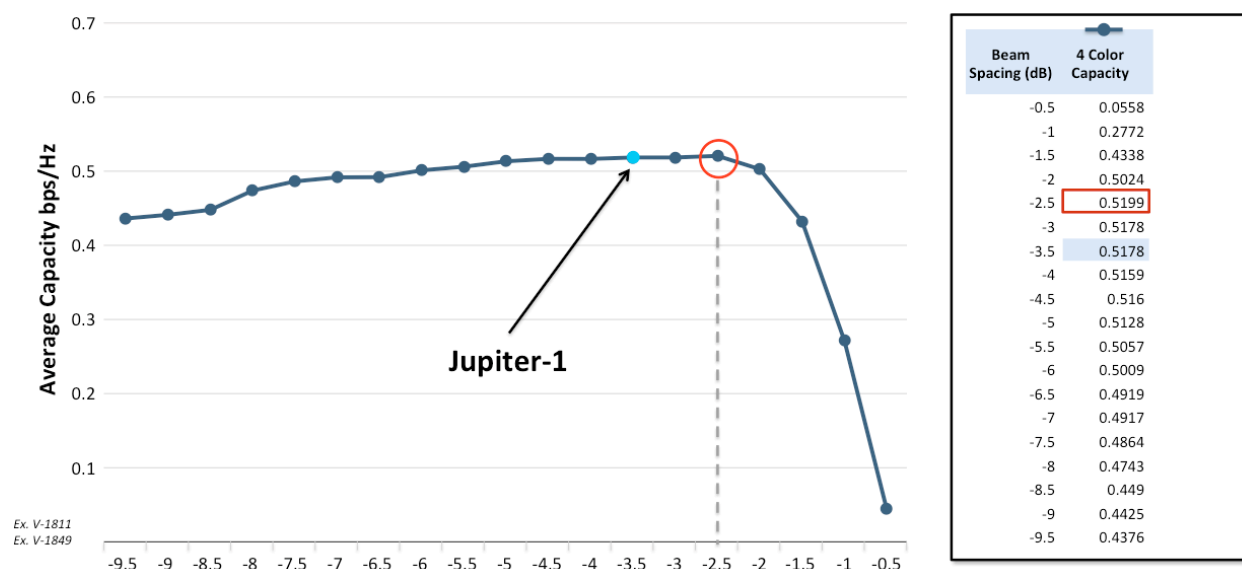
9 Claim 1 of the '043 patent requires that a satellite be operated to "maximize"
10 capacity by using a beam pattern with "a specific number of color(s)" and "specific
11 beam spacing that results in higher data-carrying capacity" than is "achieved with
12 other alternative numbers of color(s) of frequency and polarization and beam
13 spacings."³ V-1289 (emphasis added). Under the plain language of the patent's
14 claim—i.e., the "and" emphasized above—that means that the satellite must
15 "maximize" capacity in light of both variables: number of colors, and beam
16 spacing. April 6, 2014, Tr. T. at 1731; April 7, 2014, Tr. T. at 1995-97. ViaSat's
17 infringement claim fails because the SS/L satellites fail to maximize under either
18 variable—that is, even if the "and" meant "or" (as ViaSat has occasionally
19

20 ³ Claim 1 also requires that "the first spot beam as sent to at least one of the
21 first plurality of subscriber terminals is affected by interference from other signal
22 sources including the second spot beam at a signal-to-interference ratio C/I."
23 ViaSat's expert provided no evidence of interference from other signal sources,
24 that include "the second spot beam" which "illuminates a second region...adjacent
to the first region...whereby the first and second regions overlap." This is also a
failure of proof on claim 1.

suggested during this trial) SS/L still would not infringe because its satellite do not maximize over either variable.⁴ See April 7, 2014, Tr. T. at 1996-97; April 6, 2014, Tr. T. at 1733 ("Q: Mr. Sturza, your analysis did not show that Jupiter-1 had a maximum of capacity by adjusting both the number of colors and beam spacing, correct? A: That's correct.") (emphasis added).

a. Beam Spacing.

No reasonable juror could look at the evidence ViaSat has put forward in this case and conclude that the Jupiter satellite—the beam spacing of which is measured at -3.5 dB—maximizes capacity over alternate beam spacings. That is because ViaSat's own model proves that the beam spacing Jupiter-1 has results in less capacity than other beam spacings with which it could be configured:



⁴ Claim 3 is not infringed for the same reason. *Kim v. ConAgra Foods, Inc.*, 465 F.3d 1312 (Fed. Cir. 2006) (dependent claims are not infringed when independent claim not infringed).

1 Q: Okay. So going back to this model, you were testifying what
2 this graph depicts moving from the left to the right. Can you
explain that?

3 A: Yes. It depicts the average capacity that is achieved as a
4 function of the separation of the beams shown on the horizontal
scale.

5 Q: And can you explain to the jury where the maximum capacity
6 is?

7 A: Looking at the graph, as well as looking at the table, it appears
8 that the -- in fact, it's certain that the maximum occurs at a beam
spacing of minus 2.5, and its value is at .5199.

9 Q: How do you know that that's the maximum capacity?

10 A: Again, I can look at the graph, and I see that the red dot there is
11 the peak of the whole curve, but I can also look at the table and see
that there is no number in the table for any of the other beam
spacings that's bigger than .5199.

12 Q: So .5199 is the highest capacity on the table?

13 A: That's exactly right.

14 Q: Where's the Jupiter-1 satellite?

15 A: The Jupiter-1 satellite operates at a beam spacing of minus 3.5
16 DB. That is to say, it's separated by one DB from the minus 2.5 DB
level.

17 April 7, 2014, Tr. T. at 2004-05.

18 On these facts the only way to conclude that Jupiter "maximizes" capacity is
19 by contradicting basic facts about math: no reasonable juror could dispute that
20 .5199 is not .5178. And no reasonable juror could conclude that those numbers are
the same without violating immutable rules about how numbers work.

21 Indeed, ViaSat's only response to this argument is its expert's testimony that
22 the model he created has "fidelity" only to two decimal places—that is, ViaSat has
23 asked the jury to "round" the numbers and to keep rounding them until .5199 and
24

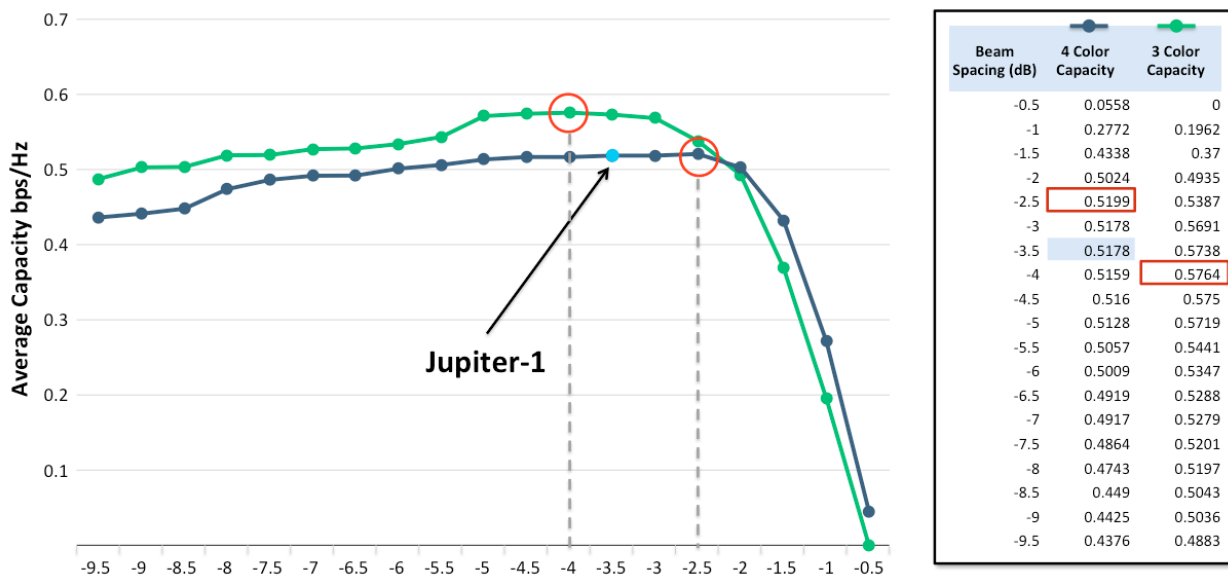
1 .5178 turn into the same thing. There is no basis in logic or reason to round these
2 numbers—ViaSat's expert announced that his tool's "fidelity" for the first time at
3 his deposition and, as Dr. Helgert pointed out:

4 A. Well, you can round off to anything you like. If you [r]ound off,
5 let's say, to one decimal digit, then you have a whole series of
6 beam spacings that give you the same answer. For example, all the
7 way down to -- oh, my goodness, it does down to maybe minus
8 seven DB and all the way up to minus two DB. So, rounding off,
9 you can manipulate the data to prove anything. What you really
have to do is look at the data, and the data clearly shows that
.5178, which is the Jupiter operating point, is less than .5199. And
so Jupiter, therefore, does not operate at its maximum value, even
for a four color system.

10 April 7, 2014, Tr. T. at 2005. In other words, to determine infringement the jury
11 must look at the facts and data—not change them. And any reasonable juror who
12 does must conclude that SS/L does not infringe the '043 patent.

13 *b. Number of Colors.*

14 Nor could any reasonable juror conclude that Jupiter-1 is configured to
15 maximize capacity across alternate numbers of colors. Again, even ViaSat's own
16 evidence proves it. Dr. Helgert, charting ViaSat's expert's tool and data, showed
17 that if Jupiter-1 were configured with three colors instead of four, it would achieve
18 higher data-carrying capacity:



Q: We have been talking about beam spacing, but let's move to number of colors. Does Jupiter-1 in your opinion maximize capacity over alternate number of colors?

A: No, it does not.

...

Q: Okay, can you tell us what this green line represents?

A: Yes. The green line is a plot of the results that were obtained again from Mr. Sturza's model by making one simple change, and that change is from a four color system to a three color system.

...

Q: Now, what does this -- what does this tell you about alternate numbers of colors and maximum capacity with respect to the Jupiter-1 satellite?

A: I think it demonstrates unambiguously that if you go to a three color system, then the average capacity is higher than if you [use] a four color system for certain ranges of beam spacing. . . . And so that tells me that Jupiter could have achieved a even higher capacity by going to a three color system rather than a four color system. And it again shows to me unambiguously that Jupiter-1

1 does not maximize the capacity over both beam spacing and color -
2 - number of colors.

3 April 7, 2014, Tr. T. at 2006-07. Again, no reasonable juror could dispute the
4 math—the numbers are what the numbers are. SS/L therefore requests judgment as
5 a matter of law of non-infringement of claims 1 and 3 of the '043 patent.

6 **2. Claims 7 and 8.**

7 SS/L is also entitled judgment as a matter of law of non-infringement of
8 claim 8 of the '043 patent. Claim 8 depends from claim 7, which requires a spot
9 beam satellite with beams that are "sent to a first subscriber terminal from the first
10 plurality of subscriber terminals utilizing a first coding and modulation
11 combination." V-1289.

12 But, as Professor Helgert testified, the SS/L satellites at issue in this case are
13 so-called "bent-pipe satellites," which perform no coding modulation ("ACM") on
14 the data within the spot beams.⁵ April 7, 2014, Tr. T. at 2009-11. Furthermore,
15 claim 7 also requires that the satellite system be "interference- dominated such that
16 C/I is less than C/N ," V-1289, a point as to which ViaSat's infringement expert
17 offered no evidence sufficient to support a jury verdict.

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22 ⁵ In fact, SS/L does not perform the ACM within the NBN Co. satellite system
23 at all—it is ViaSat that provides that function with respect to NBN Co. *Id.* at 2011
24 ("[I]t is, in fact, ViaSat that performs this function, this operation.").

1 a. *ViaSat has Failed to Present Evidence Sufficient for a*
2 *Reasonable Juror to Find by a Preponderance of the Evidence*
3 *on the Remaining Claim Elements.*

4 ViaSat has failed to carry its burden of proof with respect to the remaining
5 elements of claims 1, 3, 7, and 8 of the '043 patent. As to those claims, ViaSat has
6 failed to produce sufficient evidence to show that the accused satellites meet each
7 claim limitation.

8 For example, as to claim 1 (from which claim 3 depends), Mr. Sturza offered
9 no evidence about the antenna on the accused satellite., or about whether their
10 beams "overlap" within the meaning of the patent. April 3, 2014, Tr. T. at 1626-39.
11 He did not offer evidence of $C/I < C/N$ or whether the subject beams in the Jupiter-
12 1 satellite are "interference dominated." April 3, 2014, Tr. T. at 1626-39. He did
13 not explain how the satellite is "operated," or why that language is function as
14 opposed to methodological (*see* SS/L's concurrently filed motion for judgment as a
15 matter of law on indefiniteness). April 3, 2014, Tr. T. at 1626-39. There is thus no
16 factual basis for a jury to find by a preponderance of the evidence for ViaSat on
17 these claim elements.

18 As to claim 3, Mr. Sturza offered no evidence that the spot beams in Jupiter-
19 1 "comprise" adaptive coding, how it is implemented, or where such a
20 configuration is present on the satellite. April 3, 2014, Tr. T. at 1643-46.

21 As to claim 7 (from which asserted claim 8 depends), Mr. Sturza offered no
22 testimony about the "antenna," "power source," or "regions" that are "illuminated"
23 by the spot beams in the Jupiter-1 and NBN Co. satellites, nor did he explain how
24 they "overlap" within the meaning of the '043 patent's claim language. April 3,

1 2014, Tr. T. at 1643-46. He did not explain how or why the beams are
2 "interference dominated" or how "coding and modulation" are implemented by the
3 accused satellites. April 3, 2014, Tr. T. at 1643-46.

4 As to claim 8, Mr. Sturza offered no testimony that the coding on the
5 accused satellites is ACM as opposed to other coding and modulation, what the
6 difference may be, or how the satellite (as opposed to the ground system—which is
7 outside the claim's scope) implements them. April 3, 2014, Tr. T. at 1643-46. No
8 reasonable juror could find for ViaSat by a preponderance of the evidence as to
9 these claim elements.

10 **D. Territoriality.**

11 With respect to the NBN Co. satellites—which were contracted by the
12 Australian government, not any domestic entity—ViaSat cannot show
13 infringement because it has not presented evidence of infringement within the
14 United States.⁶ Under federal patent law, direct infringement only occurs when
15 someone "makes, uses, offers to sell, or sells any patented invention, *within the*
16 *United States* or imports *into the United States* any patented invention . . ." 35
17 U.S.C.A. § 271(a) (emphasis added). This is an essential element of patent
18 infringement, *Microsoft Corp. v. AT & T Corp.*, 127 S. Ct. 1746, 1747 (U.S. 2007),
19 without which ViaSat cannot prove its claim. In this case, ViaSat has introduced no
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22 ⁶ Nor, of course, did ViaSat demonstrate that Loral (as opposed to SS/L)
23 makes or sells satellites—it is a holding company and parent to SS/L that performs
24 no satellite manufacture or sale. *E.g.*, March 26, 2014, Tr. T. at 404; March 28,
2014, Tr. T. at 871 & 1028; April 4, 2014, Tr. T. at 1822 & 2014.

1 evidence that the NBN. Co. satellites' manufacturing completion or sale occurred
2 within the United States. Absent any evidence in the record on this claim element,
3 no reasonable juror could find for ViaSat. SS/L is therefore entitled to judgment as
4 a matter of law.

5 **E. Indirect and Contributory Infringement.**

6 Nor can ViaSat escape the problems with its infringement case by shifting
7 the focus to indirect or contributory infringement. For indirect or contributory
8 infringement to obtain there must be infringement in the first place—a finding that
9 no reasonable juror could make on this record for the reasons set forth above.⁷
10 *ACCO Brands, Inc. v. ABA Locks Mfrs. Co., Ltd.*, 501 F.3d 1307, 1313-14 (Fed.
11 Cir. 2007) (reversing denial of accused infringer's motion for JMOL of no inducing
12 infringement because substantial evidence did not support the jury's infringement
13 verdict where the patentee failed to introduce any evidence that the product
14 actually was used in an infringing manner); *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d
15 1321, 1326 (Fed. Cir. 2010) (“To establish contributory infringement, the patent
16 owner must show the following elements relevant to this appeal: 1) that there is
17 direct infringement, 2) that the accused infringer had knowledge of the patent, 3)
18 that the component has no substantial noninfringing uses, and 4) that the
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23 ⁷ Additionally, there can be no direct infringement of the '043 patent by NBN
24 Co. because it is an Australian governmental organization. 35 U.S.C.A. § 271(a).

1 component is a material part of the invention.”).⁸ *See also* April 7, 2014, Tr. T. at
2 2011-12.

3 **F. Doctrine of Equivalents.**

4 No reasonable juror could find for ViaSat according to the doctrine of
5 equivalents because, again, ViaSat has failed to put forward trial evidence that
6 would support such a finding. To prevail on a claim under the doctrine of
7 equivalents, a patentee bears the burden of proving equivalence with competent
8 evidence, including "particularized testimony and linking arguments as to the
9 insubstantiality of the differences between the claimed invention and the accused
10 device or process . . . on a limitation by limitation basis." *Texas Instruments Inc. v.*
11 *Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996).

12 Here, ViaSat's testimony fails to meet that standard. The only claim for
13 which it put forward any analysis was claim 1 of the '043 patent and claim 7 of the
14 '827. But rather than provide "particularized testimony and linking arguments as to
15 the insubstantiality of the differences between the claimed invention and the
16 accused device or process ... on a limitation by limitation basis," *id.*, ViaSat's
17 experts offered only conclusory testimony—with respect to only certain claims—
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19 ⁸ As to *Fujitsu's* intent element, ViaSat has failed to carry its burden of proof
20 for the reasons set forth in SS/L's motion for judgment as a matter of law on
21 willfulness filed concurrently herewith—there is no evidence that SS/L had
22 knowledge of ViaSat's patents and intentionally induced or contributed to
23 infringement. As *Fujitsu's* requirement that the accused component be a material
24 part of the invention, ViaSat has failed to carry its burden for the reasons set forth
in SS/L's motion for judgment as a matter of law on damages filed herewith: the
inventions claimed in ViaSat's patents are trivial and easily-avoided elements of
the satellites as a whole.

1 that the accused satellites performed the same function in approximately the same
2 manner as ViaSat's patents claim. *E.g.*, April 6, 2014, Tr. T. at 1638-39 & 1687-
3 1689. ViaSat did not explain how the accused functionalities are similar or
4 equivalent, did not identify the equivalent infringing instrumentality, or do
5 anything else to explain how the accused product fell within the claim in the
6 absence of literal infringement. The closest ViaSat came was identifying similar
7 functionality—a showing that does not rise to the level of "particularized testimony
8 and linking arguments as to the insubstantiality of the differences between the
9 claimed invention and the accused device or process . . . on a limitation by
10 limitation basis." *Texas Instruments Inc.*, 90 F.3d at 1567. This testimony fails to
11 meet the legal standards required by the Federal Circuit because it is a mere
12 recitation of the elements of the doctrine of equivalents followed by a bare
13 assertion that they are present. This does not meet the *Texas Instruments* standard
14 and SS/L is therefore entitled to judgment as a matter of law.

15 **G. The Un-Asserted Claims, and the '942 Patent.**

16 ViaSat's Fourth Amended Complaint asserted that SS/L infringed U.S.
17 Patent No. 7,773,942 (the "'942"), Doc. No. 475, but ViaSat did not assert it at
18 trial. SS/L has maintained its declaratory judgment claim for non-infringement of
19 the '942. Doc. Nos. 486 & 496. In the absence of any showing in opposition to
20 SS/L's declaratory judgment claim, SS/L is entitled to judgment as a matter of law
21 of non-infringement. *Advance Transformer Co. v. Levinson*, 837 F.2d 1080 (Fed.
22 Cir. 1988) ("affirming judgment of non-infringement where patentee had dropped
23 its claim for infringement and provided no evidence of infringement at trial and the
24

1 accused infringer had maintained a non-infringement declaratory judgment claim).
2 The same is true of the additional claims of the '875, '827, and '043 patents that
3 were not asserted at trial: ViaSat asserted that SS/L infringed, SS/L and Loral
4 counterclaimed for declaratory judgment of non-infringement, and no evidence
5 was put forward to support ViaSat's infringement allegations at trial. SS/L is
6 therefore entitled to judgment as a matter of law of non-infringement of the un-
7 asserted claims as well. *See id.*

8 IV. CONCLUSION

9 For the foregoing reasons, SS/L respectfully moves for judgment as a matter
10 of law of non-infringement of each claim of each patent asserted against it.

11
12
13 Dated: April 10, 2014

By: /s/ Patrick C. Bageant

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CERTIFICATE OF SERVICE

I hereby certify that, on April 10, 2014, I caused the foregoing
**DEFENDANTS' RULE 50 MOTION FOR JUDGMENT AS A MATTER
OF LAW ON NON-INFRINGEMENT** to be served on opposing counsel via
the Court's CM/ECF system.

Dated: April 10, 2014,

By: /s/ Patrick C. Bageant