IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

ELBIT SYSTEMS LAND AND C4I LTD., ELBIT SYSTEMS OF AMERICA, LLC,	§	
	§	CIVIL ACTION NO. 2:15-CV-00037-RWS
Plaintiffs,	§	
v.	§	~~SEALED~~
	§	Redacted - Public Version
HUGHES NETWORK SYSTEMS, LLC,	§	
Defendant.	§	

MEMORANDUM OPINION AND ORDER

Before the Court are the parties' motions for post-trial relief. Having considered the argument at the February 13, 2018 hearing and the parties' written submissions and for the reasons detailed below, the Court rules as follows:

- Defendant Hughes Network Systems, LLC's ("Hughes") Motion that Plaintiffs are Equitably Estopped from Asserting Infringement Against Hughes Products (Docket No. 506) is **DENIED**;
- Hughes's Renewed Motion for Judgment as a Matter of Law and for a New Trial (Docket No. 505) is **DENIED**; and
- Plaintiffs Elbit Systems Land and C4i Ltd. and Elbit Systems of America, LLC's Post-Trial Brief (Docket No. 507) is **GRANTED-IN-PART** and **DENIED-IN-PART**.

BACKGROUND

On January 21, 2015, Elbit Systems Land and C4I Ltd. and Elbit Systems of America, LLC filed this action against Hughes, Black Elk Energy Offshore Operations, LLC, BlueTide Communications, Inc., and Helm Hotels Group, alleging infringement of U.S. Patent Nos.

6,240,073 ("the '073 Patent") and 7,245,874 ("the '874 Patent"), both of which relate generally to satellite communication systems.[1] The patents-in-suit were first assigned to Shiron Satellite Communications ("Shiron"), which Elbit Systems Ltd., the parent to Plaintiffs, purchased in 2009. Docket No. 53 at ¶ 34. By assignment, Elbit Systems Land and C4I Ltd. is the sole owner of the '073 Patent, and Elbit Systems Land and C4I Ltd. and Elbit Systems of America jointly retain the exclusive right to enforce the '073 Patent. *Id.*

After a six-day trial, the jury reached a unanimous verdict finding the Hughes's HN, HX, and HT (also referred to as Jupiter) satellite systems infringe claims 2, 3, and 4 of the '073 Patent. Docket No. 483. The jury also found the '073 Patent not invalid and the '874 Patent not infringed. *Id*. The jury awarded $21,075,750 in damages for infringement of the '073 Patent and found that the infringement was not willful. *Id.*

I. HUGHES'S MOTION THAT PLAINTIFFS ARE EQUITABLY ESTOPPED FROM ASSERTING INFRINGEMENT AGAINST HUGHES PRODUCTS (Docket No. 506)

In Hughes's first motion, it argues that the doctrine of equitable estoppel shields it from liability. Docket No. 506. The test for equitable estoppel has three elements: (1) the patentee, through misleading conduct (or silence), leads the alleged infringer to reasonably infer that the patentee does not intend to enforce its patent against the alleged infringer; (2) the alleged infringer relies on that conduct; and (3) the alleged infringer will be materially prejudiced if the patentee is allowed to proceed with its claim. *High Point SARL v. Sprint Nextel Corp*., 817 F.3d 1325, 1330 (Fed. Cir. 2016) (quoting *Radio Sys. Corp. v. Tom Lalor & Bumper Boy, Inc*., 709 F.3d 1124, 1130 (Fed. Cir. 2013)). "If the record indicates silence alone, 'mere silence must be accompanied by some other factor which indicates that the silence was sufficiently misleading as to amount to bad

[1] At the time of trial, Hughes was the only remaining defendant in this action. *See* Docket Nos. 28, 50, 397, 398

faith.' " *Id.* (quoting *Hemstreet v. Comput. Entry Sys. Corp.*, 972 F.2d 1290, 1295 (Fed. Cir. 1992); *Meyers v. Asics Corp.*, 974 F.2d 1304, 1308 (Fed. Cir. 1992)).

For Hughes to prevail on its claim, it must identify misleading conduct or silence that leads the infringer to reasonably infer that the patentee does not intend to enforce its patent against the alleged infringer. *Id.* Here, Hughes suggests that Shiron believed Hughes infringed in 2008 by virtue of its inclusion of Hughes on a "List of Infringers" slide from an internal presentation. *Id.* at 2 (citing DX0581 at 0006). Hughes also points to a "Technical Questionnaire" Shiron filled out for iLeverage as evidence of Shiron's belief. *Id.* at 3 (citing Docket No. 506-4 at ELBIT_0241771) ("b. Which products or systems are likely to utilize the invention? Provide a list of at least the top three: VSAT systems from HNS, GILAT, VIASAT, iDirect, Advantech, Newtech, STM, . . ."). Hughes claims that it was contacted by iLeverage about purchasing the patents but never told of Shiron's belief that it was an infringer. *Id.* at 7.

As to the second element, Hughes suggests that it relied on iLeverage's communications that the patents were being offered for sale and communicated iLeverage's offer to the engineering department. *Id.* at 8 (citing PX227 at 002). Hughes now claims that, had it known of Shiron's belief that Hughes infringed its patents, it would have conducted an infringement analysis. *Id.* at 9. Hughes also argues that it relied on Shiron's "misrepresentation" in its decision "not to take alternative actions," which may have included contacting Shiron to request a claim chart or purchasing the patents outright. *Id.* at 10.

Hughes also claims to have relied on Shiron's misleading communications in making investments in the Jupiter products. Hughes cites the declaration of Paul Gaske, Hughes's executive vice president, in which Mr. Gaske claims that, had Hughes known that Shiron believed that the DirecWay and HN products infringed the '073 Patent, it likely would have designed the

Jupiter products differently to avoid an allegation of infringement. *Id.* at 11 (citing Docket No. 506-18 ("Gaske Decl.") ¶ 13).

And as to the third requirement, material prejudice, Hughes claims that it was materially prejudiced by investing [redacted] in the Jupiter project, when that "money and effort . . . could have been used to design an inroute that completely avoided Shiron's allegations of infringement." *Id.* at 13 (citing Gaske Decl. ¶ 13–15). Hughes also argues that it has been prejudiced because it would have preserved evidence related to the Personal Earth Station ("PES") system, which Hughes asserted in this litigation to be prior art. *Id.* at 13–14.

As a preliminary matter, the Court questions whether Hughes's argument is a laches argument by another name, which would be legally improper in light of *SCA Hygiene Products Aktiebolag v. First Quality Baby Products, LLC.*, 137 S.Ct. 954, 967 (2017). Hughes's complaint appears to be that it relied on Shiron "communicating" that it did not intend to pursue an infringement claim when it invested in the accused products. Docket No. 506 at 2. The Court is persuaded that Hughes's argument amounts to a complaint that Shiron waited too long to pursue its infringement claim and is legally insufficient as a matter of law.

Even under the rubric of equitable estoppel, however, Hughes's motion fails on a factual basis. Hughes's current position that it was "affirmatively misled" by Shiron in 2008 is inconsistent with Mr. Gaske's testimony from trial, where he stated that Hughes did not become aware of the asserted patents until January 2015, when the present suit was filed. 8/3 AM Tr. at 15:11–16 ("Q. Now, let's move forward to 2008. It is Hughes's position, and you testified on behalf of the corporation, that Hughes, as the Defendant, was not aware that it was being accused of infringing the '073 patent and the '874 patent until this lawsuit was filed in 2015, correct? A. I

believe that's correct."). Mr. Gaske similarly testified at his deposition that he was unaware of the patents until the lawsuit was filed. Docket No. 521-4, Tr. at 77:3–8.

Relatedly, Hughes's reliance on the iLeverage document is also insufficient to support its theory of misleading conduct. At his deposition, Dr. Shaul Laufer, one of the founders of Shiron and a named inventor of the '073 Patent, testified that he did not ask iLeverage to contact Hughes. Docket No. 513-9 Tr. at 235:14–20 ("Q. Did you ask iLeverage to tell Hughes? A. No. Q. You didn't ask anyone to tell Hughes you thought they infringed your patent; correct? A. Correct"). In fact, Mr. Laufer was unaware that iLeverage even approached Hughes and offered it a chance to buy the Shiron portfolio. *Id.* at 240:23–241:4.

Mr. Gaske also now claims that Hughes has changed the designs of its products to avoid allegations of infringement in the past. *See* Gaske Decl. ¶ 14. But his current statement is at least undercut by his representations (in both his deposition and at trial) that Hughes has never modified a product to avoid an allegation of infringement. Docket No. 513-8, Tr. at 44:24–45:18 ("Q. Has Hughes ever modified a product as a result of a third party claiming patent infringement in an attempt to avoid an infringement claim? . . . A. Again, not that I'm aware of. Q. So you're not aware of any instances where a third party came to Hughes with an 14 allegation that Hughes infringed on a third party's patent and Hughes went out and changed one of its products? . . . A. Yeah, I'm not aware of that."); 8/3 AM Tr. at 16:24–17:7 ("Q. In -- in 40 years of working at Hughes, you don't know of it ever changing its course based upon someone saying, hey, you're infringing our patents, correct? A. That's correct. I'm not sure that we've had people say that very often.").

In light of these statements, the Court cannot conclude that Hughes was materially prejudiced by any alleged misrepresentation. Accordingly, because Hughes has not met its burden

to establish the applicability of equitable estoppel, Hughes's equitable estoppel motion is **DENIED**.

II. HUGHES'S RENEWED MOTION FOR JUDGMENT AS A MATTER OF LAW AND FOR A NEW TRIAL (Docket No. 505)

In its Renewed Motion for Judgment as a Matter of Law and New Trial, Hughes seeks (1) judgment as a matter of law of noninfringement; (2) judgment as a matter of law of invalidity; (3) a new trial on infringement; (4) a new trial on damages; and (5) remittitur. Docket No. 505.

LEGAL STANDARD

Judgment as a matter of law is only appropriate when "a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue." FED. R. CIV. P. 50(a). "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." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008).

Under Fifth Circuit law, a court is to be "especially deferential" to a jury's verdict and must not reverse the jury's findings unless they are not supported by substantial evidence. *Baisden v. I'm Ready Prods., Inc*., 693 F.3d 491, 499 (5th Cir. 2012). "Substantial evidence is defined as evidence of such quality and weight that reasonable and fair-minded men in the exercise of impartial judgment might reach different conclusions." *Threlkeld v. Total Petroleum, Inc.*, 211 F.3d 887, 891 (5th Cir. 2000). The Court will "uphold a jury verdict unless the facts and inferences point so strongly and so overwhelmingly in favor of one party that reasonable men could not arrive at any verdict to the contrary." *Cousin v. Trans Union Corp*., 246 F.3d 359, 366 (5th Cir. 2001); *see also Int'l Ins. Co. v. RSR Corp*., 426 F.3d 281, 296 (5th Cir. 2005). However, "[t]here must be more than a mere scintilla of evidence in the record to prevent judgment as a matter of law in favor

of the movant." *Arismendez v. Nightingale Home Health Care, Inc*., 493 F.3d 602, 606 (5th Cir. 2007) (citing *Laxton v. Gap, Inc*., 333 F.3d 572, 577 (5th Cir. 2003)).

In evaluating a motion for judgment as a matter of law, a court must "draw all reasonable inferences in the light most favorable to the verdict and cannot substitute other inferences that [the court] might regard as more reasonable." *E.E.O.C. v. Boh Bros. Const. Co., L.L.C*., 731 F.3d 444, 451 (5th Cir. 2013). Although the court must review the record as a whole, it must disregard all evidence favorable to the moving party that the jury is not required to believe. *Ellis v. Weasler Eng'g Inc*., 258 F.3d 326, 337 (5th Cir. 2001). However, a court may not make credibility determinations or weigh the evidence, as those are solely functions of the jury. *See id.* (citing *Reeves v. Sanderson Plumbing Prods., Inc*., 530 U.S. 133, 150–51 (2000)). The Court gives "credence to evidence supporting the moving party that is uncontradicted and unimpeached if that evidence comes from disinterested witnesses." *Arismendez*, 493 F.3d at 606.

Under Federal Rule of Civil Procedure 59(a), a new trial may be granted on any or all issues "for any reason for which a new trial has heretofore been granted in an action at law in federal court." Rule 59(a)(1)(A). The Federal Circuit reviews the question of a new trial under the law of the regional circuit. *Z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). The court can grant a new trial "based on its appraisal of the fairness of the trial and the reliability of the jury's verdict." *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612–13 (5th Cir. 1985). "Courts grant a new trial when it is reasonably clear that prejudicial error has crept into the record or that substantial justice has not been done, and the burden of showing harmful error rests on the party seeking the new trial." *Sibley v. Lemaire*, 184 F.3d 481, 487 (5th Cir. 1999) (quoting *Del Rio Distributing, Inc. v. Adolph Coors Co*., 589 F.2d 176, 179 n. 3 (5th Cir. 1979)). "A new trial may be granted, for example, if the district court finds the verdict is against the weight of the

evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course." *Smith*, 773 F.2d at 612–13. The decision to grant or deny a new trial is committed to the sound discretion of the district court. *See Allied Chem. Corp. v. Daiflon, Inc.*, 449 U.S. 33, 36 (1980).

A. Judgment as a Matter of Law on Noninfringement

Hughes moves for judgment as a matter of law that Hughes's DirecWay, HN, HX, and Jupiter Systems do not infringe the '073 Patent (1) because Elbit failed to present particularized evidence of infringement by each system; (2) because the systems do not include the first communications means; (3) because the systems do not include the second communications means; (4) because the systems do not include the "switching means;" and (5) because Elbit failed to present legally sufficient evidence that allegedly equivalent structures were available at the time the '073 Patent issued. The Court addresses each of Hughes's arguments in turn.

(1) Particularized Evidence of Infringement

According to Hughes, Elbit failed to offer particularized evidence of infringement for each product and each asserted claim of the '073 Patent. Hughes contends that Elbit instead attempted to prove infringement by virtue of the products' compliance with the Internet Protocol over Satellite (IPoS) standard ("IPoS") standard. Docket No. 505 at 3–4.

Hughes argues that Elbit did not provide evidence as to how the HX or Jupiter systems satisfy the corresponding structure of "transmitter means" or "receiver means." *Id.* at 4. To that end, Hughes argues that the only evidence presented at trial was a document describing the HN System Overview. *Id.* (citing 8/1 PM Tr. at 53:10–55:13, 88:2–22).

Hughes suggests that "Elbit will likely argue that the evidence for the HN system applies equally for the HX and Jupiter systems because all of these systems share a 'common core

technology' comprising an 'IPoS based return channel,' " but, according to Hughes, that the products have the same basic functionality is not enough to justify grouping without evidence that the relevant features are identical. *Id.* at 4–5 (citing *Fujitsu Ltd. v. Netgear, Inc.*, No. 07-CV-710-BBC, 2009 WL 3047616, at *4 (W.D. Wis. Sept. 18, 2009)). Hughes also notes that Elbit relied solely on HN source code for the switching means claim element to argue that Elbit's infringement argument for the HX and Jupiter systems lacked evidentiary support. *Id.*

Hughes also claims that Elbit failed to prove infringement by relying on the IPoS standard for three reasons: (1) that Elbit relied on diversity Aloha, an optional portion of the IPoS standard, to show that the Accused Systems must have had a pseudo-random sequence generator and local oscillator for "first communication means;" (2) that the IPoS standard lacks sufficient detail regarding diversity Aloha to show that compliance necessarily results in infringement; and (3) that Elbit did not establish that the accused systems complied with or implemented the accused portions of the IPoS standard for the corresponding structures for the first and second communications means. *Id.* at 5–8.

Elbit first responds that it presented substantial evidence regarding the structure and operation of all accused products. Docket No. 514 at 2. According to Elbit, it presented evidence that the accused products all rely on a "common core" technology and Hughes has not pointed to a single difference between the accused products that would have been relevant to the jury's infringement finding. *Id.* at 2–3. Elbit argues that Mr. Bruce Elbert, its technical expert, reviewed thousands of pages of Hughes's technical documentation and walked the jury through each of the accused systems. *Id.* (citing 8/1 PM Tr. at 92:9–13). Elbit contends that Mr. Elbert then explained how each accused product contained "common core technology" including the IPoS based return channel and common IP capabilities, which are common elements in the systems directly related

to infringement. *Id.* at 3–4 (citing PX001-002; 8/1 PM Tr. 39:14–40:2). Elbit then explains that Mr. Elbert showed the jury a listing of model numbers from each of the accused systems, which was admitted as PX853, and confirmed that the DirecWay, HN, HX, and HT/Jupiter product lines all fit within the common core technologies and all employed the two communications and switching means. *Id.* (citing PX863, 8/1 PM Tr. at 48:13–19). According to Elbit, Mr. Elbert then walked through a detailed infringement analysis relying primarily on the HN system and the IPoS standard but also referring to documentation for the HX and Jupiter systems, before concluding that his analysis was equally applicable to all of the accused products. *Id*. (citing PX276, PX264; PX015, PX099, PX102, 8/1 PM Tr. at 92:14–93:3; 37:21–38:4; 47:17–48:23; 71:4–13).

Elbit argues that this evidence easily meets the "substantial evidence" standard for the jury's verdict and that the law allows for infringement analysis based on a representative product on an element-by-element basis, followed by a summary opinion that all the other accused products infringe based on the same analysis. *Id.* at 5–6 (citing *Imperium IP Holdings (Cayman), Ltd. v. Samsung Elecs. Co*., No. 4:14-CV-00371, 2017 WL 1716400, at *5 (E.D. Tex. Apr. 27, 2017)).

Elbit also responds that Hughes never presented its arguments to the jury that certain portions of the IPoS standard are optional or that the standard lacked sufficient detail. Docket No. 514 at 6. But even if the Court was to consider Hughes's argument, Elbit suggests that Hughes's documentation that it presented to the jury admitted that the Hughes HN System was compliant with the IPoS standard. *Id.* at 7 (citing PX274-114; PX298-007, PX262-116, PX295-001, PX105-108, PX276-118, PX264-083). Elbit also contends that nothing in the IPoS standard suggests that the portions Mr. Elbert relied on and presented to the jury are "optional." *Id.* (citing 8/1 PM Tr. at 52:3–93:3 (discussing PX234-60, -77, -78, -133, -135, -162, -163)). Elbit further argues that since

this case involved an accused system, it was distinguishable from *Fujitsu*, which involved direct infringement of a method claim. *Id.* at 8.

In its reply, Hughes argues that the parties did not stipulate to representative products, the Court did not deem any accused system as representative of the others, and Mr. Elbert never testified that the HN system was a representative product. Docket No. 518 at 1. Hughes reprises its argument that the only evidence presented for the transmitter and receiver means was about the HN system. *Id.* at 2. Hughes also suggests that Mr. Elbert's statements about common capabilities do not address the structure required for the switching means and, because the Jupiter systems have a different switching structure than the HN system, Elbit cannot use the HN system as a representative product for the Jupiter system. *Id.* at 2–3.

In its surrreply, Elbit responds that Mr. Elbert's element-by-element analysis and summary opinion at trial is more than substantial evidence to support the infringement verdict. Docket No. 523 at 1. As to Hughes's arguments about the different switching means between the HN and Jupiter products, Elbit argues that Hughes waived this argument by failing to present any evidence at trial that the accused devices were different as related to the claims. *Id.*

The jury's infringement verdict is supported by substantial evidence. Generally, a patentee can show infringement with detailed expert testimony with respect to only one type of device and then a summary opinion explaining that the analysis applies to other allegedly infringing devices that operate similarly, without discussing each type of device in particular. *TiVo, Inc. v. EchoStar Commc'ns Corp*., 516 F.3d 1290, 1308 (Fed. Cir. 2008); *see also Imperium IP Holdings (Cayman), Ltd. v. Samsung Elecs. Co.*, 259 F. Supp. 3d 530, 538 (E.D. Tex. 2017). The trial record makes clear that Mr. Elbert's testimony satisfies this standard. Particularly, Mr. Elbert explained Hughes's development trajectory, relying on documentation relating to each product and

explaining that all of the accused products contained a "common core" technology including an IPoS return channel and common IP capabilities. *See* 8/1 PM Tr. at 36:25–39:2; 92:9–93:3; PTX 180-003. Mr. Elbert presented the jury with a chart listing the infringing products and confirmed that each fit within the common core technologies, employing "the two communications means and switching means." *Id*. at 48:13–19. Mr. Elbert then conducted a detailed infringement analysis based on documentation for the HN system and the IPoS standard, confirming that his analysis was equally applicable to the accused products. *Id.* at 92:14–93:3; *see also id*. at 37:21–38:4, 47:17–48:23, 71:4–13.

The Court is also not persuaded by Hughes's argument that Mr. Elbert's testimony regarding the common core technology does not apply to the transmitter and receiver means limitations. Mr. Elbert did not limit common core technology to certain limitations at trial, and, instead, confirmed that all of the accused products shared a common functionality as it relates to the claims. 8/1 PM Tr. at 92:14–93:3. To the extent Hughes now argues that the HN, HX, and Jupiter systems offer "many new features and capabilities," it offered no evidence to the jury as to how these differences would affect the infringement analysis.

Substantial evidence supports the jury's finding of infringement based on the IPoS standard, as nothing in the IPoS standard suggests that the portions that Mr. Elbert relied on and presented to the jury are "optional." *See generally* 8/1 PM Tr. at 52:3–93:3 (discussing PX234-60, -77, -78, -133, -135, -162, -163). With respect to Hughes's arguments about Elbit's reliance on a standard, Elbit has pointed to substantial evidence at trial suggesting that the accused products practice the standard. *See, e.g.*, PX274-114, PX262-116, PX295-001, PX105-108; *see also Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1327 (Fed. Cir. 2010).

Accordingly, Hughes's motion is **DENIED** on this basis.

(2) "first communication means"

The Court construed the "first communications means" as a means-plus-function term with the function of "transmitting short bursty data" and the structure of the "Random Access Transmitter 70 in Figure 5 in the '073 Patent and equivalents thereof." Docket No. 208 at 15.

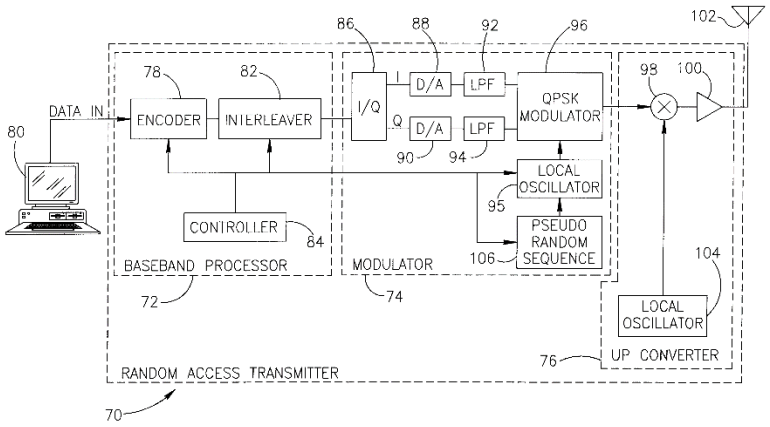

FIG.5

'073 Patent, Fig. 5.

Hughes now argues that Elbit failed to establish that a pseudo-random sequence generator ("PRSG") was directly connected to and driving a local oscillator in the accused systems. Docket No. 505 at 8. Instead, according to Hughes, Mr. Elbert treated the PRSG 106 connected to the local oscillator 95 of Figure 5 as a purely functional limitation—to be able to choose frequencies randomly. *Id.* at 9 (citing 8/1 PM Tr. at 62:16–18). From there, Hughes contends, Mr. Elbert stated that Diversity Aloha uses random frequency selection, so there must be a PRSG. *Id.* Hughes suggests that Mr. Elbert only "assumed that there must be a local oscillator, without any explanation or evidence," and that there is no evidence in the record establishing that the accused systems include the PRSG 106 and local oscillator 95. According to Hughes, Mr. Elbert assumed that all structures that could be used to randomly select or change the frequency are statutory

equivalents to the corresponding structure. *Id.* (citing *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001)).

Hughes also contends that the statutory equivalents analysis requires one to look at whether the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification. *Id.* at 9–10 (citing *Odetics, Inc. v. Storage Tech. Corp.*, 195 F.3d 1259, 1267 (Fed. Cir. 1999)). Hughes suggests that Mr. Elbert "never actually identified the allegedly equivalent structure in the HN, HX, or Jupiter systems" and instead identified diversity Aloha as a purportedly equivalent function. *Id.*

In response, Elbit claims the jury credited Mr. Elbert's testimony on the factual issue of whether the accused products have a "first communications means." Docket No. 514 at 8. Elbit points to Mr. Elbert's opinion that the accused products performed the claimed function of "transmitting short bursty data" and contained a structure that was identical and/or equivalent to the corresponding structure identified by the Court, Random Access Transmitter 70 in Figure 5 in its entirety. *Id.* (citing 8/1 PM Tr. at 55:15–69:22). Elbit argues that Mr. Elbert walked through every component of Figure 5 and identified where that component could be found in the accused products. *Id.* (citing 8/1 PM Tr. at 58:6–65:2). Elbit also claims that Mr. Elbert identified the differences between the transmitter in Figure 5 and the transmitter in the accused products, explaining that they were "minor" and "not significant." *Id.* at 8–9 (citing 8/1 PM Tr. at 58:24–59:8, 60:13–61:5, 62:6–65:2).

With respect to Hughes's argument about proof of structure, Elbit claims (1) that Hughes waived this argument by failing to argue during claim construction that a "direct connection" was required between the PRSG and the local oscillator; (2) that Hughes misunderstands the legal test

for statutory equivalents as requiring that the patentee show that every component of a multicomponent structure is present in the accused device and arranged exactly as in the patent; and (3) that Hughes mischaracterizes the record in arguing that Mr. Elbert glossed over his analysis of Figure 5. *Id.* at 9–10 (citing *Odetics*, 185 F.3d 1268). Elbit also argues that Mr. Elbert did not reduce Figure 5 to a functional limitation, explaining how the rand() source code in the accused products, in conjunction with the time and frequency block, causes the transmitter to randomly change frequencies in the same manner as the PRSG and local oscillator Figure 5. *Id.* at 10–11 (citing 8/1 PM Tr. at 62:1–65:3).

In its response, Elbit also argues that Dr. Stephen Wicker, Hughes's expert, treated the first communications means as a purely functional limitation, testifying that the PRSG, local oscillator, and modulator structures in Figure 5 "generate[] codes" and that the accused products did not infringe because they did not use "code-based spreading." *Id.* at 11 (citing 8/4 AM Tr. at 22:9–14 ("That's right. Code-based spreading modulator is not a time division multiple access modulator. They're different things.")).

Elbit has adduced substantial evidence that the accused systems meet the "first communications means" limitation. At trial, Elbit's expert Mr. Elbert first reviewed the claim construction with the jury. 8/1 PM Tr. at 55:22–56:12. He then reviewed Hughes's documentation for the HN system,[2] explaining that the Hughes product uses Diversity Aloha, which he opined met the function for the "first communications means" limitation. *Id.* at 57:4–2. Mr. Elbert then explained how the HN product contained a structure that was identical and/or equivalent to Random Access Transmitter 70 in Figure 5, walking through each component in Figure 5 and identifying where it could be found in the accused products. 8/1 PM Tr. at 55:15–69:22. To the

[2] Mr. Elbert explained that the accused products share a "common core technology" as it relates to his infringement analysis with a common return channel and common IP capabilities. 8/1 PM Tr. at 92:14–93:3.

extent Mr. Elbert identified differences between the transmitter in Figure 5 and the transmitter in the accused products, he characterized those differences to be minor or insignificant. *Id*. at 58:24–59:8, 60:13–61:5, 62:6–65:2. On this record, the Court is not persuaded that Mr. Elbert's analysis was purely speculative, nor is the Court convinced that Mr. Elbert reduced Figure 5 to a functional limitation.

Similarly, Hughes's argument that Mr. Elbert only "assumed that there must be a local oscillator, without any explanation or evidence" is without merit. Mr. Elbert identified the "Time and Frequency Sync" block in PX234 as corresponding to the local oscillator and explained that the products contain a "rand" function in the source code, corresponding to the PRSG. 8/1 PM Tr. at 61:13–21, 63:18–65:3.

Accordingly, because substantial evidence supports the jury's finding that the accused systems meet the "first communications means" limitation, Hughes's motion for judgment as a matter of law is **DENIED** on this basis.

(3) "second communication means"

The Court construed the "second communications means" as a means-plus-function term with the function of "continuous transmission of data" and the structure of the "Channel Assignment Transmitter 110 in Figure 6 and equivalents thereof." Docket No. 208 at 15.

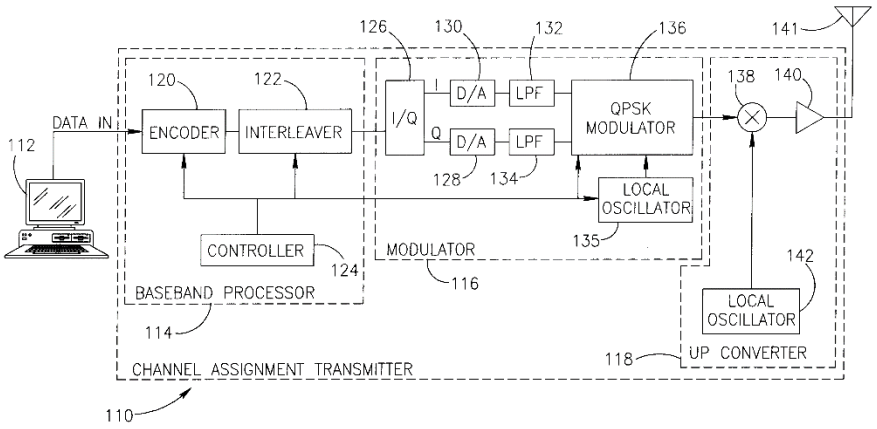

FIG.6

'073 Patent, Fig. 6.

Hughes now argues that Elbit failed to show that the accused systems performed the function of "continuous transmission of data." Docket No. 505 at 10. According to Hughes, Mr. Elbert's opinion that a discrete long burst transmission could be understood as a continuous transmission of data is insufficient because, for statutory equivalence under 35 U.S.C. § 112, ¶ 6, function must be identical. *Id.* at 11 (citing *Odetics*, 185 F.3d at 1267).

In response, Elbit identifies portions of Mr. Elbert's report explaining how the accused products' "stream" mode with variable burst lengths performs "continuous transmission of data." Docket No. 514 at 12. 8/1 PM Tr. at 72:2–75:24.

At trial, Hughes's expert, Dr. Wicker, testified that the accused systems were "bursty" and "not continuous." 8/3 PM Tr. at 129:7–17. Mr. Elbert did not agree, and the jury could have credited Mr. Elbert's analysis; the Court may not "effectively supplant the jury's assignment of credibility or weight attributed as between the experts, as those are sole functions of the jury." *Hitachi Consumer Elecs. Co. v. Top Victory Elecs. (Taiwan) Co.*, No. 2:10-CV-260-JRG, 2013 WL 5273326, at *4 (E.D. Tex. Sept. 18, 2013), aff'd sub nom., 577 F.App'x 998 (Fed. Cir. 2014)

(citing *Perkins–Elmer Corp. v. Computervision Corp*., 732 F.2d 888, 893 (Fed.Cir.1984)). Accordingly, Hughes's motion is **DENIED** on this basis.

(4) "switching means"

The Court construed the "switching means" as a means-plus-function term with the function of "switching transmission between said first communication means and said second communication means in accordance with predefined criteria" and the structure of the "modem 160 or PC 150 including driver layer 158 performing the algorithms disclosed in the '073 Patent at 10:30–11:40 or Figure 8." Docket No. 208 at 30.

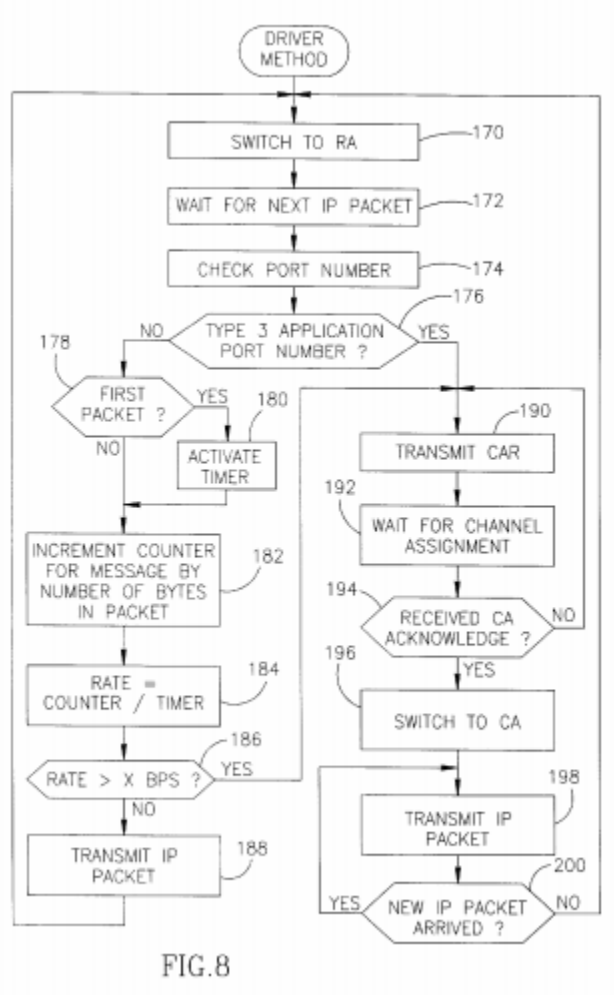

FIG.8

'073 Patent, Fig. 8.

Hughes moves for judgment as a matter of law because "Elbit failed to address how the accused systems satisfied a substantial portion of the corresponding structure for the 'switching means' limitation." Docket No. 505 at 11. According to Hughes, Mr. Elbert's testimony focused on only the first part of the algorithm disclosed at 10:30–11:40 of the '073 Patent (the decision to switch from low to high). *Id.* at 12 (citing 8/1 PM Tr. 80:9–13). Hughes also claims that Mr. Elbert failed to address how the Hughes HN, HX or Jupiter terminals perform the requesting "a specific data rate" portion of the switching means algorithm. *Id.* (citing PX-1 at 11:14–15). Hughes argues that it was only after Mr. Wicker testified that Mr. Elbert provided a conclusory rebuttal that he considered the entire corresponding structure to be met in the accused products without substantial differences. *Id.* at 13 (citing 8/4 PM Tr. at 47:17–48:1).

In response, Elbit claims that Mr. Elbert testified that the accused products perform the claimed function of "switching transmission between said first communication means and said second communication means in accordance with predefined criteria" and explained how the accused products contain a structure that is identical and/or equivalent to the corresponding structure identified by the Court (modem 160 or PC 150 including driver layer 158 performing the algorithms disclosed in the '073 Patent at 10:30–11:40 or Figure 8). Docket No. 514 at 13 (citing 8/1 PM Tr. 4 at 78:24–88:1, 122:15–124:16; 8/4 PM Tr. at 37:25–48:1).

Elbit also responds that Hughes's switching means algorithm argument is both legally and factually erroneous. *Id.* at 14. Elbit first argues that the structure (as construed by the Court) is an algorithm and that it was sufficient for Elbit to show that the overall structure of the accused algorithm is equivalent to the claimed algorithm, even if the accused algorithm has a different number of steps and parts. *Id.* (citing *Odetics*, 185 F.3d at 1268–69). Factually, Elbit claims that

Hughes's argument fails because Elbit presented substantial evidence that the accused products meet the "switching means" limitation. *Id.*

The Court questions whether Hughes's argument improperly whittles the corresponding structure for switching means down to its smallest sub-components to argue that the sub-components or their equivalents are not present in the accused product. *See Odetics*, 185 F.3d at 1268–69; *Raytheon Co. v. McData Corp*., No. 2:03-cv-13, 2004 WL 952284, at *6 (E.D. Tex. Feb. 10, 2004). Hughes's argument appears to treat each step of the algorithm as a limitation to be met, but Hughes cites no case for the proposition that an accused device must include every step in an algorithm. However, even if Hughes is correct that Elbit must show each piece of the claimed algorithm in the accused products, substantial evidence supports the jury's finding.

At trial, Mr. Elbert explained how the accused products switched from "Diversity Aloha" transmission (corresponding to the first communication means) to "Stream" transmission (corresponding to the second communication means) based on the terminal determining that it has additional data to send beyond what will fit in the Aloha transmission (a predefined criteria). 8/1 PM Tr. at 78:24–81:22. Mr. Elbert also explained that the accused modems contain a driver layer that makes the decision to switch based on "predefined criteria," particularly, when the length of a message exceeds the "certain amount of data" that the Aloha packet can carry. *Id*. at 80:20–81:3, 81:25–88:1. With respect to the algorithm at 11:20–40, Mr. Elbert opined that, when the accused satellite terminals send a message with a backlog of zero to the hub (when the terminal has no additional data to send), the hub will not assign the terminal a stream (or switch it to stream mode), corresponding to portion of the algorithm in Column 11 that states the terminal will request a switch back to the first communication means when a "user output buffer becomes empty." *Id*. at 82:19–83:1, 84:5–8; PX 1, 11:21–25, 11:32–33.

The Court is not persuaded that Mr. Elbert failed to account for the part of the algorithm regarding a "requested data rate." Mr. Elbert explained that the accused products send a flag and the amount of data it has to send to the hub, an "indication of what data they need to send," amounting to the data rate described in the claimed algorithm. 8/1 PM Tr. at 123:22–124:12.

Even if Hughes is correct that Elbit was required to identify each step of the algorithm in the corresponding structure of the accused products, substantial evidence supports the jury's finding, and Hughes's motion on this basis is **DENIED**.

(5) Availability of equivalent structures

Hughes argues that the Court should grant judgment as a matter of law as to "switching means" because Elbit failed to introduce evidence that the allegedly equivalent structure in the accused systems was available at the time the '073 Patent issued. Docket No. 505 at 14 (*citing Al-Site Corp. v. VSI Intern., Inc*., 174 F.3d 1308, 1320 (Fed. Cir. 1999)). According to Hughes, Mr. Elbert only provided evidence of the equivalent feature from 2003, two years after the patent issued. *Id.*

Elbit argues that Hughes's argument is unsupported by the trial record and waived because Hughes did not argue this theory to the jury. Docket No. 514 at 17. Elbit suggests that it did present evidence that the DirecWay system, launched in early 2001 and before the '073 Patent issued, included the accused infringing return channel. *Id.* (citing 8/1 PM Tr. at 36:10–14, 57:25–58:2, 92:14–93:3; 8/3 PM Tr. at 121:14–25; 8/1 PM Tr. at 48:20–22).

Substantial evidence supports the jury's finding that equivalent structures were available when the '073 Patent issued—particularly, that the DirecWay system was available at the relevant time period and that it included the IPoS return channel. *See* PX180; 8/1 PM Tr. at 36:9–38:14, 57:25–58:2, 92:9–93:3; 8/2 PM Tr. at 38:1–15; 8/3 PM Tr. at 121:14–121:5. Hughes's witnesses

confirmed this. 8/3 AM Tr. at 43:6–7, 44:14–16, 76:21–24, 108:1–3. Hughes's suggestion that "the timeline Elbit relies on is from May 12, 2011 [and] is not representative of or evidence of DirecWay's structures or components as they existed in 2011" is an attack on the credibility of the evidence, which is a decision squarely within the province of the jury. Accordingly, Hughes's motion on this basis is **DENIED**.

B. Judgment as a Matter of Law on Invalidity

Hughes also moves for judgment as a matter of law that the '073 Patent is invalid as anticipated by the Personal Earth Station (PES) or obvious in light of the PES and Tejima, Heath or Feldman.[3] Docket No. 505 at 15.

(1) Anticipation by PES

First, Hughes contends that the evidence at trial clearly and convincingly demonstrated that the PES system (Release 7.6A with Flexroute and LANAdvantage) was on sale, known or used by others in the United States more than a year before the November 14, 1997 priority date of the '073 Patent. *Id.* at 15. Elbit does not appear to contest the availability of the PES.

According to Hughes, Dr. Wicker compared the features of claims 2, 3, and 4 to the PES system. Docket No. 505 at 16. Hughes claims that Elbit accused the same TDMA and TDMA Aloha communication techniques of infringement that existed in the PES system. *Id.* at 17. Hughes claims that "a prior art reference which would literally infringe a properly construed claim of the '073 Patent invalidates that claim." *Id.*

Regardless of whether Hughes is correct that the accused functionalities existed in the PES system, anticipation cannot be proved by merely establishing that "one practices the prior art."

[3] "Tejima" is U.S. Patent No. 4,736,371 (DX0489); "Heath" is U.S. Patent No. 5,638,374 (DX0545); and "Feldman" is a RAND publication titled "An Overview and Comparison of Demand Assignment Multiple Access (DAMA) Concepts for Satellite Communications Networks" (DX0483).

Zenith Elecs. Corp. v. PDI Commc'n Sys., Inc., 522 F.3d 1348, 1363 (Fed. Cir. 2008). "[M]ere proof that the prior art is identical, in all material respects, to an allegedly infringing product cannot constitute clear and convincing evidence of invalidity." *Id*. "Anticipation requires a showing that each element of the claim at issue, properly construed, is found in a single prior art reference," and that "[i]t is the presence of the prior art and its relationship to the claim language that matters for invalidity." *Id*. (citing *Tate Access Floors, Inc. v. Interface Architectural Resources, Inc*., 279 F.3d 1357 (Fed. Cir. 2002)). Accordingly, Hughes's argument that claims of the '073 Patent are invalid because Hughes practices the PES fails as a matter of law.

Regardless, as a factual matter, the jury's finding that the '073 Patent was not anticipated by the PES is supported by substantial evidence. Mr. Elbert testified that PES lacked the Figure 5 structure necessary for the "first communication means." 8/4 PM Tr. at 21:5–19. He also explained that the required "switching means . . . was not in the PES product." 8/1 PM Tr. at 89:14–18; 8/4 PM Tr. at 30:6–31:25. Relatedly, the jury was also entitled to rely on Dr. Wicker's statement that the PES did not anticipate the '073 Patent. *See* 8/4 AM Tr. at 31:16–21 ("Q. What are the different ways whereby an earlier invention can invalidate a later-filed patent? A. Okay. As I understand it, there's something called anticipation. Anticipation means you can find everything that's in the claim in a piece of prior art. That's – that's not what I found."). Accordingly, substantial evidence supports the jury's finding that the claims of the '073 Patent were not anticipated by the PES, and Hughes's motion on that basis is **DENIED**.

(2) Obviousness

Hughes also claims that the PES system in combination with (1) Tejima renders obvious claims 2 and 4 of the '073 Patent, (2) Heath renders obvious claim 3, and (3) Feldman renders obvious claims 2–4. Docket No. 505 at 18.

Particularly, Hughes identifies Dr. Wicker's testimony that a person of skill in the art ("POSA") could modify the transmission techniques of the PES to be code-based as to render the asserted claims obvious. *Id.* (citing 8/4 AM Tr. at 43:23–44:20, 48:25–52:4, 52:24–56:25). Hughes claims that a POSA could take the PES system and combine it with other well-known techniques for the combination of short bursty data and continuous transmission of data. *Id.* at 19 (citing 8/4 AM Tr. at 48:25–52:4, 52:24–56:25; DX0483 (Feldman); DX0489 (Tejima); DX0545 (Heath)). Hughes also points to Dr. Wicker's testimony that it would have been obvious to a POSA to switch the TDMA Aloha in the PES for structure disclosed in the patent. *Id.* (citing 8/4 AM Tr. at 50:6–12). Hughes identifies Mr. Wicker and Mr. Elbert's testimony that Figure 5, the structure for the first communications means, could be implemented by CDMA, a technique disclosed in the Feldman reference. *Id.* (citing 8/1 PM Tr. at 121:6–23 ("Q. Now, one example of what's in Figure 5 is the CDMA transmitter; is that correct? . . . A. Yes, that's one example."); 8/4 AM Tr. at 115:19–116:8). According to Hughes, Dr. Wicker provided an obviousness analysis to modify the transmission techniques of the prior art PES system to be code-based, in accordance with the Court's claim construction. *Id.* (citing 8/4 AM Tr. at 43:23–44:20, 48:25–52:4, 52:24–56:25). As a motivation to combine, Hughes points to Dr. Wicker's testimony that "[i]t was well-known at the time that there were other technologies that could be used that would have involved the continuous transmission of data." *Id.* (quoting 8/4 AM Tr. at 32:19–33:11, 54:7–13).

With respect to the "means for switching" element in claim 2, Dr. Wicker testified that the PES system would switch, upon receiving a message that exceeds a certain size. *Id.* (citing 8/4 AM Tr. at 68:2–70:7; DX0323-0010). Hughes's expert relies on Tejima to supply this term. *Id.* (citing 8/4 AM Tr. at 68:2–70:7; DX0489-0014). For claim 3, Dr. Wicker suggests that, when the flag is set to true, the PES system will switch to the other inroute access method and that the Heath

Patent also discussed the idea of a continuation flag. *Id.* (citing 8/4 AM Tr. at 70:8–73:16; DX0323-0019; DX0545). And for the "means for switching" element in claim 4, Dr. Wicker relied on Tejima to disclose buffers being over a predetermined level in the 1980s. *Id.* (citing 8/4 AM Tr. at 73:17–74:24).

Finally, Hughes argues that Elbit failed to show a nexus between its secondary considerations evidence and the claimed features of the invention. *Id.* at 22.

Elbit responds that Dr. Wicker's testimony was conclusory and that he failed to identify any teaching, suggestion, or motivation for a POSA to combine the PES with Hughes's references. Docket No. 514 at 20. According to Elbit, Dr. Wicker's combination of PES and Heath relied on hindsight and the jury was entitled to reject it. Elbit specifically points to Dr. Wicker's testimony on cross examination, where he stated that a POSA would not have been motivated to combine PES and Heath because "[PES] worked quite well just as it was." *Id.* at 21 (citing 8/4 AM Tr. at 129:4–5 and 129:11–12 ("There was no motivation [to modify] presented by the–the product's functionality itself.")).

With respect to Feldman, Elbit points to Dr. Wicker's statement that a POSA would likely continue to rely on TDMA, as opposed to using the "code-based transmissions" disclosed in the patent. *Id.* (citing 8/4 AM Tr. 55:16–21 ("Q: So once you've started down a path of choosing time based, you're probably going to stick with that unless there's a real good reason to change? A: Well, exactly. And that's what we see here on the board. Back in the '90s, Hughes was using TDMA, and they're using it today.")). And with respect to Tejima, Elbit notes that Dr. Wicker offered no opinion for why a POSA would combine it with the PES. *Id.* at 22 (citing Id. at 68:21–69:7.)

Even if Hughes had shown that a POSA would have combined PES with Heath, Feldman, or Tejima, Elbit maintains that it offered sufficient rebuttal evidence at trial to support the jury's finding that the claims were not obvious. *Id.* And, in response to Hughes's secondary considerations argument, Elbit claims that it offered evidence of long-felt need, skepticism, and commercial success. *Id.* at 22.

Substantial evidence supports the jury's conclusion that the '073 Patent was not invalid for obviousness. The jury was entitled to reject Hughes's obviousness combinations in light of Dr. Wicker's statements that a POSA would not have been motivated to combine PES and Heath because PES worked well "just as it was," his statements that a POSA may have continued relying on TDMA in the PES, as opposed to combining it with the code-based techniques in Feldman. Because Dr. Wicker did not provide a motivation to combine the PES with Tejima, the jury was entitled to reject that combination as well. 8/4 AM Tr. at 129:4–5 and 129:11–12, 55:2–21, 68:21–69:7.

Relatedly, in its motion, Hughes does not point to clear and convincing evidence that Tejima, Feldman, and Heath would satisfy the requisite elements not disclosed by PES. *See* Docket No. 505 at 18–21. For example, Hughes discusses Feldman as providing the "code-based transmissions such as CDMA" that could be implemented in the PES system, but Hughes does not indicate how the transmissions supplied in Feldman meet the structure in Figure 5. *See id.* (citing 8/4 AM Tr. 50:13–52:4 ("Q. So in your opinion, would it have been obvious to one of ordinary skill in the art to modify Personal Earth Station's time-based structure and potentially use codes? A. Yes, there are documents like this that say it's something that a person would try.").

Elbit also presented the jury with evidence of objective indicia of nonobviousnsess. An article that appeared in the McKinsey Quarterly is in the record, which indicated that those in the

industry felt a pressing need to address high bandwidth needs but did not believe that a two-way satellite with a return link over satellite could be a viable solution. *See* PX594. Mr. Elbert testified at trial to this industry need and opined that Hughes introduced the DirecWay product as a new way to address this need. *See* 8/1 PM Tr. at 36:6–21. Even if Hughes's witness, Mr. Gaske, disagreed with Mr. Elbert and attributed the long-felt need for two-way Internet over satellite to the cost of components, the jury was entitled to weigh Mr. Gaske's testimony against that given by Mr. Elbert; it is not the Court's role to reweigh the evidence or consider what the record might have otherwise supported. *See Apple Inc. v. Samsung Electronics Co., Ltd.*, 839 F.3d 1034, 1056 (Fed. Cir. 2016).

Additionally, Elbit linked the commercial success of the accused product to the claimed invention with PX449, illustrating the increased sales for Hughes's infringing two-way solution compared to its previous one-way system. This evidence was tied to Hughes's transition from non-infringing products to infringing products, which incorporated the patented features of the '073 Patent. *See* 8/2 PM Tr. at 16:18–23; 39:1–40:1; 41:15–21; PX449. On this record, the jury was presented with substantial evidence of a nexus between the '073 Patent and commercial success supporting the jury's verdict that the '073 Patent would not have been obvious.

Accordingly, substantial evidence supported the jury's finding that the '073 Patent was not invalid as obvious and Hughes's motion for judgment as a matter of law on this basis is **DENIED**.

C. New Trial on Infringement and Invalidity

GE also moves for a new trial because "Elbit's conduct at trial, together with its inaccurate representations to the Court during and leading up to trial, resulted in a jury verdict based on irrelevant, highly prejudicial emotional issues and devoid of certain critical facts." Docket No. 505 at 22. According to Hughes, the jury's verdict with respect to the '073 Patent is against the

great weight of the evidence. *Id.* Specifically, Hughes moves for a new trial on five bases: (1) because of the Court's limiting instruction, (2) because Elbit presented irrelevant evidence related to a pre-priority date meeting to inject confusion and prejudice, (3) because the Court improperly rejected Hughes's claim construction positions, (4) because the case was tried in an improper venue, and (5) on the same grounds raised in its renewed motion for judgment as a matter of law. The Court addresses each of Hughes's arguments in turn.

(1) Limiting instruction

During trial the Court determined that Hughes's argument and questioning "had crossed over into the territory of claim construction" and ruled that a limiting instruction was necessary. 8/3 AM Tr. at 13:18–14:7. Hughes now challenges that limiting instruction.

First, Hughes argues that the Court erred in finding a limiting instruction appropriate because its arguments and evidence did not run afoul of the claim construction. Docket No. 505 at 23. Specifically, Hughes argues that the Court improperly relied on statements made outside of the jury's presence to determine that a limiting instruction was necessary. *Id.* at 24. Hughes also argues that the Court's limiting instruction improperly applied a new negative limitation to the claims. *Id.* at 24. According to Hughes, the limiting instruction improperly excluded the phrase "in its entirety." *Id.* at 26. Hughes claims that this "new negative limitation" improperly suggested to the jury that the Court rejected Hughes's noninfringement position: "Stating in the middle of Hughes' case in chief that '[t]he Court also determined that the claims do not require the random access transmitter in Figure 5 to be configured solely to perform non-synchronous frequency hopping code division multiple access, NS-FH-CDMA' is easily conflated in the jury's mind with a statement directly from the bench expressly doubting Hughes' non-infringement theory." *Id.* at 27.

In response, Elbit states that Hughes repeatedly contradicted the Court's claim construction (prior to the limiting instruction) by arguing to the jury that the '073 Patent was limited to CDMA and FDMA techniques. Docket No. 514 at 23. Elbit points to Hughes's opening statement, in which it repeatedly made reference to transmission techniques as the reason why Hughes did not infringe: "We're -- we're–we've got a big ranch called TDMA. That's what we do. We don't do FDMA, we don't do CDMA." *Id.* at 24 (quoting 7/31 PM Tr. at 59:15–16).

Elbit argues that Hughes repeatedly violated the Court's claim construction over the course of the trial and suggested to the jury that the first and second communication means meant CDMA and FDMA. *Id.* (citing 7/31 AM Tr. at 59:15–16). With respect to Hughes's argument that the Court improperly injected a "negative limitation" into the claims, Elbit responds that Hughes was foreclosed from presenting its argued "distinction" to the jury "because the phrase 'in its entirety' was not presented to the jury as part of the claim construction." *Id.* Elbit also argues that the Court's instruction did not prejudice Hughes because it was clear that the jury was to determine whether the accused structure is the same or equivalent to the structure in Figure 5 and that the jury "may consider" evidence that "the accused system is not configured to perform CDMA" in making its determination. *Id.* at 26 (citing 8/3 AM Tr. at 27:23–28:9, 28:22–29:5).

The Court's limiting instruction is not a basis for a new trial. In its *Markman* Order, the Court construed "first communication means" as a means-plus-function term with the function of "transmitting short bursty data" and the structure of the "Random Access Transmitter 70 in Figure 5 in the '073 Patent and equivalents thereof." Docket No. 208 at 15. The Order further states that "the Court rejects Defendants' proposal to include a specific technique as part of the corresponding structure." *Id.* at 14. In Hughes's opening statement, it asked the jurors to turn to the '073 Patent abstract and told the jury that "first communication scheme uses random access method based on

a nonsynchronous frequency hopping code division multiple access technique. CDMA." 7/31 PM Tr. at 58:6–8. In the same opening statement, Hughes explained that the claims required a "first communication means, second communication means, [and] the decision to switch in the remote." *Id.* at 59:11–14. Hughes then stated that "[i]f you don't do those, then you're off on your own property." *Id*. Next, Hughes explained that the accused products were on "a big ranch called TDMA" and that Hughes didn't "do FDMA . . . [or] CDMA." *Id.* at 59:15–16. Based on these statements, the Court determined that Hughes's arguments had clearly violated the Court's claim construction, arguing to the jury that the claim limitations could be boiled down to specific techniques. Relatedly, when the Court explained that it was considering issuing a limiting instruction, it noted that Hughes's proposed slides, to which Elbit objected, included a slide titled "First Communication Means Structure CDMA." 8/3 AM Tr. at 13:8–7.

The Court is not persuaded that the limiting instruction should have included the phrase "in its entirety" or that Hughes suffered prejudice from its exclusion. Again, as stated above., the Court construed "first communications means" as a means-plus-function term with the function of "transmitting short bursty data" and the structure of the "Random Access Transmitter 70 in Figure 5 in the '073 Patent and equivalents thereof." Docket No. 208 at 15. The construction *does not include* the phrase "in its entirety," and the Court is not persuaded that Hughes was entitled to a modification of the claim construction thereto mid-trial. It is not "reasonably clear that prejudicial error has crept into the record or that substantial justice has not been done," and, accordingly, Hughes's motion for a new trial on this basis is **DENIED**. *See Sibley v. Lemaire*, 184 F.3d 481, 487 (5th Cir. 1999) (*citing Del Rio Distributing, Inc. v. Adolph Coors Co*., 589 F.2d 176, 179 n. 3 (5th Cir. 1979)); *Perret v. Nationwide Mutual Ins. Co*., Case Nos. 4:10- cv-522, 4:10-cv-523, 2013 WL 12099400, at *1 (E.D. Tex. July 19, 2013).

(2) Evidence related to a pre-priority date meeting (PX-385)

Next, Hughes moves for a new trial based on the admission of evidence related to a 1997 meeting between Shiron and Hughes (PX-385). Particularly, Hughes suggests that the Court admitted the slide deck as relevant to willfulness and copying for the '073 Patent but that Elbit did not rely on it for willfulness at trial, using it instead to "confuse the jury about the infringement and scope of the '073 Patent. Docket No. 505 at 28.

Hughes particularly complains that Elbit relied on the exhibit in its opening to argue that Hughes's DirecWay product was a "copy" of Shiron's invention as disclosed in the slide deck. *Id.* at 30 (citing 7/31 PM Tr. at 32:8–17, 34:18–20, 37:19–20). According to Hughes, Elbit's substantial focus on the 1997 meeting in its trial theme tainted the verdict and led the jury to find the '073 Patent valid and infringed against the weight of the evidence. *Id.* at 31.

Elbit claims that the exhibit was relevant to Elbit's overall invention story and the relationship between the parties. Docket No. 514 at 27. Elbit suggests that Shiron's meeting with Hughes in February 1997 plays a role in Elbit's invention story for the '073 Patent by shedding light on what the inventors thought their invention was capable of and how the invention would impact the industry. *Id.* According to Elbit, the exhibit provided important background and casted Shiron as an impressive startup that was able to beat a much larger, established competitor to the punch. *Id.* Elbit further maintains that it was not required to argue every basis for relevance to the Court when seeking to admit the document. *Id.*

The Court is not persuaded that admission of PX-385 was error—let alone prejudicial error—supporting the grant of a new trial. As a preliminary matter, Hughes has not shown that the jury's finding that the '073 Patent was infringed and was not invalid is against the weight of the evidence. Likewise, Hughes has not met its burden to show that the admission of the slide

deck was erroneous and resulted in an unfair trial. Hughes claims that the slides "tainted the jury with an improper pre-priority date disclosure and an improper story of copying and willfulness, which prejudiced the jury's evaluation of infringement and validity." Docket No. 518 at 12–13. Notably, the jury did not find willful infringement of the '073 Patent. Docket No. 482 at 6.

To the extent Hughes argues that an improper copying story was put before the jury, Hughes cannot identify any statement by Elbit that Hughes "copied" Shiron. Additionally, Hughes suggests that Elbit "tainted the jury with an improper pre-priority date disclosure" but points to no specific statements so infecting the jury. *See* Docket No. 505 at 30–31; Docket No. 518 at 11–12 (noting that Elbit never used the word "copy"). Having reviewed the trial record, the Court finds that a new trial is not warranted based on the admission of PX-385. *See Johnson v. Ford Motor Co.*, 988 F.2d 573, 582 (5th Cir. 1993) ("a new trial will not be granted unless, after considering counsel's trial tactics as a whole, the evidence presented, and the ultimate verdict, the court concludes that 'manifest injustice' would result by allowing the verdict to stand"). Accordingly, Hughes's motion thereto is **DENIED**.

(3) Claim Construction

Hughes also seeks a new trial because, according to Hughes, "for the purpose of preserving the issue for appeal, trial should have gone forward—and the jury should have been instructed—based on Hughes' proposed claim constructions for the reasons identified in its claim construction briefing." Docket No. 505 and 31–32. For the reasons that are detailed in the Court's *Markman* Order (Docket No. 208), Hughes's motion for a new trial on this basis is **DENIED**.

(4) Improper Venue

Likewise, Hughes seeks a new trial because, according to Hughes, this case was tried in an improper venue. For the reasons detailed in the Court's order on Hughes's motion to dismiss for

improper venue (Docket No. 430; *see also* Docket No. 388), Hughes's motion for a new trial on this basis is **DENIED**.

(5) Hughes's Motion for Judgment as a Matter of Law

Finally, Hughes provides no basis for a new trial on any of these issues. Having denied each of its requests in its Renewed Motion for Judgment as a Matter of Law, *supra* Section II. A.–B., Hughes's motion for a new trial on this basis is **DENIED**.

D. New Trial on Damages

Hughes also moves for a new trial on damages because, according to Hughes, the jury's damages award is not supported by legally sufficient evidence of a reasonable royalty. Docket No. 505 at 33. Hughes cites four reasons it believes justify a new trial on damages: (1) the Gilat agreement was not a comparable settlement agreement; (2) Elbit's royalty rate does not reflect the value of the patented invention; (3) the jury's damages award was inflated by Hughes's entire revenues, and (4) Elbit's error in the iLeverage valuation irreparably prejudiced the jury's damages award.

(1) Gilat agreement

According to Hughes, Mr. Christopher Martinez, Elbit's damages expert, failed to establish that the economic circumstances surrounding the Gilat agreement (PX-215) were economically comparable to the circumstances at the hypothetical negotiation. Docket No. 505 at 34. Particularly, Hughes complains that the Gilat agreement was directed to existing products that Gilat did not have the right to sell and payments negotiated by a party in this situation are "in no shape or form a royalty that would be appropriate for a party seeking to license patents before even making covered products or incurring any costs." *Id.* at 34–35. Hughes also argues that the Gilat

agreement was "effectively an injunction" and not comparable to the economic reality of the hypothetical negotiation. *Id.*

To the extent Hughes re-argues its *Daubert* motion regarding Mr. Martinez, the Court incorporates by reference its *Daubert* order. *See* Docket No. 388 at 31–34. At trial, Mr. Martinez testified to the comparability of the Gilat agreement, noting its temporal comparability, technological comparability, and comparability with respect to the relationship between the parties in the hypothetical negotiation. *See, e.g.*, 8/2 PM Tr. at 28:12–16 ("Q. So let's talk about some of those points. So number one, is the Hughes/Gilat agreement from the right time? A. Yes, it is. The Hughes/Gilat agreement was in September of 2001. The hypothetical negotiation was May of 2001. So we're – we're pretty close in time."); 28:21–29:2 ("In talking with Mr. Elbert and giving him the patents related to all the agreements that I looked at, and I asked him to look at those patents and tell me which were most -- which was closest, it's one of the patents in this Hughes/Gilat litigation that Mr. Elbert deemed to be most comparable. So, yes, it -- it seems to be technologically comparable."); 29:3–16 ("Q. Okay. And did you also -- were you also able to review any testimony from Hughes' own witnesses, in particular Mr. Gaske, where he discussed this litigation and what it concerned? A. Yes, I did. Q. And what did you learn from that? A. I learned from Mr. -- Mr. Gaske – Gaske's testimony, excuse me, that the reason Hughes filed the lawsuit against Gilat -- this lawsuit against Gilat was because it believed that Gilat was -- was using Hughes' patents in its one-way product. We've all heard about the one-way and the two-way. This is the old one-way product."); 31:17–32:10 ("[Q.] What about the relationship between the parties? Is there any difference between Gilat and Hughes versus Shiron and Hughes? A. Yes, there is. Gilat and Hughes were the two biggest players in the market. They -- they were the -- they were a big chunk of the market together, the two of them. Shiron, on the other hand, was a startup.

Shiron wasn't in the same position that either Gilat and Hughes were as a big market player that could influence the marker -- market. And so what you have to consider here is that a negotiation between competitors is probably a more fierce negotiation and -- in a hypothetical or a real-world situation, and so you have to understand that's why we're looking at this issue. Gilat and Hughes were -- were big competitors. Now, you can't completely discount Shiron. Shiron wanted to play in this space, but Shiron was a smaller player. That's for sure.").

Here, the jury relied on the testimony of the only damages expert to testify at trial, Mr. Martinez, and a comparable license in the record to award a reasonable royalty rate of $18 per unit. Hughes has not met its burden to establish that the jury's verdict was not supported by the evidence at trial and is not entitled to a new trial on damages because of Mr. Martinez's reliance on the Gilat agreement. Accordingly, Hughes's motion for a new trial on damages on this basis is **DENIED**.

(2) Royalty Rate

Next, Hughes argues that Elbit's damages expert did not perform proper apportionment. Docket No. 505 at 36–37. Hughes contends that Mr. Martinez's reliance on "built-in" apportionment was inappropriate as unsupported by the record and Federal Circuit law. *Id.* at 37 (citing *Commonwealth Sci. & Indus. Research Organisation v. Cisco Sys., Inc*., 809 F.3d 1295, 1303 (Fed. Cir. 2015) ("*CSIRO*"). According to Hughes, reliance on the built-in approach to apportionment is only appropriate in narrow circumstances that do not apply here because the Gilat agreement is not a comparable license. *Id.* at 38. Hughes further argues that the Court's rejection of its built-in apportionment instruction "compounded the problem." *Id.*

Again, to the extent Hughes re-argues its *Daubert* motion on Mr. Martinez, the Court incorporates by reference its *Daubert* order. *See* Docket No. 388 at 31–34. In *CSIRO*, the Federal Circuit explained that valuations of patents based on comparable license are appropriate where the

"model begins with rates from comparable licenses and then accounts for differences in the technologies and economic circumstances of the contracting parties." *CSIRO*, 809 F.3d 1303 (internal quotation marks omitted). *CSIRO* does not require that an apportionment analysis with comparable licenses rely on licenses by the very same parties negotiating over the value of the same asserted patent, and Mr. Martinez's explanation of the differences between the accused technology and the technology subject to the Gilat license adequately accounts for his apportionment of the value of the patents-in-suit. *See* Docket No. 388 at 32.

Additionally, to the extent Hughes summarily argues that the Court's jury instruction "[c]ompound[ed] the problem," the jury was instructed to apportion damages, *see* Docket No. 485 at 31, and the Court is not persuaded—and Hughes does not argue—that the Court's apportionment instruction was legally incorrect. Accordingly, Hughes's motion for a new trial on this basis is **DENIED**.

(3) Entire Market Value Rule

Hughes also argues that the entire jury damages award was improperly inflated by introduction of evidence of Hughes's entire revenues. Docket No. 505 at 38–39. Particularly, Hughes objects to Mr. Martinez's comparison of his proposed $18 per unit royalty to Hughes's $2,500 total lifetime subscriber revenue value. *Id.* at 39. Hughes claims that this violates the entire market value rule. *Id.* (citing *Uniloc USA Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011)). According to Hughes, if Mr. Martinez used the difference in price between a non-infringing system and an infringing system as part of a check, "he would have compared the $18 royalty with $385 in incremental revenue." Docket No. 518 at 18.

As the Federal Circuit explained in *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014), the entire market value rule has two parts: a substantive legal rule and a separate,

evidentiary principle. The substantive legal rule mandates that an ultimate reasonable royalty award be based on the incremental value that the patented invention adds to the end product. *Id.* The evidentiary principle, applicable specifically to the choice of a royalty base, is that where a multi-component product is at issue and the patented feature is not the item which imbues the combination of the other features with value, care must be taken to avoid misleading the jury by placing undue emphasis on the value of the entire product. *Id.* The point of the evidentiary principle is to help our jury system reliably implement the substantive statutory requirement of apportionment of royalty damages to the invention's value. *Id*.

In *Uniloc*, the Federal Circuit found that Uniloc's reference to Microsoft's entire market value for Office and Windows, $19 billion, was an improper check under the entire market value rule. 632 F.3d at 1319. The court noted that "[t]he disclosure that a company has made $19 billion dollars in revenue from an infringing product cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue." *Id.* at 1320. The record in *Uniloc* indicates that Uniloc emphasized Microsoft's total revenue value in a pie chart, in comparing Uniloc's proposed royalty to the total revenue Microsoft earns through the accused products, and by Uniloc's belittlement of Microsoft's expert's royalty figure as representing only .0003% of total revenue. *Id.* at 1318–1319.

Here, however, Mr. Martinez's consideration of $2,500 lifetime subscriber revenue value does not amount to the violation that occurred in *Uniloc*. A review of the record suggests that Mr. Martinez only refers to the $2,500 in two instances, both with respect to his $18 royalty rate being "reasonable." *See* 8/2 PM Tr. at 44:16–46:13, 51:12–19. This does not amount to the significant prejudicial use described in *Uniloc*. To the extent Hughes takes issue with the value Mr. Martinez used in his royalty check, Hughes was entitled to cross-examine him. But Hughes's disagreement

with Mr. Martinez is not a sufficient basis to warrant a new trial on damages. Accordingly, Hughes's motion for a new trial on this basis is **DENIED**.

(4) iLeverage valuation

During closing argument, counsel for Elbit presented the jury with a document that was in evidence, a valuation of the asserted patents conducted by iLeverage. *See* 8/7 AM Tr. at 134:19–20. Elbit's counsel proceeded to check the calculations of certain numbers on the document, *Id.* at 135:22–135:21, and posited to the jury that the document contained mathematical errors. *Id.*

Hughes now claims that it is entitled to a new trial based on this attorney argument. Docket No. 505 at 41. Particularly, Hughes claims that Elbit's counsel's argument that the document contained a mistake was "[w]ithout any basis in the trial record beyond his own personal conjecture." *Id.* Hughes appears to suggest that Elbit's counsel's argument amounted to a damages opinion "beyond the bounds of acceptable advocacy" and that it irreparably prejudiced the jury to disregard the iLeverage valuation as a proper basis for damages." *Id.* According to Hughes, the calculation was without any basis in the record because Mr. Uzi Aloush, the author of the document, testified that he believed the document to be credible and because Mr. Shaul Laufer, the inventor of the '073 Patent, never testified to any error in the document. *Id*. at 42–43. Hughes also faults Elbit's counsel's calculation for beginning with the entire domestic market value. *Id.* at 43–44.

In response, Elbit claims that the jury is entitled to compute its own damages without being "required to accept one specific figure or another." Docket No. 514 at 41 (citing Docket No. 485 at 32). Elbit contends that it was not required to present a witness to testify that "100 discounted by 20% results not in 20, but 80." *Id.* Elbit also points to a statement from the author of the document, Mr. Aloush, where he states that the iLeverage document was unreliable. *Id.* at 42 n.19

(citing 8/2 AM Tr. at 51:10–18, 52:13–24, 53:3–11, 53:23, 55:23, 57:7–19, 59:5–8). Elbit further suggests that its argument was proper rebuttal to Hughes's closing statement, during which it stated that Mr. Aloush's valuation was "thorough work," and that Aloush had "talked to hundreds of people in the industry and came to a valuation for these patents." *Id.* at 43 (citing 8/7 Tr. at 128:17–129:5). Elbit also claims that any objection Hughes has to Elbit's closing is waived because Hughes did not object during Elbit's rebuttal or at a sidebar conference immediately thereafter. *Id.*

As the Court noted in response to Hughes's objection—lodged three hours after the jury began its deliberations—Hughes's argument was not presented in time for the Court to act on it. 8/7 AM Tr. at 143:22–143:3. At the time, the Court questioned Hughes as to why its objection had not been waived, to which Hughes responded that "it was a complete surprise to us" and that counsel "went back and checked the entire record" in the interim. *Id.* at 143:4–19. Neither of these reasons excuses Hughes's three-hour delay in its objection, and because Hughes failed to object to Elbit's counsel's closing argument at the time of the argument or at a sidebar conference immediately thereafter, Hughes's argument is waived. *See Nissho-Iwai Co. v. Occidental Crude Sales, Inc.*, 848 F.2d 613, 619 (5th Cir. 1988).

Even if Hughes's argument is not waived, however, it has not demonstrated that Elbit's counsel's argument extended beyond the bounds of acceptable advocacy. Although Hughes argues there was no basis in the record to question the calculations in the iLeverage document, the trial record suggests otherwise. For example, testimony from the document's author, Mr. Aloush, suggested that the document was "not [a] valuation" and that percentages in the document were "based on no research almost whatsoever." 8/2 AM Tr. at 52:10–24; *see also id.* at 51:11–53:11 ("That's a – that's a document that I wrote, which in an answer to Aharon Shech, the CEO of Shiron. He asked me to value the patents during the process, toward -- towards the end. And I

refused. I said I know how to do that. That's not my job. My job -- I was hired to sell the patents, not to value them. QUESTION: Now, let me be clear. Did you ever -- is there anything in this document in which you lied to Mr. Shech? . . . ANSWER: No, I'm not a liar. I didn't -- I didn't lie. . . . But it's not no, period. It's I didn't lie, but this is not valuation. It's not a lie the same way when I say to my son that he's the most clever boy in -- in -- in -- in the world. Is that a lie, that he's the most clever boy in the world? No, it's not a lie. Is it -- is it based on thorough research? Also no.").

Importantly, Elbit's counsel's rebuttal argument responded to Hughes's closing statement, in which counsel for Hughes argued that Mr. Aloush's document was "thorough work" and that Aloush "had talked to hundreds of people in the industry and came to a valuation for these patents." 8/7 Tr. at 128:17–129:5. Mr. Aloush's testimony about the lack of reliability of the iLeverage valuation provides at least the necessary factual predicate for Elbit's counsel to question the reliability of the calculations contained therein in closing argument. While "[a] closing statement may implicate the interest of substantial justice when counsel's assertions are either false or without basis in the record," here, the iLeverage document itself and testimony from its drafter were both in the record. *See In re Isbell*, 774 F.3d 859, 872 (5th Cir. 2014). Counsel's statements merely asked the jury to look critically at DX-307.

Hughes also seems to suggest that the closing argument was improper because Elbit did not depose Mr. Aloush on the accuracy of the math in the iLeverage document and because Elbit did not depose Mr. Christopher Bakewell, Hughes's damages expert, on the same, but it is unclear that Elbit should have been required to do those things. Mr. Bakewell did not testify at trial, so whether he was deposed on the iLeverage math is somewhat irrelevant to the evidence presented at trial. Moreover, Elbit was not required to depose Hughes's witnesses about documents on Hughes's exhibit list.

Accordingly, Hughes is not entitled to a new trial on this basis, and its motion on this basis is **DENIED**.

E. Remittitur

Hughes also asks for a remittitur. Docket No. 505 at 44. Because the Court has not determined that the jury's damages award is against the weight of the evidence, *see supra* Section II.D., Hughes's motion for a remittitur is **DENIED**.

III. ELBIT'S POST-TRIAL MOTION (Docket No. 507)

In Elbit's Post Trial Brief, it moves for costs, supplemental damages from ongoing royalties on infringing sales not accounted for in the verdict, pre- and post-judgment interest, and attorneys' fees. Docket No. 507. The Court discusses each request in turn.

A. Costs

Elbit seeks, and Hughes does not object to, $174,326 in costs associated with deposition transcripts and videos, trial and hearing transcripts, fees for witnesses, the complaint filing fee, and fees for exemplification and copies. Docket No. 507 at 2. As these costs are unopposed, Elbit's motion with respect to these costs is **GRANTED** and Elbit is awarded $174,326 in costs.

Elbit also seeks $99,903.52 in disputed costs for its audio/visual and graphics service expenses incurred directly before and after trial. *Id.* "Consistent with the 'strict construction' given to [28 U.S.C. §] 1920 by the Supreme Court and the Fifth Circuit, the Federal Circuit has construed the term 'exemplification' narrowly to be limited to "an official transcript of a public record, authenticated as a true copy for use as evidence." *Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, No. 2:15-CV-1202-WCB, 2017 WL 3044594, at *2 (E.D. Tex. July 18, 2017) (collecting cases). Elbit's costs for audio/visual and graphics services are not exemplification costs taxable under § 1920(4), and Elbit's request for these costs is **DENIED**.

B. Supplemental Damages and Ongoing Royalties

Elbit seeks supplemental damages at the jury's implied royalty rate of $18 per unit for the infringing units shipped from July 19, 2017 through August 7, 2017. Docket No. 507 at 3–4. In light of the Court's finding that the jury's infringement verdict is supported by the record, Hughes does not dispute Elbit's request. Docket No. 515 at 4. The parties have stipulated that 59,653 units were sold during this period that were not reflected in the jury's damages award. Docket No. 539. Accordingly, Elbit is entitled to and is **AWARDED** $1,073,754 in damages for pre-verdict infringement not accounted for in the jury's verdict.

Elbit also seeks an enhanced royalty rate for post-verdict infringing sales. The Federal Circuit has interpreted 35 U.S.C. § 283 to permit a court to award an ongoing royalty for patent infringement in lieu of an injunction. *Prism Techs. LLC v. Sprint Spectrum L.P.*, 849 F.3d 1360, 1377 (Fed. Cir. 2017). Ongoing royalties may be based on a post-judgment hypothetical negotiation using the Georgia–Pacific factors. *Arctic Cat Inc. v. Bombardier Recreational Prod. Inc*., 876 F.3d 1350, 1370 (Fed. Cir. 2017). The amount of the ongoing royalty is "committed to the sound discretion of the district court" to be determined in accordance with principles of equity. *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1364 n.2 (Fed. Cir. 2008).

At the outset, the Court determines that imposition of an ongoing royalty is an appropriate exercise of the Court's discretion in this case. *Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 35 (Fed. Cir. 2012). In this case, it is clear from the verdict form that the jury awarded damages for past infringement. *See* Docket No. 482 at 4 ("What sum of money . . . do you find by a preponderance of the evidence would fairly and reasonably compensate Elbit for any past infringement . . . "); *see also Whitserve,* 694 F.3d at 35 ("The jury was instructed to award "damages," which by definition covers only past harm."). Because the jury's verdict does not

compensate Elbit for future infringement, the Court will award an ongoing royalty. *Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1379 (Fed. Cir. 2010).

The parties agree that the jury's implied royalty rate is $18 per unit. *See* Docket No. 507 at 3–4; Docket No. 515 at 5. As discussed *supra* Section II.D., the jury's royalty rate was supported by substantial evidence. From this starting point, the Court conducts a renewed analysis of a reasonable royalty based on a post-verdict hypothetical negotiation. The jury's damages award is a starting point for evaluating ongoing royalties. *See Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, No. 2:15-cv-1202-WCB, 2017 WL 3034655, at *7 (E.D. Tex. July 18, 2017) ("*Uropep*"). The burden is on Elbit to show that it is entitled to a royalty rate in excess of the rate initially determined by the jury. *Creative Internet Advertising Corp. v. Yahoo! Inc.*, 674 F. Supp. 2d 847, 855 (E.D. Tex. 2009).

"There is a fundamental difference . . . between a reasonable royalty for pre-verdict infringement and damages for post-verdict infringement." *Amado*, 517 F.3d. at 1361. "Prior to judgment, liability for infringement, as well as the validity of the patent, is uncertain, and damages are determined in the context of that uncertainty." *Id.* at 1362. Once a judgment of validity and infringement has been entered, however, the calculus is markedly different because different economic factors are involved. *Id.* (citing *Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1315 (Fed. Cir. 2007)).

Courts have questioned whether *Amado* applies to cases where Plaintiffs are not seeking an injunction. *See Uropep*, 2017 WL 3034655, at *5; *Cioffi v. Google, Inc.*, No. 2:13-CV-103, 2017 WL 4011143, at *4 (E.D. Tex. Sept. 12, 2017); *EMC Corp. v. Zerto, Inc.*, No. CV 12-956 (GMS), 2017 WL 3434212, at *3 (D. Del. Aug. 10, 2017) (reviewing *Amado* and *Paice* and concluding that, "[w]hen an injunction is found to be improper, however, there appears to be no

material difference between the parties' current situation and the one it was in at the time of the hypothetical negotiation."); *but see Arctic Cat*, 876 F.3d 1370.

The Court agrees with Hughes that an enhancement of the ongoing royalty rate would be inappropriate, especially when Elbit did not seek a permanent injunction from the Court. *See Amado*, 517 F.3d at 1362 ("When a district court concludes that an *injunction* is warranted, but is persuaded to stay the injunction pending an appeal, the assessment of damages for infringements taking place *after the injunction* should take into account the change in the parties' bargaining positions, and the resulting change in economic circumstances, resulting from the determination of liability . . . as well as the evidence and arguments found material to the granting of the injunction and the stay.") (emphasis added). But, the Court also recognizes that there are "some indications in Federal Circuit law that *Amado* is not limited to that context." *Uropep*, 2017 WL 3034655, at *5 (collecting cases). Regardless of whether *Amado* applies to a case that does not involve a request for injunctive relief, the Court determines that, under its framework, enhancement is inappropriate here.

In considering the enhancement of the ongoing royalty, the Court considers the factors outlined in *Georgia-Pacific Corp. v. U.S. Plywood Corp*., 318 F. Supp. 1116 (S.D.N.Y. 1970). The Court focuses on any evidence that was not before the jury and any changed circumstances between the hypothetical negotiation, as determined by the jury, and the hypothetical negotiation that would occur after the judgment. *Bianco v. Globus Med., Inc*., 53 F. Supp. 3d 929, 933 (E.D. Tex. 2014).

Here, Elbit seeks (1) an enhancement of between 25 percent and 50 percent because of the parties' changed bargaining positions in the post-verdict hypothetical negotiation, (2) an

enhancement of 29 to 63 percent because of an increase in Hughes's profit margins, and (3) an enhancement of 50 percent for willfulness. Docket No. 507 at 5.

First, with respect to bargaining positions, Elbit states that it now has "significantly greater bargaining power than what Hughes faced in the May 2001 hypothetical negotiation," as evaluated by the jury, because Shiron was the owner of the patent at the original hypothetical negotiation and was a struggling startup with no financial means of enforcing its patent rights. *Id.* Shiron's revenues at the time of the 2001 negotiation were less than $5 million, whereas Elbit's post-verdict annual revenues exceed $3 billion with approximately $239 million in annual net profit. *Id.* at 5–6 (citing Docket No. 507-2 ("Martinez Decl.") at ¶¶ 18–19). Elbit also suggests that the patented technology has enjoyed more commercial success today than it had at the time of the jury's hypothetical negotiation, strengthening Elbit's bargaining position as well. *Id.* at 6 (citing Martinez Decl. at ¶¶ 21–22). According to Elbit, that the '073 Patent expired in November of 2017 suggests that Hughes would not attempt to design around the patent, further strengthening Elbit's bargaining position. *Id.*

Second, Elbit argues that Hughes's increased profitability would provide an additional basis for enhancement, independent of the higher bargaining power commanded by post-verdict Elbit compared to 2001 Shiron. *Id.* at 7 (citing Martinez Decl. at ¶¶ 25–28).

And third, Elbit argues that Hughes's post-verdict infringement warrants an enhancement from willfulness. Elbit asks the Court to evaluate the factors outlined in *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 827 (Fed. Cir. 1992), particularly focusing on the infringer's investigation and good-faith belief of invalidity and noninfringement factor (factor 2) and the closeness of the case factor (factor 5). *Id.* at 8.

Hughes responds that the ongoing royalty should be no higher than the jury's implied royalty and suggests that post-verdict royalty enhancement is only appropriate in cases where a permanent injunction was found to be appropriate. Docket No. 515 at 5 (citing *Cioffi*, 2017 WL 4011143, at *4).

In response to Elbit's argument for enhancement based on bargaining positions, Hughes contends that the purported changes in the parties' bargaining positions are unrelated to the invention. *Id.* at 6. Hughes also impugns Mr. Martinez's commercial success theory, suggesting that he did not consider other reasons for the increased commercial success of Hughes's products. *Id.* at 7 (citing Docket No. 515-2 ("Bakewell Decl.") ¶¶ 19–23). Hughes suggest that it has available non-infringing alternatives now that it would not have had access to at the 2011 hypothetical negotiation. *Id.* at 8 (citing Bakewell Decl. ¶¶ 17–18). Hughes also claims that Elbit's enhancement request for 25 to 50 percent is arbitrary. *Id.* at 9.

In response to Elbit's argument that the royalty rate should be enhanced because of Hughes's profitability, Hughes counters that Elbit failed to present evidence of a nexus between the '073 Patent and Hughes's increased profitability. *Id.* at 10.

Finally, Hughes responds to Elbit's request for a willfulness enhancement, arguing that willfulness should be rejected as a basis for enhancement where future infringement was authorized indefinitely as a result of Elbit's choice to forego seeking an injunction. *Id.* at 10–11 (citing *Cioffi*, 2017 WL 4011143, at *8).

It is unclear that Elbit would have a bolstered position in a hypothetical negotiation because of its considerable resources (as compared to Shiron in 2001). Although Mr. Martinez, Elbit's damages expert, now states that Elbit's bargaining position has improved as compared to Shiron's, he also testified at trial that Shiron and Gilat, a Hughes competitor and one of the "biggest players

in the market," were similar parties. 8/2 PM Tr. at 31:17–32:18, 35:1–4. The Court is not persuaded that evidence of Elbit's size reflects a "changed" bargaining positions between Shiron and Elbit, especially when the jury has already heard and considered it in its verdict. *See Cioffi*, 2017 WL 4011143, at *6.

Elbit also suggests that its bargaining position has improved because of the commercial success of the accused products, pointing specifically to Hughes's subscriber growth. *See* Docket No. 507-2, Martinez Decl. at ¶ 22. But Elbit has not demonstrated that that subscriber growth can be attributed to the success of the accused products.

Mr. Martinez also opines that, as of the date of the verdict, the '073 Patent only had 99 days of life before its expiration, suggesting that it would not make economic sense for Hughes to design and implement a non-infringing alternative. *Id.* at ¶ 20. But Mr. Martinez does not account for the increased number of non-infringing alternatives in the market in 2017 as compared to 2001. *See* Bakewell Decl. at ¶ 17.

The Court also does not agree with Elbit that Hughes's increased profitability necessarily warrants an enhancement in this case, especially when Elbit has not connected Hughes's increased profitability to the accused systems. *See* Martinez Decl. at ¶¶ 24–28.

Finally, the Court concludes that an enhancement for willfulness is inappropriate. *See Cioffi*, 2017 WL 4011143, at *8 (explaining that enhancement of an ongoing royalty based on willfulness is less persuasive in a case where patentee is not seeking a permanent injunction because "any future infringement is authorized indefinitely," subject to an ongoing royalty rate).

Accordingly, the Court applies the jury's implied royalty rate, $18 per unit, to each unit sold after the verdict and until the expiration of the patent. The parties have stipulated that 260,004

units were sold during the relevant time period. Docket No. 539. Thus, Elbit is entitled to and **AWARDED** an additional $4,680,072 in damages for post-verdict infringement.

C. Pre- and Post-Judgment Interest

Elbit also seeks pre- and post-judgment interest. For pre-judgment interest, Elbit argues that the prime rate is appropriate, Docket No. 535 at 90:18–20, while Hughes argues for the 5-year T-Bill rate, Docket No. 515 at 3. In keeping with the standard practice of this District, the Court **ORDERS** Hughes to pay Elbit pre-judgment interest at the prime rate compounded quarterly from January 2015 through the date on which the Court enters final judgment. *See Georgetown Rail Equipment Company v. Holland L.P.*, No. 6:13-cv-366, Docket No. 363 at 22 (E.D. Tex. Jun. 16, 2016); *Soverain Software LLC v. J.C. Penney Corp.*, No. 6:09-cv-272, 2012 U.S. Dist. LEXIS 151102, *33 (E.D. Tex. Aug. 9, 2012); *Clear With Computers, LLC v. Hyundai Motor Am., Inc*., No. 6:09-cv-479, slip op. at 14 (E.D. Tex. Jan. 9, 2012); *Fractus, S.A. v. Samsung Elecs. Co.*, 876 F. Supp. 2d 802, 2012 U.S. Dist. LEXIS 80284, *143 (E.D. Tex. 2012); *Tele-Cons, et al. v. General Electric Co, et al*., No. 6:10-cv-451, slip op. at 2 (E.D. Tex. Sept. 29, 2011); *ACQIS LLC v. IBM Corp. et al*., No. 6:09-cv-148, slip op. at 1 (E.D. Tex. June 8, 2011).

Elbit also seeks post-judgment interest under 28 U.S.C. § 1961, which Hughes does not dispute. The calculation of post-judgment interest is deferred until after the Court has entered final judgment.

D. Exceptional Case

Finally, Elbit argues that it is entitled to attorneys' fees as the prevailing party in an exceptional case. Docket No. 507 at 11. "The court in exceptional cases may award reasonable attorney fees to the prevailing party." 35 U.S.C. § 285. Prior to the Supreme Court's recent decision in *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), Federal

Circuit precedent required that the prevailing party produce clear and convincing evidence that the opposing party's claims were objectively baseless and brought with subjective bad faith in order to declare a case exceptional. *Brooks Furniture Mfg., Inc. v. Dutailier Int'l, Inc.*, 393 F.3d 1378, 1381–82 (Fed. Cir. 2005). Rejecting both the clear and convincing evidence standard and the two-part test, the Supreme Court has since held that an exceptional case under § 285 is "simply one that stands out from others with respect to the substantive strength of a party's litigating position (concerning both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated." *Octane Fitness*, 134 S. Ct. at 1756.

District courts "may determine whether a case is 'exceptional' in the case-by-case exercise of their discretion, considering the totality of the circumstances." *Id.* at 1757. "[A] case presenting either subjective bad faith or exceptionally meritless claims may sufficiently set itself apart from mine-run cases to warrant a fee award." *Id.* at 1756. "The predominant factors to be considered, though not exclusive, are those identified in *Brooks Furniture*: bad faith litigation, objectively unreasonable positions, inequitable conduct before the PTO, litigation misconduct, and (in the case of an accused infringer) willful infringement." *Stragent, LLC v. Intel Corp.*, No. 6:11-cv-421, 2014 WL 6756304, at *3 (E.D. Tex. Aug. 6, 2014) (Dyk, J.); *see also Octane Fitness*, 134 S. Ct. at 1756 n.6 ("[I]n determining whether to award fees under a similar provision in the Copyright Act, district courts could consider a 'nonexclusive' list of 'factors,' including 'frivolousness, motivation, objective unreasonableness (both in the factual and legal components of the case) and the need in particular circumstances to advance considerations of compensation and deterrence.' ") (quoting *Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 535 n.19 (1994)). "Ultimately, a party's entitlement to attorney fees need only be proved by a preponderance of the evidence." *DietGoal*

Innovations LLC v. Chipotle Mexican Grill, Inc., No. 2:12-cv-764, 2015 WL 1284826, at *1 (E.D. Tex. March 20, 2015) (Bryson, J.) (citing *Octane Fitness*, 134 S. Ct. at 1758).

While the Court does not find Hughes's litigation positions lacked "substantive strength" warranting an exceptional case finding, *see Octane Fitness*, 134 S. Ct. at 1756, the record in this matter is littered with examples of Hughes's litigation misconduct. After reviewing the totality of the conduct in this case, there cannot be serious doubt that Hughes's litigation strategies unnecessarily complicated the proceedings and needlessly increased costs. The Court summarizes only a few examples of Hughes's egregious conduct below.

At trial, Hughes repeatedly argued claim construction positions—that the Court had rejected—to the jury, despite the Court's admonitions not to do so. *See supra* Section II.C.(1). Hughes argued to the jury that infringement of the "first communications means" depended solely on whether Hughes did TDMA, FDMA, CDMA—an argument divorced from the claim language and from the Court's claim construction. *See, e.g.*, 7/31 PM Tr. at 59:11–16. Hughes's conduct was so egregious that the Court gave the jury a limiting instruction to clarify that the jury's infringement analysis must be based on the claims as construed by the Court. Tellingly, in the moments before the Court informed Hughes of its intent to read a limiting instruction, the Court reviewed a Hughes slide (to which Elbit objected). That slide contained the heading, "First Communication Means Structure CDMA." 8/3 AM Tr. at 13:8–7. Hughes's actions at trial suggest that it both intended to and did try to argue claim construction before the jury in bad faith.

Hughes responds to this allegation of bad faith only by stating that it did not argue claim scope before the jury and that Elbit raised "baseless allegations that Hughes copied and willfully infringed a pre-priority date 1997 presentation at trial." Docket No. 515 at 19. The Court has rejected Hughes's characterization of the 1997 presentation and notes that no argument that

Hughes "copied" the presentation was made at trial. *See supra* Section II.C.(2). Hughes's argument that it was justified in its treatment of claim construction at trial is unconvincing.

Hughes also acted in bad faith with respect to its listing of a PES-related video on its exhibit list. The Court allowed Hughes to present a video demonstration of the PES system as trial evidence so long as Elbit was able to take the deposition of Mr. Anthony Messineo, Hughes's technician who prepared the demo. Docket No. 411 at 61:10–13. At Mr. Messineo's deposition, Hughes presented new videos, which it then added to its exhibit list. Elbit objected, and, before the July 21 pretrial conference, Hughes removed the videos from its exhibit list. Docket No. 507-20; Docket No. 452 at 62:2–4.

At trial, however, these videos resurfaced, now labeled as "demonstratives." Docket No. 507-21. When the Court asked counsel for Hughes whether the Magistrate Judge had ruled on these videos at pretrial, Hughes represented that at the July 21 pretrial conference "at 116:21 to 25, we made clear to the Court that we intended to play the videos as demonstratives." *Id.* at 20:8–10. But a review of the July 21 pretrial conference transcript reveals that Hughes only discussed the videos in the context of whether they constituted a live demonstration. Docket No. 452, Tr. at 116:21–25. Relatedly, at the July 20 pretrial conference, Hughes suggested that the video produced in expert discovery and the "one used during the deposition" were "identical." Docket No. 444 at 3–6. This was not the case, and, at trial, the Court determined that the PES videos were substantive evidence and not timely disclosed. 8/2 AM Tr. at 62:2–4; *see also* Docket No. 507-21 (stating that Hughes "re-shot new versions of the video," submitting both a newly narrated and unnarrated version).

Hughes responds that it genuinely intended its statements at the July 21 pretrial to "cover the 'new' PES videos" and that Elbit's different interpretation should not amount to exceptional

or bad-faith conduct. Docket No. 515 at 25. But, after considering Hughes's statements, the Court is not so convinced. Indeed, if Hughes believed the long-lived issue of the PES videos to be a misunderstanding, it could have clearly apprised the Court and Elbit—during trial—of that fact. Instead, Hughes ran both the Court and Elbit through its exercise regarding these videos in seemingly bad faith, forcing both the Court and Elbit to expend time and effort during trial to parse out the various ways Hughes had misrepresented the nature of the evidence.

Hughes also seemed to purposefully ignore the Court's orders in discovery: For example, its invalidity expert report contained not only numerous obviousness combinations and invalidity theories not disclosed in its invalidity contentions, but even combinations based on the Sprague and Hamalainen references, which the Court had already excluded. *See* Docket No. 242; Docket No. 249 at 66:12–19. Now, Hughes's explanation for this behavior is that it responded promptly to Elbit's objection to the report, stating that "Hughes will not *require* Elbit to present an expert rebuttal on those combinations," but the Court does not issue advisory opinions to the parties. Docket No. 515 at 34 (citing Docket No. 507-23 at 3) (emphasis added). Hughes appears to have ignored the Court's Order for the sole purpose of complicating Elbit's task of providing a rebuttal expert report.

Relatedly, Hughes's January 15 invalidity contentions—as originally served—presented an essentially limitless number of possible obviousness combinations in clear contravention of the Local Rules. *See* Docket No. 201 at 4 (noting that the contentions included approximately 550 billion possible obviousness combinations, a "literally astronomical number"). After Elbit both objected via email and filed a motion to strike, Hughes served a "Supplemental Appendix" to its contentions on February 8, 2018, three weeks after the Court's deadline for contentions. But even the supplement purported to "reserve" the January 15 contentions, which the Court rejected in its

Order on the motion to strike. Docket No. 91-4 at 1 ("Defendants do not concede that any of Elbit's alleged deficiencies required 'remedy,' " and "[a]ll reservations from Defendants Invalidity Contentions of January 15, 2016 are incorporated herein."); Docket No. 201 at 5 ("Defendants will be limited to only those combinations specifically disclosed in their contentions—specific items of prior art, listed in specific combinations, and associated with specific claims of the asserted patents."). Disclosing a completely unreasonable number of obviousness combinations in your contentions, waiting until opposing counsel objects, then supplementing them three weeks *after* the deadline with a reservation that you may still rely on the originally disclosed number of combinations serves no purpose other than to increase the litigation costs for both sides and the burden on the Court.

It should be noted that none of Defendants' conduct in isolation makes this case exceptional. Considering Hughes's litigation misconduct in sum, however, the Court finds that this case is exceptional and stands out in comparison to the mine-run of cases. Accordingly, Elbit's motion for attorneys' fees pursuant to 35 U.S.C. § 285 is **GRANTED**. The parties are **ORDERED** to meet and confer and to file a notice detailing the agreed amount of fees or any disputes within **fourteen (14) days** of this Order.

CONCLUSION

As set forth above, the Court has ruled as follows:

- Hughes's Motion that Plaintiffs are Equitably Estopped from Asserting Infringement Against Hughes's Products (Docket No. 506) is **DENIED** and
- Hughes's Renewed Motion for Judgment as a Matter of Law and for a New Trial (Docket No. 505) is **DENIED** on all bases.

In light of the above, Hughes's Motion for Judgment as a Matter of Law Pursuant to Rule 50(a) (Docket No. 480) is **DENIED AS MOOT**. With respect to Elbit's Post-Trial Brief (Docket No. 507), the Court has ruled as follows:

- Elbit's motion for $174,326 in unopposed costs is **GRANTED**; Elbit's request for additional costs is **DENIED**;
- Elbit's request for $1,073,754 in damages for pre-verdict infringement not accounted for in the jury's verdict is **GRANTED**;
- Elbit's request for damages for post-verdict infringement is **GRANTED-IN-PART** and **DENIED-IN-PART,** and Elbit is **AWARDED** $4,680,072 in damages for post-verdict infringement;
- Elbit's request for pre- and post-judgment interest is **GRANTED** and Hughes is **ORDERED** to pay Elbit pre-judgment interest at the prime rate compounded quarterly from January 2015 through the date on which the Court enters final judgment;
- Hughes is further **ORDERED** to pay post-judgment interest, the calculation of which is deferred until after the Court has entered final judgment; and
- Elbit's motion for attorneys' fees pursuant to 35 U.S.C. § 285 is **GRANTED**.

So ORDERED and SIGNED this 30th day of March, 2018.

Robert W Schroeder III

ROBERT W. SCHROEDER III
UNITED STATES DISTRICT JUDGE