

United States District Court
For the Northern District of California

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

APPLE, INC., a California corporation,) Case No.: 12-CV-00630-LHK
)
Plaintiff and Counterdefendant,) JUDGMENT
)
v.)
)
SAMSUNG ELECTRONICS CO., LTD., a)
Korean corporation; SAMSUNG)
ELECTRONICS AMERICA, INC., a New York)
corporation; and SAMSUNG)
TELECOMMUNICATIONS AMERICA, LLC,)
a Delaware limited liability company,)
)
Defendants and Counterclaimants.)
_____)

Judgment is entered against Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, "Samsung") and in favor of Apple, Inc. ("Apple") in the amount of \$119,625,000.00. Judgment is entered against Apple and in favor of Samsung in the amount of \$158,400.00.

For the reasons stated in the November 25, 2014 Order Granting Apple's Motion for Ongoing Royalties (ECF No. 2074), Samsung is ordered to pay ongoing royalties for any continuing infringement at the per-unit rates set forth in that Order. Those royalties shall apply to products adjudicated to infringe U.S. Patent Nos. 5,946,647; 8,046,721; and 8,074,172, and to

1 products “not more than colorably different therefrom.” The starting date for any ongoing royalties
2 shall be after the date of this Judgment.

3 The Clerk shall close the case file.

4 **IT IS SO ORDERED.**

5 Dated: November 25, 2014



LUCY H. KOH
United States District Judge

United States District Court
For the Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

APPLE, INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
)	
Plaintiff,	)	ORDER GRANTING IN PART APPLE'S
	)	MOTION FOR ONGOING ROYALTIES
v.)	
)	
SAMSUNG ELECTRONICS CO., LTD., a	)	[UNDER SEAL]
Korean corporation; SAMSUNG)	
ELECTRONICS AMERICA, INC., a New York)	
corporation; and SAMSUNG)	
TELECOMMUNICATIONS AMERICA, LLC,)	
a Delaware limited liability company,)	
)	
Defendants.)	

After a jury trial and resolution of post-trial motions, on September 3, 2014, Apple, Inc. ("Apple") moved for ongoing royalties for any continuing infringement by Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, "Samsung"). *See* ECF No. 1959. The Court ordered the parties to brief the issues of whether Apple is entitled to ongoing royalties at all, and the proper amount of any such royalties. ECF No. 1978. The Court finds Apple's motion suitable for decision without oral argument pursuant to Civil Local Rule 7-1(b), and therefore VACATES the hearing set for December 18, 2014. Having considered the law, the record, and the parties' arguments, the Court GRANTS Apple's motion, but modifies the scope of Apple's requested relief as discussed below.

1 **I. BACKGROUND**

2 On May 5, 2014, a jury reached a verdict in this case, finding in part that Samsung
3 infringed Apple's U.S. Patent Nos. 5,946,647 (the "'647 patent"), 8,046,721 (the "'721 patent"),
4 and 8,074,172 (the "'172 patent"). ECF No. 1884. On May 23, 2014, both parties filed motions
5 for judgment as a matter of law, and Apple filed a motion for a permanent injunction. *See* ECF
6 Nos. 1895-3, 1896-3, 1897-3. On August 27, 2014, the Court denied Apple's request for a
7 permanent injunction. ECF No. 1954. On August 29, 2014, Apple filed a notice of appeal to the
8 Federal Circuit regarding denial of the permanent injunction. The Court subsequently resolved the
9 parties' motions for judgment as a matter of law. ECF Nos. 1963, 1965.

10 On September 3, 2014, Apple filed the instant motion, seeking ongoing royalties for any
11 future infringement by Samsung. ECF No. 1958. Apple demands royalties from Samsung for any
12 continuing sales of the products for which the jury found infringement, and for any Samsung
13 products "not more than colorably different" from the adjudicated products. ECF No. 1959
14 (Apple's Proposed Order). Apple claims that the jury awarded per-unit royalty rates of \$2.75 for
15 the '647 Patent, \$2.30 for the '172 Patent, and \$1.41 for the '721 Patent, and requests the same
16 rates for any future infringement. *See id.*

17 On September 9, 2014, the Court set schedules for briefing both Apple's entitlement to
18 ongoing royalties and the proper amount of any such royalties, and asked the parties to address the
19 effect of Apple's motion on entry of final judgment in this case. ECF No. 1966. On September 13,
20 2014, Samsung sought an extension of time to respond to Apple's motion. ECF Nos. 1969, 1970.
21 On September 15, 2014, Apple opposed Samsung's request for an extension. ECF No. 1975.
22 After considering the parties' submissions, the Court adjusted the briefing schedules. ECF No.
23 1978.

24 Regarding Apple's entitlement to ongoing royalties, Samsung filed an Opposition on
25 September 22, 2014. ECF No. 1986-3. On September 29, 2014, Apple filed its Reply. ECF No.
26 2001. On October 6, 2014, Samsung filed an administrative motion seeking leave to file a Sur-
27 Reply (ECF No. 2013), which Apple opposed on October 9, 2014 (ECF No. 2032). The Court
28

1 granted Samsung's request (ECF No. 2049), and Samsung filed its Sur-Reply on October 15, 2014
2 (ECF No. 2050).

3 As to the proper quantity of ongoing royalties, on September 22, 2014, Apple filed its
4 opening brief and supporting materials. ECF No. 1985-3. On October 6, 2014, Samsung filed its
5 Response with supporting declarations. ECF No. 2015-2. On October 14, 2014, Apple filed its
6 Reply. ECF No. 2046-3.

7 **II. LEGAL STANDARDS**

8 In their briefs, the parties make many conflicting (and sometimes inconsistent) statements
9 about the nature of the ongoing royalties remedy. As a result, the Court briefly reviews the
10 relevant legal standards.

11 An ongoing royalty permits an adjudged infringer to continue using a patented invention for
12 a price. *See Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1313 n.13 (Fed. Cir. 2007)
13 (defining an ongoing royalty and distinguishing a compulsory license). The Federal Circuit has
14 identified 35 U.S.C. § 283, which authorizes "injunctions in accordance with the principles of
15 equity," as statutory authority for awarding ongoing royalties. *See id.* at 1314 (citing § 283); *see*
16 *also* Mark A. Lemley, The Ongoing Confusion Over Ongoing Royalties, 76 Mo. L. Rev. 695, 695-
17 99 (2001) (analyzing authority for ongoing royalties under §§ 283 and 284). Accordingly, while
18 this remedy involves monetary relief, there is no Seventh Amendment right to jury trial for ongoing
19 royalties. *See Paice*, 504 F.3d at 1315-16 ("[T]he fact that monetary relief is at issue in this case
20 does not, standing alone, warrant a jury trial.").

21 The Federal Circuit has held that ongoing royalties are a discretionary remedy. "There are
22 several types of relief for ongoing infringement that a court can consider: (1) it can grant an
23 injunction; (2) it can order the parties to attempt to negotiate terms for future use of the invention;
24 (3) it can grant an ongoing royalty; or (4) it can exercise its discretion to conclude that no forward-
25 looking relief is appropriate in the circumstances." *Whitserve, LLC v. Computer Packages, Inc.*,
26 694 F.3d 10, 35 (Fed. Cir. 2012). "Under some circumstances, awarding an ongoing royalty for
27 patent infringement in lieu of an injunction may be appropriate." *Paice*, 504 F.3d at 1314.
28 However, the remedy is not automatic: "awarding an ongoing royalty where 'necessary' to

1 effectuate a remedy, be it for antitrust violations or patent infringement, does not justify the
 2 provision of such relief as a matter of course whenever a permanent injunction is not imposed.” *Id.*
 3 at 1314-15.

4 The Federal Circuit has not addressed the burden of proof for ongoing royalties. However,
 5 other courts have placed the burden on the patentee. *Creative Internet Adver. Corp. v. Yahoo! Inc.*,
 6 674 F. Supp. 2d 847, 855 (E.D. Tex. 2009) (“When injunctive relief is denied under the traditional
 7 four factor test and the Court instead considers whether an infringer should pay an ongoing royalty,
 8 the Court finds that the burden of proving damages remains with the patentee.”).

9 Determination of ongoing royalties differs from evaluation of a reasonable royalty during
 10 trial because the jury has reached a liability verdict and other economic factors may have changed.
 11 “Prior to judgment, liability for infringement, as well as the validity of the patent, is uncertain, and
 12 damages are determined in the context of that uncertainty. Once a judgment of validity and
 13 infringement has been entered, however, the calculus is markedly different because different
 14 economic factors are involved.” *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1362 (Fed. Cir. 2008).
 15 A district court may also consider “additional evidence of changes in the parties’ bargaining
 16 positions and other economic circumstances that may be of value in determining an appropriate
 17 ongoing royalty.” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1343
 18 (Fed. Cir. 2012); *but see* Lemley, *supra*, at 704-05 (“Juries are already required to assume that the
 19 patent is valid and infringed when setting past damages. There is no reason to think that asking the
 20 same question twice should produce different answers in most cases.”) (footnotes omitted).

21 **III. DISCUSSION**

22 Apple and Samsung have three sets of disputes. First, Samsung argues that Apple is
 23 procedurally barred from seeking the remedy of ongoing royalties. Second, Samsung contends in
 24 the alternative that Apple is not entitled to any ongoing royalties for any Samsung products. Third,
 25 assuming that Apple is entitled to a remedy, the parties dispute the proper ongoing royalty rates.
 26 The Court addresses these disputes in order.

1 **A. Samsung's Procedural Arguments**

2 Samsung presents a host of procedural arguments as to why Apple is now precluded from
3 seeking ongoing royalties, and why the Court should postpone resolution of Apple's motion.
4 Apple disputes each of these arguments and contends that it has not forfeited any rights. The Court
5 determines that Apple is not barred from requesting ongoing royalties, for the reasons below.

6 **1. Waiver**

7 Samsung first argues that Apple waived ongoing royalties by failing to identify this remedy
8 in various pretrial filings. Samsung observes that Apple did not offer any expert testimony on
9 ongoing royalties or raise the issue in motions for pre- and post-verdict judgment as a matter of
10 law, new trial, or a permanent injunction. *See* ECF No. 1986-3 at 2-3. In particular, Samsung
11 claims that Apple failed to request ongoing royalties in the parties' Joint Amended Pretrial
12 Statement, and that Apple's "boilerplate" reference to "[a]ny other remedy to which Apple may be
13 entitled, including all remedies provided for in 35 U.S.C. §§ 284, and 285 and under any other law"
14 was insufficient to preserve the issue. *Id.* at 4; ECF No. 1455-1 at 3. Relatedly, Samsung argues
15 that Apple also failed to include ongoing royalties in the scope of injunctive relief requested, which
16 was limited to an injunction preventing "further acts of infringement." ECF No. 1455-1 at 3.

17 Apple responds that it adequately preserved ongoing royalties in the Joint Amended Pretrial
18 Statement by requesting "all damages adequate to compensate for Samsung's infringement of
19 Apple's asserted patents, and in no event less than a reasonable royalty for Samsung's acts of
20 infringement." ECF No. 2001 at 2. Apple notes that the Federal Circuit in *Paice* characterized
21 ongoing royalties as a "reasonable royalty" in light of ongoing infringement, such that Apple's
22 request for a "reasonable royalty" encompassed that remedy. *Id.* (quoting 504 F.3d at 1315).
23 Additionally, Apple submits examples of pretrial statements in other cases—including *Paice*—
24 where the parties did not expressly request an "ongoing royalty," but no waiver occurred. *See, e.g.,*
25 ECF No. 2002-4 at 3 (pretrial statement in *Paice*, seeking "monetary damages in the form of a
26 reasonable royalty").¹

27 ¹ *See also* ECF Nos. 2002-1 at 6 (Joint Final Pre-Trial Order, *Mondis Tech. Ltd. v. Hon Hai*
28 *Precision Indus. Co.*, No. 2:07-CV-565 (E.D. Tex.)), 2002-2 at 18 (Order on Final Pretrial
Conference, *I/P Engine, Inc. v. AOL, Inc.*, No. 2:11-cv-512 (E.D. Va.)), 2002-3 at 3 (Joint Pre-Trial

1 Additionally, Samsung points to this Court's August 21, 2014 Order denying Samsung's
 2 motion for judgment of invalidity under 35 U.S.C. § 101. ECF No. 1952. There, the Court
 3 rejected Samsung's attempt to raise § 101 defenses against two Apple patents for the first time after
 4 trial. The Court determined that Samsung failed to preserve § 101 defenses because Samsung did
 5 not identify that legal theory in expert reports, dispositive motions, or the Joint Amended Pretrial
 6 Statement. *See id.* at 4-5. The Court noted that the Ninth Circuit has "consistently held that issues
 7 not preserved in the pretrial order have been eliminated from the action," *S. Cal. Retail Clerks*
 8 *Union v. Bjorklund*, 728 F.2d 1262, 1264 (9th Cir. 1984), and that "a theory will be barred if not at
 9 least implicitly included in the order," *Eagle v. Am. Tel. & Tel. Co.*, 769 F.2d 541, 548 (9th Cir.
 10 1985). Now, Samsung argues that these same principles should preclude Apple from seeking
 11 ongoing royalties. *See* ECF No. 1986-3 at 3.

12 Under these circumstances, the Court concludes that Apple did not waive ongoing royalties.
 13 Apple concedes that it did not use the words "ongoing royalties" in the Joint Amended Pretrial
 14 Statement or its pre- and post-trial motions. However, throughout this litigation, Apple has
 15 consistently requested royalties to compensate for all Samsung infringement. *See, e.g.,* Compl.
 16 (ECF No. 1) at 13-14; Am. Compl. (ECF No. 261) at 12-13. As noted above, in the Joint Amended
 17 Pretrial Statement, Apple requested "all damages adequate to compensate for Samsung's
 18 infringement of Apple's asserted patents, and in no event less than a reasonable royalty." ECF No.
 19 1455-1 at 3. Thus, Apple's request for ongoing royalties was at least "implicitly included" in this
 20 filing. *Eagle*, 769 F.2d at 548. By contrast, Samsung did not identify § 101 in the Joint Amended
 21 Pretrial Statement at all, despite identifying other statutory defenses (such as §§ 102, 103, and
 22 112). *See* ECF No. 1952 at 3. Moreover, Samsung had raised § 101 much earlier in this case, but
 23 then abandoned that defense in its expert reports and pretrial filings. Apple, on the other hand, has
 24 consistently sought compensatory royalties for all infringing activity.

25 In its Sur-Reply, Samsung contends that Apple's reference to "royalties" or "damages" in
 26 the Joint Amended Pretrial Statement could not encompass ongoing royalties because that is a

27 Order, *Creative Internet Adver. Corp. v. Yahoo! Inc.*, No. 6:07cv354 (E.D. Tex.)). However, the
 28 Court notes that the patentee in *Mondis* requested "a running royalty to compensate it for any
 continuing infringement." ECF No. 2002-1 at 12.

1 remedy under 35 U.S.C. § 283, not “damages” under § 284. ECF No. 2050 at 2. Samsung is
 2 correct that the Federal Circuit has characterized ongoing royalties as an equitable remedy
 3 authorized under § 283. *See Paice*, 504 F.3d at 1314-16 (analyzing ongoing royalties under § 283
 4 and finding no Seventh Amendment right to jury trial); *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*,
 5 515 F. App’x 882, 882 (Fed. Cir. 2012) (“An ongoing royalty is not the same as an accounting for
 6 damages.”). However, this does not mean that Apple’s request for “royalties” and “damages” is
 7 insufficient to invoke a request for ongoing royalties. The Federal Circuit has also referred to an
 8 ongoing royalty as a “reasonable royalty.” *Paice*, 504 F.3d at 1315 (describing the requested relief
 9 as “a reasonable royalty in light of the ongoing infringement”). As Apple notes, other courts have
 10 awarded ongoing royalties even though the patentee generally sought a “reasonable royalty” or
 11 compensatory damages. *See, e.g.*, ECF No. 2002-4 at 3 (pretrial statement in *Paice*).²

12 Samsung does not cite any case law where ongoing royalties were deemed waived where a
 13 patentee sought damages and “in no event less than a reasonable royalty” but did not employ the
 14 words “ongoing royalty.” Rather, Samsung cites two cases relating to waiver, neither controlling
 15 and both distinguishable. *See* ECF No. 1986-3 at 3. In *Elvis Presley Enterprises, Inc. v. Capece*,
 16 the Fifth Circuit affirmed a ruling that the plaintiff in a trademark case waived an accounting of
 17 profits. 141 F.3d 188, 206 (5th Cir. 1998). The plaintiff listed “injunctive relief, damages, and
 18 attorneys’ fees under the Lanham Act” in the pretrial order, but not an accounting of profits. *Id.* In
 19 finding waiver, the court relied on the fact that the Lanham Act has a specific provision for an
 20 accounting of profits that “lists it separately from damages.” *Id.* That is not the situation here,
 21 however, because there is no express statutory provision in the Patent Act that separately lists
 22 ongoing royalties. Next, in *Ramos v. Davis & Geck, Inc.*, the District of Puerto Rico found that the
 23 plaintiff waived a claim for “front pay” as to one cause of action, but based this result on the fact
 24 that the plaintiff expressly requested “front pay” for a separate cause of action. 968 F. Supp. 765,
 25 771 (D.P.R. 1997). Again, that is not what occurred here. Apple has consistently sought

26 ² Samsung argues that if § 283 does not govern ongoing royalties (as a form of injunctive
 27 relief), then Samsung is entitled to a jury trial under the Seventh Amendment. *See* ECF No. 1986-3
 28 at 4 n.1. This argument is misplaced. *Paice* explained that § 283 governs ongoing royalties, and
 that there is no right to a jury trial. 504 F.3d at 1315-16. Indeed, in a later brief, Samsung cites
Paice and argues that no jury trial is required. *See* ECF No. 2015-2 at 3.

1 compensatory royalties for all infringing activity. Overall, Samsung has not demonstrated that
2 Apple waived the issue of ongoing royalties.

3 **2. Timeliness**

4 Aside from waiver, Samsung calls Apple's request for ongoing royalties an "untimely
5 second post-trial motion." ECF No. 1986-3 at 5. Samsung points to the Court's March 5, 2014
6 scheduling order for post-trial motions, which stated that "each side may file one motion for
7 judgment as a matter of law and/or motion for new trial ('post-trial motion') and "[e]ach
8 prevailing side may file one motion for a permanent injunction." ECF No. 1398 at 4. Samsung
9 claims that Apple's motion is an additional "motion to alter or amend a judgment" under Fed. R.
10 Civ. P. 59(e), and therefore an untimely post-trial motion not authorized by the Court's scheduling
11 order. According to Samsung, Apple needed to raise ongoing royalties "as alternative relief in its
12 motion for permanent injunction." ECF No. 1986-3 at 5.

13 Apple characterizes the situation differently. "Apple agrees that its request for an ongoing
14 royalty may be characterized as a Rule 59(e) motion to 'alter or amend a judgment'" under Rule
15 59(e), but claims that this motion is not a "post-trial motion" as defined in the Court's scheduling
16 order because it is not a "motion for judgment as a matter of law and/or motion for new trial."
17 ECF No. 2001 at 6-7. Apple also claims its motion is "early" because the Court has not yet entered
18 final judgment. *Id.* at 7. Apple claims that at least one other district court has allowed a patentee
19 to seek ongoing royalties after losing a permanent injunction request. *See Warsaw Orthopedic,*
20 *Inc. v. NuVasive, Inc.*, No. 08-CV-1512, slip op. at 1 (S.D. Cal. June 10, 2013) ("[T]he Court
21 denied Warsaw's motion for a permanent injunction and ordered the parties to brief the matter of
22 ongoing royalties.").

23 The Court finds that Apple's motion is not untimely. The Court's March 5, 2014
24 scheduling order (ECF No. 1398) addressed only motions requesting a new trial, judgment as a
25 matter of law, and permanent injunctions. Apple's motion does not fall within any of those
26 categories, and is therefore not foreclosed by that scheduling order. Also, Apple filed its motion
27 for ongoing royalties only one week after the Court denied a permanent injunction, which negates
28 Samsung's claims of untimeliness.

1 Samsung asserts that Apple forfeited ongoing royalties by not requesting that relief at the
2 same time it moved for a permanent injunction. Apple argues that briefing both issues
3 simultaneously would force patentees “to take the conflicting position that money damages are
4 inadequate, while simultaneously proposing money damages to remedy the infringement,” ECF
5 No. 2001 at 6. However, Samsung claims that “parties routinely request an ongoing royalty in the
6 alternative to—and at the same time as—a request for a permanent injunction barring the sale of
7 the infringing product,” citing *Bard Peripheral Vascular v. W.L. Gore & Associates*, 670 F.3d
8 1171, 1178 (Fed. Cir. 2012) (*vacated in part*, 476 F. App’x 747 (Fed. Cir. 2012)), and *Cordance*
9 *Corp. v. Amazon.com, Inc.*, 730 F. Supp. 2d 333, 336 (D. Del. 2010). ECF No. 1986-3 at 6.
10 However, both of those cases are merely examples of patentees simultaneously seeking both an
11 injunction and ongoing royalties. *E.g.*, *Cordance*, 730 F. Supp. 2d at 336 (“Cordance filed a
12 motion for permanent injunction or, in the alternative, imposition of an ongoing royalty.”). Neither
13 case holds that this is a procedural requirement.³ Accordingly, the Court determines that Apple’s
14 motion is not untimely.

15 3. Jurisdiction

16 Next, Samsung challenges this Court’s jurisdiction to decide Apple’s motion. Apple
17 appealed this Court’s denial of Apple’s request for a permanent injunction, before resolution of the
18 parties’ motions for judgment as a matter of law or entry of final judgment in this case. *See* ECF
19 No. 1955. Apple appealed under 28 U.S.C. § 1292(c)(1), which permits appeals to the Federal
20 Circuit from interlocutory orders refusing injunctions. *See also* § 1292(a)(1); Br. of Pl.-Appellant
21 Apple Inc. at 1, Case No. 14-1802 (Fed. Cir. Oct. 3, 2014) (“This Court has jurisdiction over the
22 denial of a permanent injunction under 28 U.S.C. § 1292(c)(1).”). According to Samsung, Apple’s
23 interlocutory appeal “divested the Court of jurisdiction” for any “overlapping matters” between
24 Apple’s requests for a permanent injunction and for ongoing royalties. ECF No. 1986-3 at 8.
25 Samsung posits that ongoing royalties involve several issues common to a permanent injunction,
26 such as the adequacy of monetary relief and consumer demand for the infringed patented features.

27 ³ The Court notes that delaying a motion for ongoing royalties until after resolution of a
28 permanent injunction motion (as Apple has done here) may delay entry of final judgment, as
discussed below.

1 See *id.* at 8-9. Apple disagrees, claiming that its request for ongoing royalties “is distinct from the
2 injunction issue raised on appeal.” ECF No. 2001 at 8.

3 The Court finds Samsung’s jurisdictional arguments unpersuasive. Samsung’s theory that
4 ongoing royalties are inextricably bound to the permanent injunction appeal is not supported by the
5 law that the parties have cited. “The filing of a notice of appeal is an event of jurisdictional
6 significance—it confers jurisdiction on the court of appeals and divests the district court of its
7 control over those aspects of the case involved in the appeal.” *Griggs v. Provident Consumer*
8 *Discount Co.*, 459 U.S. 56, 58 (1982). The Ninth Circuit has held that its jurisdiction under
9 § 1292(a)(1) (for interlocutory injunction orders) extends “only to the ‘matters inextricably bound
10 up with the injunctive order from which the appeal is taken.’” *Paige v. Cal.*, 102 F.3d 1035, 1039
11 (9th Cir. 1996) (quoting *Self-Realization Fellowship Church v. Ananda*, 59 F.3d 902, 905 (9th Cir.
12 1995)).⁴ However, “it is firmly established that an appeal from an interlocutory order does not
13 divest the trial court of jurisdiction to continue with other phases of the case.” *Plotkin v. Pac. Tel.*
14 *& Tel. Co.*, 688 F.2d 1291, 1293 (9th Cir. 1982); see also *Fairchild Semiconductor Corp. v. Third*
15 *Dimension (3D) Semiconductor, Inc.*, No. 2009-1168, 2009 WL 790105, at *1 (Fed. Cir. Mar. 25,
16 2009) (“Although a district court may not proceed with matters involved with the injunction itself,
17 . . . or make findings to support its injunction while the injunction is on appeal, . . . the district court
18 may proceed with the litigation and permit discovery, enter rulings on summary judgment, or hold
19 a trial on the merits.”) (internal citations omitted).

20 Samsung cites *Paige* to support its argument that the Court lacks jurisdiction over any
21 overlapping issues in Apple’s appeal. See ECF No. 1986-3 at 8. However, the Ninth Circuit’s
22 guidance in that case is instructive as to why Samsung’s arguments are misplaced. *Paige* involved
23 an interlocutory appeal of an order granting a preliminary injunction in a discrimination class
24 action suit. 102 F.3d at 1037. The district court entered the injunction based on its decisions
25 regarding class certification and summary judgment, and the defendants sought interlocutory
26

27 ⁴ Both sides rely on Ninth Circuit law regarding jurisdiction, but do not address whether
28 regional or Federal Circuit law would apply to this Court’s jurisdiction. Cf. *Int’l Elec. Tech. Corp.*
v. Hughes Aircraft Co., 476 F.3d 1329, 1330 (Fed. Cir. 2007) (“We apply our own law, rather than
regional circuit law, to questions relating to our own appellate jurisdiction.”).

1 review of those underlying decisions. The Ninth Circuit held that “the class certification order in
2 this case is inextricably bound up with the grant of the interim injunction,” and that the injunction
3 could not be upheld “without also upholding the certification of the class.” *Id.* at 1039. The court
4 also exercised jurisdiction over the summary judgment order “because the relief provided in the
5 injunction was based on the fact that the merits of the disparate impact issue had been resolved.”
6 *Id.* at 1040. Thus, *Paige* indicates that predicate issues that are necessary to resolution of an
7 injunction are “inextricably bound up with” an interlocutory appeal and thus removed from the
8 district court’s jurisdiction during the appeal. *See also Bates v. United Parcel Serv., Inc.*, 465 F.3d
9 1069, 1076 (9th Cir. 2006) (“Because the district court’s legal authority to grant the injunction
10 stemmed from its holding that UPS violated the ADA and the California laws, those holdings are
11 ‘inextricably bound up’ with its injunction.”).

12 Here, Apple’s request for ongoing royalties is not “inextricably bound up with” the
13 permanent injunction appeal. Unlike the class certification and summary judgment rulings in
14 *Paige*, determining Apple’s entitlement to ongoing royalties was not necessary for resolving
15 Apple’s permanent injunction motion. Indeed, Apple did not move for ongoing royalties until after
16 the Court denied a permanent injunction. Samsung contends that “the amount of money adequate
17 to compensate Apple” is “involved in the appeal” because Apple must argue that monetary
18 damages are inadequate compensation. ECF No. 1986-3 at 9. Specifically, Samsung claims that
19 the permanent injunction appeal affects application of the *Georgia-Pacific* factors (for purposes of
20 determining ongoing royalties) because issues such as the probative value of Apple’s patent
21 licenses and demand for the patented features must be “re-open[ed].” *Id.* at 9. This argument fails
22 because mere factual overlap between issues does not demonstrate that those issues are
23 “inextricably bound” to each other. This Court’s permanent injunction order did not address the
24 *Georgia-Pacific* factors or reasonable royalties. *See* ECF No. 1954. As Apple points out, many
25 discrete issues regarding liability and damages (including application of *Georgia-Pacific*) were
26 also disputed in the parties’ motions for judgment as a matter of law, but Samsung did not argue
27 that Apple’s appeal divested this Court of jurisdiction to resolve those motions. *See* ECF No. 2001
28 at 8. Indeed, rulings on preliminary and permanent injunctions require some analysis of liability

1 and remedies, which overlap factually with other issues, but § 1292 allows for interlocutory
 2 appeals of injunction orders while a case proceeds before the district court. Because determination
 3 of ongoing royalties is not inextricably bound up with Apple's permanent injunction motion,
 4 Apple's appeal has not divested this Court of jurisdiction.

5 **4. Request for Stay**

6 As a further procedural alternative, Samsung asks that "[i]f the Court finds that the
 7 jurisdictional question is even close, the Court should avoid potentially wasteful proceedings by
 8 staying this case pending resolution of Apple's interlocutory appeal." ECF No. 1986-3 at 10.
 9 Samsung claims that deciding Apple's ongoing royalties motion now would waste resources
 10 because the pending appeal may affect or obviate ongoing royalties. The Court is unpersuaded and
 11 DENIES Samsung's request to stay resolution of Apple's ongoing royalties motion.

12 First, as explained above, the Court does not find Samsung's jurisdictional question close.
 13 The fact that there may be some overlapping issues that are relevant to both a permanent injunction
 14 and ongoing royalties does not divest this Court of jurisdiction. Samsung has not persuaded the
 15 Court that there is a substantial risk of "having the same issues before two courts simultaneously"
 16 (ECF No. 1986-3) because the pending appeal involves the propriety of an injunction under *eBay*
 17 *Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006), not the merits or calculation of ongoing
 18 royalties.

19 Second, the Federal Circuit has indicated that ongoing royalties must be resolved prior to
 20 entry of final judgment. Last year, in *Robert Bosch, LLC v. Pylon Manufacturing Corp.*, the
 21 Federal Circuit held that a district court can enter a final appealable judgment before adjudicating
 22 damages because damages fall within the scope of an "accounting" under § 1292(c)(2). 719 F.3d
 23 1305, 1308 (Fed. Cir. 2013) (en banc). However, in a prior nonprecedential opinion, the Federal
 24 Circuit stated that "[a]n ongoing royalty is not the same as an accounting for damages" and must
 25 therefore be resolved before entry of final judgment: "We agree with Warsaw that even assuming
 26 Rule 54(b) would give this court jurisdiction over a claim that is 'final except for an accounting'
 27 within the meaning of 28 U.S.C. § 1292(c)(2), the case is not 'final' because the district court has
 28 not yet determined ongoing royalties." *Warsaw*, 515 F. App'x at 882 (emphasis added); see also

1 *Hynix Semiconductor Inc. v. Rambus Inc.*, 609 F. Supp. 2d 951, 987 (N.D. Cal. 2009) (noting that a
2 request for ongoing royalty may preclude final judgment). Apple and Samsung concur that
3 *Warsaw*, and not *Bosch*, applies here. See ECF No. 2001 at 9 (Apple: “a stay will leave any appeal
4 in limbo”); ECF No. 2015-2 at 3 (Samsung: “*Warsaw* . . . found that ongoing royalties under § 283
5 do not fall within the finality exception under § 1292(c)(2)”). Therefore, staying this issue as
6 Samsung proposes would preclude entry of final judgment and prevent the parties from appealing
7 any remaining issues other than denial of a permanent injunction for Apple.⁵

8 Samsung argues that the Court should postpone resolution of ongoing royalties for the same
9 reasons that it postponed calculation of supplemental damages and prejudgment interest. See ECF
10 No. 1986-3 at 11. In its post-verdict motion for judgment as a matter of law, Apple sought
11 supplemental damages for post-verdict infringement, as well as prejudgment interest on the jury’s
12 damages award. The Court “agree[d] that an award of supplemental damages is necessary here,”
13 but found it “appropriate to delay the consideration of evidence of actual postverdict sales and
14 calculation of supplemental damages until after the completion of the appeal in this case.” ECF
15 No. 1963 at 18-19. Likewise, the Court “decline[d] Apple’s request that the Court calculate and
16 award prejudgment interest at this time before any appeal is resolved.” *Id.* at 24. The Court was
17 able to postpone those calculations because they do not preclude final judgment. However, as
18 explained above, ongoing royalties must be addressed before entry of final judgment and appeal of
19 any remaining issues.

20 Samsung also identifies two other litigations—*I/P Engine, Inc. v. AOL Inc.*, Case No. 2:11-
21 cv-512 (E.D. Va.), and *Creative Internet Advertising Corp. v. Yahoo! Inc.*, No. 6:07-cv-00354-JDL
22 (E.D. Tex.)—where the parties litigated ongoing royalties, but subsequent Federal Circuit decisions
23 on the underlying merits of those cases rendered ongoing royalties moot. See ECF No. 1986-3 at
24 11-13. However, Samsung’s argument that resolution of Apple’s ongoing royalties motion can be

25
26 ⁵ The Court observes that Apple has tried to expedite the pending permanent injunction
27 appeal. See Apple’s Opp’n to Samsung’s Mot. for a 30-Day Extension (ECF No. 58), *Apple, Inc.*
28 *v. Samsung Elecs Co.*, No. 14-1802 (Fed. Cir. Oct. 24, 2014). Further delaying entry of final
judgment here could prompt two separate appeals regarding denial of a permanent injunction and
all other issues, which could be inefficient and favors prompt resolution of Apple’s ongoing
royalties motion.

1 stayed ignores *Warsaw*'s instruction that ongoing royalties must be adjudicated prior to a full
2 appeal.

3 For the foregoing reasons, the Court disagrees with Samsung's procedural and jurisdictional
4 objections to Apple's motion and denies Samsung's request to stay resolution of this motion.

5 **B. Apple's Entitlement to Ongoing Royalties**

6 The Court turns to the parties' second set of disputes—whether Apple is entitled to ongoing
7 royalties for any continuing infringement. This issue precedes any analysis of the proper amount
8 of ongoing royalties, which the Court addresses in a separate section below.

9 Apple and Samsung disagree about the legal standards for determining entitlement to
10 ongoing royalties. Apple insists that it is entitled *per se* to ongoing royalties: "In the absence of an
11 injunction, a patentee is entitled to receive ongoing royalties" ECF No. 1958 at 1. Apple
12 further states that permanent injunctions and ongoing royalties share the same statutory basis
13 (§ 283), but claims that "[d]ifferent legal standards apply to each type of relief: *Georgia-Pacific* for
14 an ongoing royalty and *eBay* for a permanent injunction." ECF No. 2001 at 4-5. On the other
15 hand, Samsung argues for the first time in its Sur-Reply that "*Georgia-Pacific* is a test for
16 determining the amount of a royalty as legal damages, *not* whether a plaintiff is entitled to the
17 equitable remedy of an ongoing royalty." ECF No. 2050 at 3. According to Samsung, the four-
18 factor *eBay* test for injunctive relief is also the standard for determining entitlement to ongoing
19 royalties, and "the test for entitlement is based on the court's equitable discretion." *Id.*

20 The parties' arguments conflate the standards for determining *entitlement* to ongoing
21 royalties as opposed to the *amount* of any such royalties. Apple claims that *Georgia-Pacific* is the
22 "legal standard . . . for an ongoing royalty." However, *Georgia-Pacific* addresses determination of
23 the amount of a reasonable royalty through a hypothetical negotiation, not whether a patentee is
24 entitled to an ongoing royalty under § 283. On the other hand, Samsung characterizes *eBay* as
25 holding that the four-factor test for permanent injunctions "is the 'well-established' and
26 'traditional' test for *any equitable relief*." *Id.* at 3 (emphasis added). This overextends *eBay*,
27 which addressed permanent injunctions, not ongoing royalties. *See, e.g.,* 547 U.S. at 393 (referring
28 to "traditional equitable principles in deciding respondent's motion for a permanent injunction")

(emphasis added)). Samsung cites no cases that apply the four-factor permanent injunction test to ongoing royalties. Indeed, it is unclear how the Court could apply the second *eBay* factor—“that remedies available at law, such as monetary damages, are inadequate to compensate for that injury”—to an award of ongoing royalties. *Id.* at 391.

The Federal Circuit has instructed that entitlement to ongoing royalties is a matter of discretion for the district court, focusing on whether the patentee has received compensation for continuing infringement. Contrary to Apple’s argument that it is entitled *per se* to ongoing royalties, the Federal Circuit has plainly stated that a district court “can exercise its discretion to conclude that no forward-looking relief is appropriate in the circumstances.” *Whitserve*, 694 F.3d at 35; *see also Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012) (“This court reviews the district court’s decision to impose an ongoing royalty, in light of its denial of a permanent injunction, for abuse of discretion.”). In *Paice*, the Federal Circuit explained that “[u]nder some circumstances, awarding an ongoing royalty for patent infringement in lieu of an injunction may be appropriate,” and that such a remedy should not be provided “as a matter of course whenever a permanent injunction is not imposed.” 504 F.3d at 1314-15 (emphases added); *see also Bard*, 670 F.3d at 1178 (citing *id.*).

While a patentee does not automatically receive ongoing royalties in lieu of a permanent injunction, the Federal Circuit has indicated that a prevailing patentee should receive compensation for any continuing infringement. *See Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1379 (Fed. Cir. 2010) (“An award of an ongoing royalty is appropriate because the record supports the district court’s finding that Telcordia has not been compensated for Cisco’s continuing infringement.”). Because Apple could file piecemeal complaints against Samsung for future infringement, awarding ongoing royalties at this stage may avoid “an endless succession of lawsuits presenting the same issue.” Lemley, *supra*, at 697. Accordingly, the Federal Circuit has repeatedly approved the practice of granting ongoing royalties to compensate a patentee for continuing infringement. *See Paice*, 504 F.3d at 1316; *Amado*, 517 F.3d at 1362; *ActiveVideo*, 694 F.3d at 1343; *Bard*, 670 F.3d at 1193. Multiple district courts have followed *Paice* and awarded ongoing royalties in lieu of an injunction. *See, e.g., Telcordia Techs. v. Cisco Sys.*, No. 04-876,

2014 U.S. Dist. LEXIS 51076, at *18 (D. Del. Apr. 14, 2014) (awarding ongoing royalties); *Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd.*, No. 09-290, 2014 U.S. Dist. LEXIS 43042, at *124 (W.D. Pa. Mar. 31, 2014) (same); *Depuy Synthes Prods., LLC v. Globus Med., Inc.*, No. 11-652, 2014 U.S. Dist. LEXIS 61450, at *24 (D. Del. Mar. 28, 2014); *Mondis*, 2012 U.S. Dist. LEXIS 60004, at *22-24.

Having addressed the standard for determining a patentee's entitlement to ongoing royalties, the Court turns to the parties' additional arguments regarding Apple's entitlement to ongoing royalties under the present circumstances.

1. Double Recovery

Samsung's first argument is that Apple improperly seeks double recovery for certain infringing sales because Apple is already entitled to supplemental damages for post-verdict infringement. *See* ECF No. 1986-3 at 13; ECF No. 2050 at 1. "Generally, the double recovery of damages is impermissible." *Aero Prods. Int'l, Inc. v. Intex Recreation Corp.*, 466 F.3d 1000, 1017 (Fed. Cir. 2006).

In its post-verdict motion for judgment as a matter of law, Apple sought "[s]upplemental damages through judgment." ECF No. 1897-3 at ii. Noting that Apple wanted supplemental damages "through the date of judgment for infringing sales not considered by the jury," this Court agreed that "an award of supplemental damages is necessary here, as there are sales for which the jury did not make an award, because they occurred after the jury reached its verdict." ECF No. 1963 at 17-18. Thus, Apple has sought and obtained entitlement to supplemental damages beginning the day after the jury's verdict through the date of final judgment, in an amount to be determined after resolution of any appeals.

In seeking ongoing royalties, Apple initially sought compensation for infringing products "that are sold on or after the date of this [Proposed] Order." ECF No. 1959. However, after Samsung raised the possibility of double recovery, Apple changed positions and now "requests that such ongoing royalties start from the date of the denial of the permanent injunction, and Apple will accept this remedy in lieu of supplemental damages." ECF No. 2001 at 10. Apple claims that under this amended request, "there will be no double-counting." *Id.*

In light of Apple's shifting positions, the Court concludes that Apple may recover any appropriate ongoing royalties only after entry of final judgment, and supplemental damages for any post-verdict, prejudgment infringement. In its Reply in support of ongoing royalties, Apple changed course and now seeks ongoing royalties starting on August 27, 2014 (the date the Court denied a permanent injunction), waiving supplemental damages after that date. However, at Apple's request, the Court has already awarded supplemental damages through the anticipated entry of final judgment. Having invited the Court to grant this remedy over Samsung's objection, Apple may not arbitrarily choose new dates for its remedies. *See Pegram v. Herdrich*, 530 U.S. 211, 227 n.8 (2000) ("Judicial estoppel generally prevents a party from prevailing in one phase of a case on an argument and then relying on a contradictory argument to prevail in another phase."). Accordingly, Apple may recover supplemental damages for the period between entry of the verdict and entry of final judgment, and any ongoing royalties only for infringement after entry of final judgment. This obviates any concern over double recovery.

2. Notice

Samsung next asserts that "equity weighs heavily against a grant of an ongoing royalty." ECF No. 1986-3 at 14. Samsung's primary argument is lack of notice. Samsung claims that "Apple remained silent about its intention to file an alternative motion for injunctive relief," which prevented adequate discovery into "the likely post-judgment circumstances" necessary to assess ongoing royalties. *Id.* Samsung also insinuates that Apple's goal "is not recompense for genuine injury, but rather to prejudice Samsung." *Id.*

Samsung's arguments merely repeat its waiver arguments under the rubric of "equity." For the reasons explained above, the Court rejects Samsung's arguments regarding waiver and lack of notice. Samsung's speculative allegations regarding Apple's motives do not affect Apple's entitlement to remedies.

3. Judicial Resources

The parties argue about whether imposing ongoing royalties would waste or conserve judicial resources. These arguments boil down to two issues: (1) whether there is any continuing infringement of the '172, '721, and '647 Patents, and (2) whether Apple can seek ongoing royalties

1 for Samsung products “not more than colorably different” from the devices that the jury found to
2 infringe.

3 **a. Continuing Infringement**

4 Samsung claims that there is no need for continuing remedies because it no longer infringes
5 any of the ’172, ’721, and ’647 Patents. *See* ECF No. 1986-3 at 15. According to Samsung, “[n]o
6 Samsung product released since 2012 has even been accused of infringing the ’172 or ’721
7 patents,” and “Samsung long ago designed around these patents.” ECF No. 1986-3 at 15. As to
8 the ’647 Patent, Samsung represents that “post-verdict sales of the accused products in this case
9 have already ended,” and that the only version of the Galaxy S III product on sale “incorporate[s]
10 different code” than the relevant infringing source code. *Id.*

11 In support of these assertions, Samsung submits multiple declarations. Corey Kerstetter,
12 Vice President of Business Planning at Samsung Telecommunications America (“STA”), avers that
13 STA has stopped importing into the United States the Admire, Galaxy Nexus, Galaxy Note, Galaxy
14 S II, Galaxy S II Epic 4G Touch, Galaxy SII Skyrocket, and Stratosphere accused products. ECF
15 No. 2015-8 (“Kerstetter Decl.”) ¶ 3. Kerstetter does not represent that STA has stopped selling
16 these products. However, Kerstetter does represent that STA has stopped selling the Galaxy Note
17 II and certain Galaxy S III models, though those products may have “retail availability.” *Id.* ¶¶ 4-5.
18 Samsung also submits declarations from Juhui Lee and Sungwoo Cho, both Samsung engineers,
19 who state that Samsung has changed the source code for the accused Browser and Messenger
20 applications, respectively, in any remaining Galaxy S III products. ECF Nos. 2015-11 (“Lee
21 Decl.”), 2015-12 (“Cho Decl.”). Finally, Samsung relies on a new declaration from its expert for
22 the ’647 Patent, Dr. Kevin Jeffay, who opines based on the Lee and Cho Declarations that the
23 current versions of the Browser and Messenger applications in the Galaxy S III products do not
24 infringe asserted claim 9 of the ’647 Patent. ECF No. 2015-10 (“Jeffay Decl.”) ¶¶ 39, 45, 52.

25 In response, Apple contends that Samsung’s representations are insufficient to demonstrate
26 noninfringement, particularly regarding the ’647 Patent. *See* ECF No. 2001 at 12-13. For
27 example, Apple faults Samsung for not guaranteeing that the accused source code is no longer
28 present in any Samsung products currently on the market. ECF No. 2046-3 at 2. Apple also

1 submits a declaration from its damages expert, Dr. Christopher Velturo, who claims (based on
2 third-party investigations) that retailers are still offering the Galaxy S III and Galaxy Note II. ECF
3 No. 1985-4 (“Velturo Decl.”) ¶¶ 9-10. Generally, Apple asserts that “Samsung has not removed
4 the patented features entirely,” but offers no specific evidence to prove continuing infringement.
5 ECF No. 2046-3 at 2.

6 Apple does not ask the Court to determine at this point whether Samsung continues to
7 infringe. *See* ECF No. 2046-3 at 2. Moreover, given the limited record regarding any post-verdict
8 infringement by Samsung, the Court declines to do so for purposes of this motion. Regardless, if
9 Samsung is correct that it no longer infringes with respect to the adjudicated products, that fact
10 does not foreclose ongoing royalties. If Samsung no longer imports or sells any of the adjudicated
11 products, then it does not need to pay any ongoing royalties and suffers no hardship from that
12 remedy. Moreover, as this Court previously noted in connection with evaluating a permanent
13 injunction, the absence of current infringement does not foreclose future infringement: “The fact
14 that Samsung may have stopped selling infringing products for now says nothing about what
15 Samsung may choose to do in the future.” *Apple, Inc. v. Samsung Elecs. Co.*, 909 F. Supp. 2d
16 1147, 1161 (N.D. Cal. 2012), *aff’d in part*, 735 F.3d 1352 (Fed. Cir. 2013) (footnote omitted).
17 While Apple could resort to filing new lawsuits to address any continuing infringement, *see Asperx*
18 *Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1344 (Fed. Cir. 2012), ongoing royalties
19 may reduce unnecessary future litigation. Thus, Samsung’s assertions that it no longer infringes do
20 not prevent imposition of ongoing royalties.

21 **b. Products “not more than colorably different”**

22 In its proposed order, Apple seeks ongoing royalties “as to products adjudicated to infringe
23 the ’647, ’172, and ’721 patents, respectively, and as to products not more than colorably different
24 therefrom.” ECF No. 1959. Samsung protests that this proposed language is overly broad and will
25 “perpetuate satellite litigation” about whether unaccused Samsung products are “colorably
26 different” from the accused infringing products. *See* ECF No. 1986-3 at 16-17. Samsung claims
27 that Apple has initiated costly enforcement proceedings at the International Trade Commission
28 against other competitors after obtaining exclusion orders against certain products. *Id.*

1 Samsung's concerns are premature. In the injunction context, this Court has already
 2 observed that the "not more than colorably different" provision is standard in injunctions. ECF No.
 3 1954 at 38. The Federal Circuit has explained and applied this standard for contempt proceedings
 4 regarding injunctions. *See TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 882 (Fed. Cir. 2011) (en
 5 banc) ("Instead of focusing solely on infringement, the contempt analysis must focus initially on
 6 the differences between the features relied upon to establish infringement and the modified features
 7 of the newly accused products."). Several district courts have used this language when imposing
 8 ongoing royalties. For example, in *Bianco v. Globus Medical, Inc.*, Federal Circuit Judge William
 9 Bryson (sitting by designation) ordered ongoing royalties for trade secret misappropriation, noting
 10 that "[a]n order basing ongoing royalty payments on future sales of those three products implicitly
 11 extends to any products that are not colorably different from those products." No. 2:12-CV-00147-
 12 WCB, 2014 U.S. Dist. LEXIS 89777, at *36-37 (E.D. Tex. July 1, 2014); *see also VirnetX Inc. v.*
 13 *Apple Inc.*, No. 6:13-CV-211, 2014 U.S. Dist. LEXIS 159013, at *16 (E.D. Tex. Mar. 6, 2014)
 14 (including "products not colorably different from those adjudicated at trial") (*rev'd in part*, 767
 15 F.3d 1308 (Fed. Cir. 2014)); *Mondis*, 2012 U.S. Dist. LEXIS 60004, at *7-8 (same); *Creative*, 674
 16 F. Supp. 2d at 854.

17 Samsung cites *Fractus, S.A. v. Samsung Electronics Co.* as an example where a court
 18 refused to employ the "not colorably different" language and limited ongoing royalties to
 19 "adjudicated models." No. 6:09-CV-203, 2013 WL 1136964, at *3 (E.D. Tex. Mar. 15, 2013).
 20 There, the plaintiff argued that "at least 25 unadjudicated but not 'colorably different' phones
 21 should be considered in the ongoing royalty rate analysis," and that "this number could increase"
 22 after discovery. *Id.* at *2. The district court decided not to include this "elusive target" in the
 23 ongoing royalty analysis, but "without prejudice to Fractus filing a separate action involving these
 24 products." *Id.* While the *Fractus* court exercised its discretion to decline to adjudicate products
 25 that were "not colorably different," as noted above, most other courts have adjudicated "not
 26 colorably different" products. Moreover, the *Fractus* court recognized that the plaintiff could
 27 simply file new lawsuits to target new infringing products. Similarly, Apple could file new
 28 lawsuits against Samsung for future infringement. Samsung does not address the likelihood that

1 new enforcement lawsuits by Apple would require the “further motion practice, discovery and
2 expert disputes” that Samsung decries here. ECF No. 1986-3 at 17-18.

3 Samsung also argues that Apple’s proposed language for ongoing royalties is “far broader
4 even than what it proposed for its permanent injunction” because Apple tried to enjoin only
5 “features,” not “products.” *Id.* at 17. In its proposed permanent injunction, Apple targeted
6 “software or code capable of implementing any Infringing Feature, and/or any feature not more
7 than colorably different therefrom.” ECF No. 1895-4. This Court noted that Apple’s proposed
8 injunction was relatively narrow because it “targets only specific features, not entire products.”
9 ECF No. 1954 at 38. Such narrowing was appropriate because Apple sought to enjoin a variety of
10 activities such as “developing, designing, [or] testing” source code “capable of implementing any
11 Infringing Feature.” ECF No. 1895-4.

12 Here, Apple seeks ongoing royalties for “products not more than colorably different
13 therefrom.” ECF No. 1959. Apple does not respond to Samsung’s objection, but Apple indicates
14 that it wants royalties for “products with the software found to infringe or software that is not more
15 than colorably different therefrom.” ECF No. 2001 at 14. The Court is not convinced by
16 Samsung’s assertion that Apple’s request is “far broader” than the proposed permanent injunction.
17 The Federal Circuit explained that the “not colorably different” inquiry focuses on “the features
18 relied upon to establish infringement.” *TiVo*, 646 F.3d at 882. Thus, any analysis of future
19 Samsung products would necessarily focus on the relevant infringing features. The jury heard
20 considerable evidence regarding the value of the infringing features, so the verdict reflects the
21 jury’s apportionment of the value of those features to the adjudicated products. Applying ongoing
22 royalties by product instead of feature is reasonable under these circumstances.

23 5. The Jury Verdict

24 Finally, Samsung argues that the jury’s damages verdict reflects a lump sum, which means
25 that Apple has received a one-time compensation for all past and future infringement. *See* ECF
26 No. 1986-3 at 18. Furthermore, Samsung contends that if the jury verdict is ambiguous, it is
27 impossible to award ongoing royalties. *See id.* at 18-19; ECF No. 2015-2 at 1.
28

Samsung has already raised and lost this argument. In opposing Apple's earlier request for supplemental damages, Samsung argued that the jury must have awarded a lump sum instead of a per-unit royalty. The Court rejected this theory because the verdict contains no express statement about whether the damages award encompasses future infringement, the verdict form chart with respect to the Galaxy S II products referred to sales up to the "Present," and Dr. Chevalier also presented a per-unit reasonable royalty theory at trial. *See* ECF No. 1963 at 19-22 (citing *Telcordia*, 612 F.3d at 1378, and *Whitserve*, 694 F.3d at 35-38). For these reasons, the Court previously concluded that: "Because the record suggests it is plausible that the jury intended to award Apple damages only for past infringing sales, the Court cannot conclude that the jury necessarily awarded a lump-sum award intended to cover past and future infringement." *Id.* at 22. Accordingly, the Court awarded supplemental damages.⁶ For the same reasons, the Court disagrees with Samsung's interpretation of the jury verdict.

6. Summary of Entitlement to Ongoing Royalties

Apple has not received compensation for any continuing infringement by Samsung. *See Telcordia*, 612 F.3d at 1379 (stating that "an ongoing royalty is appropriate" because the patentee "has not been compensated for . . . continuing infringement"). Without ongoing royalties, there is an increased chance of duplicative litigation and successive lawsuits. Exercising its equitable discretion, the Court finds that Apple should receive ongoing royalties under these circumstances. However, the Court restricts any ongoing royalties to the period after entry of final judgment because Apple has already obtained entitlement to supplemental damages for post-verdict, pre-judgment infringement.

C. Amount of Ongoing Royalties

The Court now addresses the proper calculation of ongoing royalties. The Federal Circuit has recommended that "the district court may wish to allow the parties to negotiate a license

⁶ Samsung claims that when the jury recalculated damages for the Galaxy S II products under the '172 Patent (*see* ECF No. 1884 at 9), the jury only reallocated damages without changing the total award, which indicates a lump sum. *See* ECF No. 2015-2 at 1. The Court already rejected this speculative argument (*see* ECF No. 1963 at 21 n.7). The jury might have made a mistake in its first calculation, and then applied a per-unit rate when recalculating damages. Indeed, as shown in the charts below, the jury's updated verdict reflects a nearly uniform per-unit royalty for all adjudicated products under the '172 Patent.

1 amongst themselves regarding future use of a patented invention before imposing an ongoing
2 royalty.” *Paice*, 504 F.3d at 1316; *see also id.* at 1316-17 (Rader, J., concurring) (suggesting that
3 negotiation be a requirement). District courts have followed this recommendation by ordering
4 private negotiations. *E.g., Hynix*, 609 F. Supp. 2d at 987.

5 Here, these parties have been negotiating on and off since August 2010, or well over four
6 years. *See* Tr. at 1046:16-21. The Court has presided over three jury trials between these parties
7 (in the above-captioned case and in Case No. 11-CV-01846) and ordered private negotiations
8 multiple times. After the May 5, 2014 jury verdict, the parties conducted further negotiations, but
9 to no avail. *See* ECF No. 1894. In August 2014, Apple and Samsung settled all of their worldwide
10 patent disputes, except their U.S. litigations. *See* Velturo Decl. ¶ 46. Furthermore, the briefs here
11 demonstrate that the parties still vigorously dispute ongoing royalties and disagree on almost all
12 issues. Therefore, the parties’ behavior indicates that any order to negotiate ongoing royalties is
13 likely to be futile and only delay the entry of final judgment. The Court therefore determines
14 ongoing royalty rates from the briefing.

15 As noted above, the Federal Circuit has held that “[f]here is a fundamental difference . . .
16 between a reasonable royalty for pre-verdict infringement and damages for post-verdict
17 infringement,” and that “the calculus is markedly different because different economic factors are
18 involved.” *Amado*, 517 F.3d at 1361-62. A district court may consider “additional evidence of
19 changes in the parties’ bargaining positions and other economic circumstances that may be of value
20 in determining an appropriate ongoing royalty.” *ActiveVideo*, 694 F.3d at 1343. “[T]he Federal
21 Circuit has not delineated specific economic factors for courts to assess in an ongoing royalty
22 context.” *Telcordia*, 2014 U.S. Dist. LEXIS 51076, at *5. However, in *Bard*, the Federal Circuit
23 approved certain case-specific factors: “The court also considered other economic factors,
24 including that Bard and Gore compete directly with respect to surgical grafts, Gore profits highly
25 from its infringing products, Gore potentially faces stiffer losses that include a permanent
26 injunction if Bard prevails in a second lawsuit, and Bard seeks adequate compensation and lacks
27 incentive to accept a below-market deal.” 670 F.3d at 1193.

Courts have used the *Georgia-Pacific* factors to evaluate a post-verdict hypothetical negotiation for ongoing royalties. As Judge Bryson stated, “the courts have often used the so-called *Georgia-Pacific* factors in assessing how the changed circumstances would produce a royalty rate in a hypothetical post-verdict licensing negotiation that was different from the royalty rate the jury selected based on a hypothetical licensing negotiation at the outset of infringement.” *Bianco*, 2014 U.S. Dist. LEXIS 89777, at *8 (Bryson, J.). Accordingly, to assess ongoing royalties, the Court considers the law regarding reasonable royalties under *Georgia-Pacific*. See *Georgia-Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

1. Rates in the Jury Verdict

Generally, the jury’s damages award is a starting point for evaluating ongoing royalties. See *Bard*, 670 F.3d at 1193 (affirming ongoing royalty that “‘should be higher than the 10% reasonable royalty rate’ set by the jury”); *Bianco*, 2014 U.S. Dist. LEXIS 89777, at *7 (noting that the Eastern District of Texas has “consistently looked to the jury’s verdict as the ‘starting point’ for determining postjudgment damages”); *Telcordia*, 2014 U.S. Dist. LEXIS 51076, at *13 (“[C]ourts frequently impose a post-verdict ongoing royalty rate that is higher than the reasonable royalty found at trial for past infringement.”). Here, the parties argue about what royalty rates the jury might have intended to award Apple. The jury awarded aggregate damages for each product found to infringe each patent, but did not specify any per-unit rate. ECF No. 1884 at 9. In interpreting an ambiguous verdict form, this Court has “broad discretion” to determine if “the verdict figure represented past infringement as well as ongoing infringement.” *Telcordia*, 612 F.3d at 1378; see also *Whitserve*, 694 F.3d at 35-38.

Apple seeks per-unit royalty rates of \$2.75 for the ’647 Patent, \$1.41 for the ’721 Patent, and \$2.30 for the ’172 Patent, for both adjudicated products and all “not more than colorably different” products. ECF No. 1959. To arrive at these rates, Dr. Vellturo reverse engineers the jury’s verdict. Vellturo Decl. ¶¶ 13-22. Dr. Vellturo attempts to explain the verdict by dividing the jury’s award for each product by his own proposed reasonable royalties to determine what percentage of his proposal the jury applied. *Id.* ¶ 16. Dr. Vellturo concludes: “(1) the jury reached agreement on per-unit royalties for each patent, (2) the jury calculated the ratio between its rates

and my royalty rates; (3) the jury applied those ratios to the reasonable royalty damages for each product provided at PX222A1.24, which was discussed during closing arguments; and (4) the jury modified the amount in the last line ('Stratosphere') to obtain a round total damages figure to be included in the answer to question 9 on the Amended Final Verdict." *Id.* ¶ 18. As an example, Dr. Velturo determines that the jury awarded 22% of his proposed royalties for the '647 Patent. *Id.* ¶ 16. Based on this ratio, Dr. Velturo multiplies his original proposed per-unit royalty for the '647 Patent (\$12.49) by 22% to reach a per-unit rate of \$2.75. *Id.* ¶ 17.

Samsung interprets the verdict differently. Dr. Chevalier renews Samsung's argument that the jury must have awarded a lump-sum royalty, not a per-unit royalty—an argument that this Court has rejected. ECF No. 2015-9 ("Chevalier Decl.") ¶¶ 13-14. Next, Dr. Chevalier disagrees with Dr. Velturo's calculations from the jury verdict because they do not explain the actual damages award. *See id.* ¶ 10. For the '647 Patent, for example, Dr. Chevalier claims that Dr. Velturo's formula does not produce the jury's award for Samsung's Admire product:

$$= \left[\frac{\text{jury agreed per unit royalty rate for '647 patent}}{\text{Dr. Velturo's per unit royalty rate for '647 patent}} \right] * \left[\text{damages figure for Admire on '647 patent from PX222A1} \right]$$

$$= [(\$2.75/\text{unit})/(\$12.49/\text{unit})] * \$34,096,139$$

$$= \$7,507,156.31$$

Id. ¶ 9. Dr. Chevalier notes that the jury actually awarded \$7,599,178, which exceeds Dr. Velturo's estimate by \$92,021.69 (or about 1.2%). *Id.* ¶ 10; *see also id.* Ex. 2.

Although Apple's estimated per-unit rates are roughly consistent with the jury verdict, the Court finds no basis for estimating the per-unit royalties as Apple suggests. The jury verdict and undisputed numbers of infringing units (shown in Dr. Velturo's Exhibit 3) reflect the following per-unit rates for the adjudicated products:

'647 Patent	Award	Units	Rate (Award/Units)
Admire	\$7,599,178		
Galaxy Nexus	\$3,158,100		
Galaxy Note	\$1,677,740		
Galaxy Note II	\$8,684,775		
Galaxy S II (AT&T / T-Mobile)	\$8,625,560		
Galaxy S II Epic 4G Touch	\$10,165,134		

Galaxy S II Skyrocket	\$2,467,265		
Galaxy S III	\$52,404,721		
Stratosphere	\$3,908,152		
Total	\$98,690,625		

'721 Patent	Award	Units	Rate (Award/Units)
Admire	\$1,372,696		
Galaxy Nexus	\$867,281		
Stratosphere	\$750,648		
Total	\$2,990,625		

'172 Patent	Award	Units	Rate (Award/Units)
Admire	\$2,655,675		
Galaxy Nexus	\$1,579,050		
Galaxy Note	\$1,166,343		
Galaxy S II (AT&T / T-Mobile)	\$4,019,400		
Galaxy S II Epic 4G Touch	\$5,849,662		
Galaxy S II Skyrocket	\$1,178,904		
Stratosphere	\$1,494,716		
Total	\$17,943,750		

See Velturo Decl. Ex. 3 (ECF No. 1985-7). Instead of simply dividing the damages award for each product by the number of units as shown above, Dr. Velturo uses a more complicated approach: dividing the jury's award by his proposed award, and then multiplying the resulting ratio against his proposed per-unit rate. *See* Velturo Decl. ¶ 17. Dr. Velturo claims that it is inappropriate to divide the damages for each product by the number of units because it "results in per-unit rates that vary for each product." *Id.* ¶ 21. He claims that this approach does not explain the jury's actions because "there is no reason to believe that the jury would adopt a different royalty rate for each different combination of a patent and a product," and no witness or lawyer told the jury to calculate damages this way. *Id.* ¶ 22. Dr. Velturo further defends his approach because it purportedly reflects "round" figures for two of the patents, which a lay jury would more likely apply. *Id.* ¶ 17.

The Court finds no basis for adopting Dr. Velturo's more complicated approach. As Dr. Chevalier observes, Dr. Velturo's method does not produce the numbers that the jury actually awarded. Dr. Velturo's calculations rely on unsupported speculation as to how the jury computed damages. For example, Dr. Velturo admits that his reverse-engineered rate for the '721 Patent is

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not a “round” figure, but speculates that this rate “may reflect a decision to approximate a number that is seven-eighths of the royalty rate I proposed.” *Id.* ¶ 17 & n.26. However, he provides no grounds for this guesswork.⁷ Indeed, in briefing its motion for judgment as a matter of law, Apple claimed that it was not possible to deconstruct the verdict because “[t]he jury may have awarded a lump sum, a running royalty, some of Apple’s lost profits, or a combination of these and/or other theories.” ECF No. 1918 at 6 n.4. Furthermore, Dr. Velturo’s approach would apply the same rate to each future sale of any adjudicated product for a given patent. In other words, Dr. Velturo would use a \$2.75 rate under the ’647 Patent for a future sale of the Galaxy S III, even though the verdict reflects a lower actual rate of [REDACTED]. This approximation is unnecessary because the verdict allows the Court to determine rates for each product, not just an average rate per patent across all products. Thus, the Court finds that the most straightforward and reliable way to determine per-unit rates for the adjudicated products is to divide damages for each product by the number of units. For the adjudicated products, the Court uses these per-unit royalty rates as the starting point for ongoing royalties.

For any products that are “not more than colorably different” from the adjudicated products, the Court concludes that the most appropriate rates are determined by dividing the total damages for each patent by the total number of infringing products for that patent. This calculation shows the average per-unit rate that the jury awarded for a given patent, across all adjudicated products for that patent. Thus, these rates show what the jury awarded on average for infringement of each patent, which is a reasonable starting point for royalties for unadjudicated products that are “not more than colorably different.” As shown in the tables above, these calculations produce rates of [REDACTED] for the ’647 Patent, [REDACTED] for the ’721 Patent, and [REDACTED] for the ’172 Patent. [REDACTED]

[REDACTED] However, the Court rejects Dr. Velturo’s approach for the reasons above.

⁷ Dr. Velturo assumes that the jury applied a percentage to the reasonable royalties he proposed at trial. However, the jury’s numbers are also consistent with applying a multiple of Dr. Chevalier’s proposed reasonable royalties. *See* DX 453A.

1 2. **Changed Circumstances**

2 Having determined starting points for ongoing royalties based on the verdict, the Court next
3 considers any “changes in the parties’ bargaining positions and other economic circumstances” that
4 may warrant departure from those rates. *ActiveVideo*, 694 F.3d at 1343. The original hypothetical
5 negotiations for the infringed patents would have occurred in late 2011. *See* Vellturo Decl. ¶ 29.
6 In setting ongoing royalties, courts have used a second hypothetical negotiation following the
7 verdict.⁸ *E.g.*, *Carnegie Mellon*, 2014 U.S. Dist. LEXIS 43042, at *119 (evaluating “hypothetical
8 negotiation” after verdict); *Depuy*, 2014 U.S. Dist. LEXIS 61450, at *24 n.8 (analyzing “post-
9 verdict hypothetical negotiation”). Here, both parties’ experts analyze various *Georgia-Pacific*
10 factors that could affect the verdict rates. However, Apple does not seek higher rates: “to be
11 conservative, Apple only seeks ongoing royalties consistent with the amounts awarded by the
12 jury.” ECF No. 1985-3 at 2. Samsung claims that the verdict rates “should be adjusted downward
13 by 57 to 75 percent to account for changes from 2011 to 2014.” ECF No. 2015-2 at 2.

14 As an initial matter, the Federal Circuit has counseled that a liability verdict causes “a
15 substantial shift in the bargaining position of the parties” because it places the patentee in a
16 stronger negotiating position. *ActiveVideo*, 694 F.3d at 1342. “Once a judgment of validity and
17 infringement has been entered, however, the calculus is markedly different because different
18 economic factors are involved.” *Amado*, 517 F.3d at 1362; *see also Bard*, 670 F.3d at 1193
19 (quoting *id.* and affirming ongoing royalty rate higher than jury’s). Therefore, Apple would have a
20 stronger position in a post-verdict hypothetical negotiation than it did before, which favors
21 relatively higher ongoing royalty rates. With this background in mind, the Court turns to the
22 disputed *Georgia-Pacific* factors.

23
24
25
26 ⁸ Dr. Vellturo refers to a hypothetical negotiation “as of summer or fall 2014.” Vellturo
27 Decl. ¶ 25. Dr. Chevalier assumes “late 2014,” but states that her analysis “is not sensitive to when
28 in 2014, after trial, the hypothetical negotiation occurs.” Chevalier Decl. ¶ 16 & n.21. Neither
party’s expert has identified any changed circumstances between “summer or fall 2014” and “late
2014,” or between the completion of briefing (October 15, 2014) and this Order, that would affect
the result here.

1 a. *Georgia-Pacific* Factor 5

2 The experts first address factor 5: “The commercial relationship between the licensor and
3 licensee, such as, whether they are competitors in the same territory in the same line of business; or
4 whether they are inventor and promoter.” *Georgia-Pacific*, 318 F. Supp. at 1120. Dr. Velturo
5 opines that changes in the smartphone market between 2011 and 2014 tend to support a higher
6 royalty. *See* Velturo Decl. ¶¶ 26-34. He cites data showing that total smartphones sold in the U.S.
7 increased from 105 million in 2011 to 137 million in 2013. *Id.* ¶ 27. He also claims that Apple and
8 Samsung’s combined share of U.S. smartphone shipments rose from 40% in 2011 to 70% in 2013,
9 and that Samsung’s share also rose from 20% to 30% over that time. *Id.* ¶ 29. Dr. Velturo further
10 notes that Samsung has “grown more dominant” and pushed out other smartphone competitors,
11 intensifying competition with Apple. *Id.* ¶¶ 33-34. He also states that the Galaxy S III was
12 particularly successful, both as to units sold and profits, and therefore particularly harmed Apple.
13 *See id.* ¶ 30. Overall, Dr. Velturo claims that the expanding market and increased competition
14 would favor a relatively high royalty.

15 In response, Dr. Chevalier argues that Apple already presented this evidence to the jury, so
16 “there is no meaningful change in the relative competitiveness between Apple and Samsung.”
17 Chevalier Decl. ¶ 21. Dr. Chevalier is correct that Dr. Velturo already presented some of his cited
18 evidence. At trial, Dr. Velturo relied on evidence arising after 2011 regarding the parties’
19 competitiveness. *See* Tr. at 1213:20-1214:22 (referring to competition during period of
20 infringement, “August 2011 through the end of 2013”). In his current declaration, for data
21 regarding total smartphone sales and the market share of all smartphone manufacturers, Dr.
22 Velturo simply refers to his pretrial supplemental expert report. *See* Velturo Decl. ¶ 27 & n.33,
23 ¶ 33 & nn. 42-43. However, Dr. Velturo does provide the market share data of all smartphone
24 manufacturers through the second quarter of 2014, information that was not before the jury. Dr.
25 Velturo gets this data from online articles and blog posts dated after the trial. *See id.* ¶ 31 &
26 nn.35-37 (citing [http://www.patentlyapple.com/patently-apple/2014/08/samsung-temporarily-](http://www.patentlyapple.com/patently-apple/2014/08/samsung-temporarily-beats-apple-in-us-smartphone-shipments.html)
27 [beats-apple-in-us-smartphone-shipments.html](http://www.patentlyapple.com/patently-apple/2014/08/samsung-temporarily-beats-apple-in-us-smartphone-shipments.html) (Aug. 6, 2014)). These new articles reference
28 market research reports but do not provide the methodology or underlying data for such reports.

1 Accordingly, this factor weighs only slightly in favor of Apple.

2 **b. Georgia-Pacific Factors 9, 10, and 11**

3 Next, Apple's expert discusses factors 9-11: "9. The utility and advantages of the patent
4 property over the old modes or devices, if any, that had been used for working out similar results.
5 10. The nature of the patented invention; the character of the commercial embodiment of it as
6 owned and produced by the licensor; and the benefits to those who have used the invention.
7 11. The extent to which the infringer has made use of the invention; and any evidence probative of
8 the value of that use." *Georgia-Pacific*, 318 F. Supp. at 1120. Dr. Velturo groups these factors
9 together and analyzes them with the assumption that Samsung continues to infringe the '647
10 Patent. *See* Velturo Decl. ¶ 39 ("Samsung has continued to sell the Galaxy S3 without
11 implementing any alternative to the '647 patent's technology."). He claims that under the "theory
12 of revealed preference" (which he previously invoked at trial, *see* Tr. at 1250:10-1251:11),
13 Samsung's continued infringement demonstrates that it values the patented features. *See id.* ¶ 36.
14 He also notes separate proceedings involving the '647 Patent: that asserted claim 9 was confirmed
15 during reexamination, and that the Federal Circuit affirmed certain claim constructions in *Apple,*
16 *Inc. v. Motorola, Inc.*, 757 F.3d 1286 (Fed. Cir. 2014). *See id.* ¶ 37. Dr. Velturo also notes
17 Samsung's statements at trial that Samsung could easily design around the asserted patents. *See id.*
18 ¶¶ 40-42.

19 Dr. Chevalier responds with a single argument: to the extent Samsung continues to infringe,
20 Samsung might choose to do so for reasons other than the value of the patented inventions. *See*
21 Chevalier Decl. ¶¶ 22-26. As examples, she notes that Samsung might not want Apple to dictate
22 the features in their products and avoid "[a]cquiescing to the demands of a competitor," citing her
23 own trial testimony. *Id.* ¶ 25 & n.43. As noted above, Samsung also represents that it no longer
24 infringes any of the three disputed patents.

25 The Court finds Apple's position more persuasive. As Dr. Velturo notes, ongoing royalties
26 would apply only if Samsung continues to infringe. *See* Velturo Decl. ¶ 44. This Court previously
27 noted that "Samsung's witnesses repeatedly told the jury that design-arounds would be simple or
28 already exist." ECF No. 1954 at 36. Thus, there is little reason for Samsung to continue any

1 infringement. Dr. Chevalier's arguments about alternative motivations for continuing infringement
2 are speculative and contrary to Samsung's repeated trial statements about the ease of design-
3 arounds. For these reasons, the Court finds that these factors favor Apple.

4 **c. Georgia-Pacific Factors 8 and 12**

5 To reduce ongoing royalty rates, Dr. Chevalier applies factors 8 ("The established
6 profitability of the product made under the patent; its commercial success; and its current
7 popularity.") and 12 ("The portion of the profit or of the selling price that may be customary in the
8 particular business or in comparable businesses to allow for the use of the invention or analogous
9 inventions."). *Georgia-Pacific*, 318 F. Supp. at 1120. Overall, Dr. Chevalier's opinion regarding
10 these factors is that [REDACTED], and thus
11 warrant lower royalties.

12 Dr. Chevalier claims that Dr. Vellturo previously opined that the 2011-12 time frame was
13 "critical" for Samsung's competition with Apple. *See* Chevalier Decl. ¶¶ 28-29. Dr. Vellturo told
14 the jury that many U.S. consumers were expected to buy their first smartphone in 2012, and that
15 "this is the time period where the competition between Samsung and Apple's about to intensify
16 because the accused units now are being launched into the marketplace" because "the competition
17 for first-time buyers is particularly important." Tr. at 1234:9-1235:1. He also testified that "the
18 Fall of 2011 is an extremely important time in this marketplace because the market is growing very
19 fast for smartphones and a lot of people are buying their first smartphone." *Id.* at 1306:24-1307:14.
20 Dr. Vellturo argued that "ecosystem effects" would drive up damages for Apple because customers
21 tend to show product loyalty. *Id.* at 1308:7-18. According to Dr. Chevalier, Dr. Vellturo failed to
22 account for the fact that this critical time "has already passed by the time of a hypothetical
23 negotiation in late 2014." Chevalier Decl. ¶ 34. She claims that the proportion of first-time
24 smartphone buyers has likely decreased since 2011. *See id.* ¶ 32. She further claims that both
25 parties' smartphones [REDACTED]. *See id.* ¶ 36.

26 Samsung's arguments do not carry much weight. Dr. Vellturo did not analyze these factors
27 for purposes of ongoing royalties, and his trial testimony did indicate that capturing first-time
28 buyers in 2011-12 was particularly important, which would have increased Apple's expected

royalties for the hypothetical negotiation in 2011. However, Dr. Vellturo did not testify that later periods (including the post-verdict time frame) would not also be critical to competition. Rather, he explained that “August 2011 through the end of 2013” was a “particularly significant period” because the market was “in a profound state of change and growth.” Tr. at 1213:20-1214:10. In turn, Dr. Chevalier identifies no evidence that competition has become less “critical” following the verdict, or that the “critical phase” “has already passed.” Even if the proportion of first-time buyers has decreased, the absolute number of such buyers may still be high. She claims that [REDACTED] However, she cites data that she previously presented in her pretrial expert reports. *See* Chevalier Decl. ¶ 36 & nn. 63, 64, 66; *see also* Tr. at 2424:10-18 (discussing profitability of Samsung products). Thus, her argument is subject to the same criticism she leveled at Dr. Vellturo’s market share evidence above—that this data was already available to the jury and does not reflect any changed circumstances.

Accordingly, Dr. Chevalier’s analysis of factors 8 and 12 provides little support for reducing ongoing royalty rates. The Court finds that these factors are roughly neutral.

d. Georgia-Pacific Factor 6

Factor 6 addresses: “The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.” *Georgia-Pacific*, 318 F. Supp. at 1120. Dr. Chevalier applies the same arguments she raises for factors 8 and 12, targeting Dr. Vellturo’s use of ecosystem effects. *See* Chevalier Decl. ¶¶ 37-38. She faults Dr. Vellturo for failing to account for a predicted decline in the proportion of first-time smartphone buyers in 2014-15, which may reduce any ecosystem effects. *See id.* ¶ 38. For the reasons stated above regarding factors 8 and 12, this analysis has limited persuasive value. While Dr. Vellturo did not address this factor for purposes of ongoing royalties, Dr. Chevalier does not cite any new evidence that customer loyalty or other factors influencing ecosystem effects have changed in the post-verdict time period. Due to this lack of evidence regarding changed circumstances, the Court finds that this factor is roughly neutral.

e. Georgia-Pacific Factors 1 and 4

Both experts discuss Apple's patent license agreements that have been executed post-verdict. Dr. Velturo analyzes this under the rubric of factor 1: "The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty." *Georgia-Pacific*, 318 F. Supp. at 1120. Dr. Chevalier addresses this more generally under factor 4: "The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly." *Id.* Both sides refer to two patent agreements: (1) Apple and Samsung's August 2014 "worldwide stand-down," in which the parties settled all patent disputes outside the United States, and (2) Apple's May 2014 agreement with Google and Motorola Mobility to settle all U.S. smartphone patent litigation. *See* Velturo Decl. ¶¶ 46-47; Chevalier Decl. ¶¶ 40-41.

Dr. Velturo briefly states that "neither agreement is relevant" because they involve different circumstances, and "no values were placed on any specific intellectual property." Velturo Decl. ¶¶ 45, 48. On the other hand, Dr. Chevalier claims that these two settlements "represent a distinct shift in Apple's patent policy" and "reflect a lessening of tensions between competitors in the 'smartphone wars' as compared to the period from 2011 through trial and suggest an increased willingness to reach agreements with competitors." Chevalier Decl. ¶ 42.

The Court finds that these factors are roughly neutral. The parties provide no information about the terms of the two agreements that would enable comparisons to the circumstances of this case. For example, if those two agreements addressed litigations that had not yet reached verdicts, they may not reflect comparable situations. Both experts provide only conclusory statements regarding Apple's settlement agreements. Dr. Chevalier does not explain how these agreements represent a "shift" in comparison to Apple's prior stances and does not compare these agreements to Apple's earlier settlement agreements with other companies. This lack of information renders these factors roughly neutral.

f. Georgia-Pacific Factor 13

The last factor addressed is: "The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business

1 risks, or significant features or improvements added by the infringer.” *Georgia-Pacific*, 318 F.
 2 Supp. at 1120. Dr. Chevalier states that the Galaxy S III has received upgrades to the Android
 3 operating system, with “dozens of new features” not covered by the asserted patents. Chevalier
 4 Decl. ¶¶ 43-45. “As the number of features included in the Android operating system continues to
 5 grow with each software update, the portion of the overall software functionality covered by the
 6 patents-at-issue can only decrease.” *Id.* ¶ 45. This factor slightly favors Samsung. Dr. Velturo
 7 does not address any changes to the adjudicated products, and Dr. Chevalier identifies new features
 8 that may make the patented features relatively less important than they were at the time of the first
 9 hypothetical royalty negotiation. However, Dr. Chevalier is not a technical expert and provides
 10 only a cursory assessment of changes to the Galaxy S III, without addressing the relative
 11 importance of the new features or the extent to which customers have upgraded their phones. For
 12 these reasons, this factor favors Samsung only slightly.

13 3. Overall Royalty Rates

14 Apple seeks rates consistent with the verdict, conceding that most of the evidence that the
 15 experts cited was “already presented at trial or in prior expert reports,” which “confirms the
 16 wisdom and conservatism inherent in using rates that preserve, rather than enhance, what that jury
 17 awarded.” ECF No. 2046-3 at 2. However, Samsung believes that any ongoing royalties should be
 18 discounted by 57-75%. Dr. Chevalier computes these discounts by using formulas that Dr.
 19 Velturo presented to the jury to quantify his reasonable royalty analysis. *See* Tr. at 1315-18. Dr.
 20 Chevalier changes “three numerical inputs” for the formulas: the profitability of the iPhone, the
 21 decline in price of the Galaxy S III, and “the diminishing share of first-time buyers going forward
 22 from a 2014 hypothetical negotiation as compared to a 2011 hypothetical negotiation.” ECF No.
 23 2015-2 at 2; Chevalier Decl. ¶ 47. She uses two alternative calculations, one based on projected
 24 2014 iPhone profits (Ex. 4), the other using profits of the lowest-priced iPhone that is “most likely
 25 to compete with the Galaxy S III” (Ex. 5). Chevalier Decl. ¶ 47. With her modified inputs, Dr.
 26 Chevalier concludes that the royalty rates should be reduced by either 59% or 75% for the ’647
 27 Patent, and either 57% or 74% for the ’721 and ’172 Patents. *Id.* Exs. 4, 5. As one example, Dr.
 28 Chevalier’s modified inputs reduce Apple’s “willingness to accept rate” for the ’647 Patent from

1 \$12.49 (the number that Dr. Vellturo originally proposed at trial) to \$5.09, for a discount of 59%.
 2 *Id.* Ex. 4. Without explanation, she applies the same discount to the \$2.75 rate that Dr. Vellturo
 3 claims the jury actually awarded, to produce a rate of \$1.12. *Id.*

4 Dr. Chevalier's analysis is not persuasive. First, her analysis is limited to modifying the
 5 inputs for Dr. Vellturo's formulas based on her conclusion that "Dr. Vellturo ignored key changes
 6 in the marketplace." *Id.* ¶ 46. However, the jury awarded significantly less for each patent than
 7 Dr. Vellturo recommended, so there is no indication that the jury applied Dr. Vellturo's formulas
 8 (or applied the royalty rates that Dr. Chevalier proposed at trial). Accordingly, Dr. Chevalier
 9 provides no basis for applying her discounts to the jury's rates, as opposed to Dr. Vellturo's
 10 original rates. Second, in modifying inputs, Dr. Chevalier reduces the price of the Galaxy S III,
 11 and uses only the Galaxy S III and Galaxy S II Epic 4G Touch as representative products. *See id.*
 12 Ex. 7. Even if Dr. Chevalier appropriately adjusts the price of the Galaxy S III, she provides no
 13 explanation for why this particular discount should apply to all other adjudicated products, much
 14 less any newer products "not more than colorably different" that might infringe. Third, as
 15 explained above, the Court finds that certain *Georgia-Pacific* factors tend to support a relatively
 16 higher royalty rate, and Dr. Chevalier assumes no such factors in proposing her discounts.

17 Particularly, Dr. Chevalier and Samsung do not address the Federal Circuit's holding that in
 18 a post-verdict hypothetical negotiation, the patentee generally has a stronger position than before.
 19 Dr. Chevalier omits this factor entirely from her ongoing royalties analysis. Moreover, Samsung
 20 cites no case where a court awarded ongoing royalties at rates below the jury's. Rather, courts
 21 have generally awarded the same or higher rates for continuing infringement. *E.g., Bard*, 670 F.3d
 22 at 1193 (affirming rates higher than jury's); *Depuy*, 2014 U.S. Dist. LEXIS 61450, at *24 n.8
 23 (awarding higher rate); *Carnegie Mellon*, 2014 U.S. Dist. LEXIS 43042, at *119 (awarding same
 24 rate). This further counsels against the discounts that Samsung proposes.

25 After considering both parties' arguments, the supporting declarations and exhibits,
 26 applicable case law, and the record, the Court determines that the proper ongoing royalty rates are
 27 those reflected in the jury verdict. As explained above, *Georgia-Pacific* factors 5 and 9-11 favor
 28 Apple. Factors 8 and 12, 6, and 1 and 4 are roughly neutral. Factor 13 slightly favors Samsung.

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On balance, Samsung has not shown that any changed economic circumstances warrant reducing the verdict rates. Apple does not seek any rates higher than the jury verdict. Accordingly, the rates reflected in the verdict shall apply.

For the adjudicated products, the rates should be the figures obtained by dividing the jury's award for each product by the corresponding number of units. For any unadjudicated products "not more than colorably different," the rates should be [REDACTED] for the '647 Patent, [REDACTED] for the '721 Patent, and [REDACTED] for the '172 Patent, for the reasons explained above.

IV. CONCLUSION

For the foregoing reasons, the Court DENIES Samsung's request to stay resolution of Apple's motion and GRANTS Apple's motion for ongoing royalties. The Court determines that Apple is entitled to ongoing royalties for any continuing infringement, in lieu of a permanent injunction. Those royalties shall apply to products adjudicated to infringe the '647, '172, or '721 Patents, and to products "not more than colorably different therefrom." The starting date for any ongoing royalties shall be after entry of final judgment in this case. The ongoing royalty rates for any adjudicated products shall be:

Product	'647 Patent	'721 Patent	'172 Patent
Admire	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy Nexus	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy Note	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy Note II	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy S II (AT&T / T-Mobile)	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy S II Epic 4G Touch	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy S II Skyrocket	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy S III	[REDACTED]	[REDACTED]	[REDACTED]
Galaxy Tab II 10.1	[REDACTED]	[REDACTED]	[REDACTED]
Stratosphere	[REDACTED]	[REDACTED]	[REDACTED]

For any unadjudicated products "not more than colorably different," the rates shall be [REDACTED] for the '647 Patent, [REDACTED] for the '721 Patent, and [REDACTED] for the '172 Patent.

IT IS SO ORDERED.

Dated: November 25, 2014

Lucy H. Koh
LUCY H. KOH
United States District Judge

United States District Court
 For the Northern District of California

UNITED STATES DISTRICT COURT
 NORTHERN DISTRICT OF CALIFORNIA
 SAN JOSE DIVISION

APPLE, INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
)	
Plaintiff and Counterdefendant,	)	ORDER GRANTING IN PART AND
	)	DENYING IN PART SAMSUNG'S
v.	)	MOTION FOR JUDGMENT AS A
	)	MATTER OF LAW
SAMSUNG ELECTRONICS CO., LTD., a)	
Korean corporation; SAMSUNG)	
ELECTRONICS AMERICA, INC., a New York)	
corporation; and SAMSUNG)	
TELECOMMUNICATIONS AMERICA, LLC,)	
a Delaware limited liability company,)	
)	
Defendants and Counterclaimants.)	
)	

On May 5, 2014, after a thirteen-day trial and approximately four days of deliberation, a jury in this patent case reached a verdict. ECF No. 1884. On May 23, 2014, Samsung filed a motion for judgment as a matter of law and motion to amend the judgment. ECF No. 1896-3 ("Mot."). On June 6, 2014, Apple filed an opposition. ECF No. 1908-3 ("Opp'n"). On June 13, 2014, Samsung filed a reply. ECF No. 1917 ("Reply"). The Court held a hearing on July 10, 2014. Having considered the law, the record, and the parties' argument, the Court GRANTS Samsung's motion for judgment as a matter of law that Samsung did not willfully infringe the '721 patent and DENIES Samsung's motion in all other respects.

I. LEGAL STANDARD

Federal Rule of Civil Procedure 50 permits a district court to grant judgment as a matter of law “when the evidence permits only one reasonable conclusion and the conclusion is contrary to that reached by the jury.” *Ostad v. Or. Health Scis. Univ.*, 327 F.3d 876, 881 (9th Cir. 2003). A party seeking judgment as a matter of law after a jury verdict must show that the verdict is not supported by “substantial evidence,” meaning “relevant evidence that a reasonable mind would accept as adequate to support a conclusion.” *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1366 (Fed. Cir. 2005) (citing *Gillette v. Delmore*, 979 F.2d 1342, 1346 (9th Cir. 1992)). The Court must “view the evidence in the light most favorable to the nonmoving party . . . and draw all reasonable inferences in that party’s favor.” *See E.E.O.C. v. Go Daddy Software, Inc.*, 581 F.3d 951, 961 (9th Cir. 2009) (internal quotations and citations omitted).

A new trial is appropriate under Rule 59 “only if the jury verdict is contrary to the clear weight of the evidence.” *DSPT Int’l, Inc. v. Nahum*, 624 F.3d 1213, 1218 (9th Cir. 2010). A court should grant a new trial where necessary “to prevent a miscarriage of justice.” *Molski v. M.J. Cable, Inc.*, 481 F.3d 724, 729 (9th Cir. 2007).

II. ANALYSIS

A. Non-infringement of Claim 9 of the ’647 Patent

The ’647 patent is directed to a “system and method for performing an action on a structure in computer-generated data.” The ’647 patent generally covers a computer-based system and method for detecting structures, such as phone numbers, post-office addresses, or dates, and performing actions on the detected structures. *See* ’647 Patent Abstract, col.1 ll.8-16. Apple asserted claim 9 of the ’647 patent against Samsung. Claim 9 depends from claim 1 and recites:

1. A computer-based system for detecting structures in data and performing actions on detected structures, comprising:
 - an input device for receiving data;
 - an output device for presenting the data;
 - a memory storing information including program routines including
 - an analyzer server for detecting structures in the data, and for linking actions to the detected structures;
 - a user interface enabling the selection of a detected structure and a linked action; and

an action processor for performing the selected action linked to the selected structure; and
a processing unit coupled to the input device, the output device, and the memory for controlling the execution of the program routines.

9. The system recited in claim 1, wherein the user interface enables selection of an action by causing the output device to display a pop-up menu of the linked actions.

'647 Patent cls. 1, 9. The jury found that all nine accused Samsung products infringe, and awarded damages. *See* ECF No. 1884 at 9. Samsung now moves for judgment as a matter of law that claim 9 is not infringed and is invalid in light of prior art. The Court addresses non-infringement and invalidity in turn.

As to non-infringement, Samsung contends that Apple presented its case under incorrect claim constructions that the Federal Circuit rejected shortly before the close of trial, in *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286 (Fed. Cir. 2014) ("*Motorola*"), and that Apple failed to demonstrate infringement of at least three limitations of claim 9, as properly construed. The Court concludes that substantial evidence supports the jury's finding of infringement, and accordingly DENIES Samsung's motion.

"To prove infringement, the plaintiff bears the burden of proof to show the presence of every element or its equivalent in the accused device." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1301 (Fed. Cir. 2011). "If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law." *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000).

1. Claim Construction

Samsung argues extensively that Apple presented an infringement case based on the wrong claim constructions. Samsung contends that Apple "shot for the moon" by relying on broad constructions of "analyzer server" and "linking actions," and that the Federal Circuit's opinion in *Motorola* rendered most of Apple's case ineffective. *See* Mot. at 1-8.

Samsung's arguments at this stage are misdirected to the extent they do not address the merits of Apple's infringement case—namely, the evidence and claim language at issue. During trial, the Court specifically addressed the effect of the *Motorola* decision with input from the

parties, and allowed both Apple and Samsung to present supplemental expert testimony before submitting the case to the jury. Accordingly, the verdict must be evaluated against the evidence presented, not the parties' procedural disputes regarding *Motorola*.

On March 19, 2012, in the *Motorola* litigation, the Northern District of Illinois construed the terms "analyzer server" and "linking actions to the detected structures" in the '647 patent. *See Apple, Inc. v. Motorola, Inc.*, No. 11-CV-08540, slip op. at 8-11 (N.D. Ill. Mar. 19, 2012). On July 20, 2012, the parties to the *Motorola* litigation appealed these constructions to the Federal Circuit. Meanwhile, in the instant case, this Court held a claim construction hearing on February 21, 2013 and issued a claim construction order on April 10, 2013. *See* ECF No. 447. The parties requested and received construction of only one term in the '647 patent, "action processor." *See id.* at 64.

However, since claim construction proceedings concluded, both parties have attempted to seek untimely constructions of the '647 patent. In its summary judgment motion, Apple sought belated constructions for "analyzer server" and "linking actions," ECF No. 803-4 at 5 n.6, but the Court found that "Apple's attempt to argue for a new claim construction at this stage is doubly improper, both because it did not raise its arguments at the claim construction stage and because Apple is trying to sidestep the summary judgment page limitations by incorporating legal arguments in a separate declaration," ECF No. 1151 at 17. On March 27, 2014, only days before the start of trial, Samsung filed a request to supplement the jury books with the Northern District of Illinois's constructions of "analyzer server" and "linking actions" that were then awaiting review by the Federal Circuit in *Motorola*. ECF No. 1521. The Court denied Samsung's request. ECF No. 1536. The case then proceeded to trial.

On April 25, 2014, which was the last scheduled day of evidence at trial, the Federal Circuit issued its decision in *Motorola*. The Federal Circuit affirmed the Northern District of Illinois's following constructions of "analyzer server" and "linking actions" from the '647 patent, and rejected Apple's arguments to alter those constructions:

"analyzer server": "a server routine separate from a client that receives data having structures from the client."

“linking actions to the detected structures”: “creating a specified connection between each detected structure and at least one computer subroutine that causes the CPU to perform a sequence of operations on that detected structure.”

Motorola, 757 F.3d at 1304-07. In response to this sudden development, the Court allowed the parties to address the effect of *Motorola* on the trial, after which the parties agreed to extend the trial and present additional testimony from their respective experts on ’647 patent infringement and validity. *See* Tr. at 2988:4-3003:20; ECF Nos. 1828, 1845. The Court also provided the *Motorola* constructions to the jury. *See id.* at 3014:16-24.

Before and during trial, the parties relied on expert opinions regarding infringement and validity of the ’647 patent from Dr. Todd Mowry (Apple) and Dr. Kevin Jeffay (Samsung). Apple now asserts that Samsung waived any challenges to Dr. Mowry’s testimony based on the *Motorola* constructions because Samsung did not raise these issues in its pre-verdict Rule 50(a) motion. Opp’n at 3. Apple’s objection is misplaced. Apple does not identify which specific non-infringement arguments Samsung allegedly waived. Samsung addressed the sufficiency of Dr. Mowry’s testimony during oral arguments for Rule 50(a) motions at the close of the evidence. *E.g.*, Tr. at 3114:20-3115:4 (referring to Dr. Mowry’s opinions).

Samsung claims that Apple’s infringement case and Dr. Mowry’s testimony before the issuance of *Motorola* relied on the claim constructions that the Federal Circuit rejected. However, the time for these arguments has passed, as the parties decided to permit additional evidence to address the *Motorola* constructions. Moreover, the Court notes that when trial resumed on April 28, 2014, Samsung attempted to have Dr. Jeffay testify misleadingly that he had used the *Motorola* constructions “since the very first day I worked on this case.” *Id.* at 3055:2-6. In fact, in his expert reports, Dr. Jeffay did not offer opinions on which claim constructions were correct. *See, e.g.*, ECF No. 882-11 (Jeffay Rebuttal Report) ¶¶ 120-28; Tr. at 3060:14-3064:21. Dr. Jeffay also testified at deposition that he had not taken positions on the *Motorola* constructions. *E.g., id.* at 3067:8-14 (quoting Jeffay deposition: “So sitting here today, based on all the information you’ve seen, do you have an opinion as to what the proper construction of analyzer server is as it appears in claim 1? Answer: No.”); *see also id.* at 3056:8-3077:25.

At this stage, the parties’ prior attempts to argue claim construction are not germane. Rather, the relevant issue is whether a reasonable jury, properly instructed, could have determined from the evidence presented that Samsung’s accused products infringe claim 9 of the ’647 patent. Indeed, despite raising these issues, Samsung asserts in its Reply that “pretrial and recall procedure are irrelevant here” and “the only relevant consideration is the record.” Reply at 3.

2. “Linking Actions” and “Specified Connection”

The Federal Circuit construed the claim phrase “linking actions to the detected structures” to mean “creating a *specified connection* between each detected structure and at least one computer subroutine that causes the CPU to perform a sequence of operations on that detected structure.” *Motorola*, 757 F.3d at 1305-06 (emphasis added). Samsung argues that the claimed “analyzer server” must create the “specified connection,” and that no accused device can possibly infringe because the user selects an action to be linked. *See* Mot. at 9-11. However, a reasonable jury could have found infringement of this limitation.

Samsung presented testimony from Google engineer Dianne Hackborn, who discussed “Intents” in the Android operating system, explaining that Intents “do communications between applications or interactions between applications.” Tr. at 1580:1-6. Hackborn testified that when an application wants to have a user perform an action, such as composing an e-mail, it can make an Intent “and give it to Android and then Android will find an application that can actually do that.” *Id.* at 1580:7-13. Dr. Jeffay then testified that “there is no specified connection” in Android because the Intent mechanism does not bind a specific application (such as a particular e-mail client) to a structure. *Id.* at 3087:3-3089:1 (“What’s not linked is the code that’s ultimately going to, for example, dial the phone.”).

However, Dr. Mowry expressed contrary opinions that the jury could have credited. Dr. Mowry’s infringement theory was that the Messenger (also referred to as “Messaging” by the parties) and Browser applications in Android include a method called `setIntent()` that calls another method called `startActivity()`, which corresponds to the “at least one computer subroutine” in claim 9 as construed in *Motorola*. Dr. Mowry explained that the *Motorola* construction of “linking

actions” did not change his infringement opinion, based on his review of source code for the Messenger and Browser applications in the Gingerbread, Ice Cream Sandwich, and Jelly Bean versions of Android, which he presented to the jury. *Id.* at 3026:16-3028:22. As an example, for the Gingerbread Messenger application, Dr. Mowry testified that `setIntent()` “records an intent object for a particular choice in the pop-up menu that shows you choices of linked action,” and that once the user picks an option, it necessarily calls the `startActivity()` method and passes an Intent object. *Id.* at 3027:6-23.

Samsung claims that there is no “specified connection” in the accused devices because there is no pre-existing link between a detected structure (such as an e-mail address) and a computer subroutine that directly performs an action (such as the Gmail application). Samsung argues that `startActivity()` is not called until the user selects an action, so it cannot be a “specified” connection. Samsung also contends that claim 9 requires “a *linked* action,” which further confirms that there must be a pre-existing link between the structure and the subroutine. *See* Mot. at 10. However, Dr. Mowry addressed this issue when he explained to the jury that `startActivity()` is “necessarily” and automatically called when a structure is detected. *See* Tr. at 3027:14-17. Also, as Apple notes, under the *Motorola* construction, the analyzer server is for “*creating* a specified connection,” such that the claimed action need not always be “linked” to a structure prior to detection of that structure. Furthermore, Dr. Jeffay admitted that `startActivity()` is a “computer subroutine that’s actually linked into the detected structures,” but claimed that no specified connection exists because claim 9 requires that “you link the actual program that performs that function,” such as dialing a phone number. *Id.* at 3090:5-20. The *Motorola* construction of “linking actions,” however, requires only that the detected structure be linked to a “computer subroutine that *causes the CPU to perform*” that function. Thus, the jury could have determined that `startActivity()` satisfies this limitation because it is admittedly a linked subroutine that causes performance of an action. While “it is well settled that an expert’s unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue of material fact,” *Arthur A. Collins, Inc. v. N.*

Telecom Ltd., 216 F.3d 1042, 1046 (Fed. Cir. 2000), that is not the situation here. The jury could have evaluated the expert testimony and reasonably determined infringement of this limitation.

For completeness, the Court addresses two additional arguments from Apple that are misplaced. First, Apple contends that Samsung waived its argument regarding the “linked action” limitation by not raising it in its pre-verdict Rule 50(a) motion. *See* Opp’n at 8 n.2. Samsung does not respond to this waiver argument in its Reply. However, the Court finds no waiver because Samsung argued repeatedly that no “specified connection” exists in Android. *See* Tr. at 3115:12-3117:10. Second, Apple notes that the Northern District of Illinois previously concluded in *Motorola* that infringement of “linking actions” (and other limitations) was not amenable to summary judgment. These arguments are meritless. *Motorola* involved different products and parties. Moreover, Apple asked the Court to exclude references to *Motorola* from trial because “the *Motorola* order, and any reference to rulings, findings, or other developments in cases not involving both parties to this action should be excluded.” ECF No. 1281-3 at 4. Having argued that prior orders in *Motorola* were irrelevant, Apple cannot now rely on them.

Even setting aside Apple’s misplaced arguments, the Court determines for the reasons above that a reasonable jury could have found infringement of the “linking actions to the detected structures” limitation.

3. “Analyzer Server”

The claimed “analyzer server” means “a server routine separate from a client that receives data having structures from the client.” The parties focus their dispute on whether Android includes a server routine that is “separate from a client.”

Apple contended that the Messenger and Browser applications contain shared libraries that correspond to the “analyzer server” limitation. *See* Tr. at 3017:17-3019:21. These shared libraries include the Linkify, Cache Builder, and Content Detector classes. *Id.* Dr. Mowry stated that Messenger and Browser are “clients” that pass data to these shared libraries to detect structures. *Id.* at 3017:9-16. Samsung claims infringement is impossible under this theory because a shared library is not “separate” from the client application. Samsung points to Ms. Hackborn’s testimony,

where she stated that Linkify “is not a server” and “does not run on its own. It runs as part of the application that’s using it.” *Id.* at 1585:9-18. Dr. Jeffay relied in part on Ms. Hackborn’s testimony to opine that shared libraries are not separate from the clients because they “become[s] part of the application.” *Id.* at 3079:17-3080:7, 3084:20-22 (“Q. So if you pull the Linkify code out of Messenger, what happens? A. Well, Messenger certainly would not run.”).

The Court finds that substantial evidence supports the jury’s verdict for this limitation. Dr. Mowry presented Android source code to the jury and explained that the shared libraries receive data from the Messenger and Browser applications and detect structures in that data. *See id.* at 3017:23-3018:8, 3018:24-3019:13. Dr. Mowry also directly rebutted Dr. Jeffay’s opinions regarding shared libraries, explaining that the shared libraries are stored in “a particular part of memory,” are accessible to multiple applications, and are “definitely separate from the applications.” *Id.* at 3023:3-3024:19. Dr. Mowry also acknowledged Ms. Hackborn’s testimony but stated that it did not alter his opinions on shared libraries. *See id.* at 3025:12-25, 3052:1-14 (stating that a shared library is “not written as a standalone program, even though it is distinct and separate from the application”). Apple also had Dr. Mowry testify that the shared libraries receive data from the client applications. *See id.* at 3019:18-21, 3021:25-3022:3. The jury could have reasonably credited Dr. Mowry’s explanations.

Dr. Mowry also testified that “glue code” supports his view that the shared libraries are distinct from the client applications because the glue code “connects together different modules or different pieces of software.” *Id.* at 3020:22-3021:10. Samsung asserts that “glue code” is not a term of art. Mot. at 12. This objection is irrelevant. Regardless of whether “glue code” appears in textbooks, Dr. Mowry stated that the presence of such code indicates that this claim limitation is satisfied. The jury was entitled to assess the competing experts’ credibility on this point. *See Kinetic*, 688 F.3d at 1362.

4. “Action Processor”

This Court construed “action processor” as “program routine(s) that perform the selected action on the detected structure.” ECF No. 447 at 64. *Motorola* did not affect this construction, and

the parties did not offer additional testimony on this limitation. Dr. Mowry identified the startActivity() and resolveActivity() methods in the Android source code as “action processors.” See Tr. at 873:8-20. He also testified that startActivity() “allows one program to launch another program and pass data to it,” such that it performs the selected action. *Id.* at 2794:8-2796:21. According to Samsung, startActivity() cannot be an “action processor” because it does not directly perform an action (such as dialing a phone number or initiating an e-mail). However, the Court’s construction of “action processor” is not limited in this way, and during claim construction, the parties disputed only whether an action processor must be “separate from a client.” See ECF No. 447 at 14-20. Samsung fails to show that a reasonable jury could not determine that startActivity() performs selected actions by launching appropriate applications.

5. Jelly Bean Galaxy Nexus

For the Jelly Bean version of the Galaxy Nexus, Apple did not accuse the Messenger application, only Browser. Samsung contends that Browser lacks a “user interface enabling the selection of a *detected* structure” because Browser detects a structure (such as an e-mail address) only after a user selects it. The jury heard sufficient evidence to reject this argument. Dr. Mowry explained that the Jelly Bean Galaxy Nexus infringes because it allows users to perform a “long press” a “press and hold” instead of a tap that results in detection of a structure prior to selection of an action. Tr. at 866:3-870:8; *see also id.* at 869:10-17 (“The user eventually is holding down long enough that it becomes a selection through a press and hold.”). At the summary judgment stage, the Court noted that whether the “long press” infringes would be a question for the jury. See ECF No. 1151 at 20-21. The jury could have reasonably accepted Dr. Mowry’s explanation.

For the foregoing reasons, Samsung’s motion for judgment as a matter of law of non-infringement of the ’647 patent is DENIED.

B. Invalidity of Claim 9 of the '647 Patent

Samsung moves for judgment as a matter of law that no reasonable jury could find claim 9 of the '647 patent valid, arguing that Sidekick renders the claim obvious. Mot. at 14. The Court DENIES Samsung's motion.

Under 35 U.S.C. § 103, a patent is invalid as obvious "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains." 35 U.S.C. § 103. "A party seeking to invalidate a patent on the basis of obviousness must demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so." *Kinetic*, 688 F.3d at 1360. "Obviousness is a question of law based on underlying findings of fact." *In re Kubin*, 561 F.3d 1351, 1355 (Fed. Cir. 2009). Though obviousness is ultimately a question of law for the Court to decide de novo, in evaluating a jury verdict of obviousness, the Court treats with deference the implied findings of fact made by the jury. *Kinetic*, 688 F.3d at 1356-57. The Court must discern the jury's implied factual findings by interpreting the evidence consistently with the verdict and drawing all reasonable inferences in the nonmoving party's favor. *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). The Court "first presume[s] that the jury resolved the underlying factual disputes in favor of the verdict [] and leave[s] those presumed findings undisturbed if they are supported by substantial evidence." *Kinetic*, 688 F.3d at 1356-57 (citation omitted). The underlying factual inquiries are: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations, such as commercial success, long felt but unsolved needs, copying, praise, and the failure of others. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966)); *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1311 (Fed. Cir. 2010). The Court then examines the ultimate legal

conclusion of obviousness de novo to determine whether it is correct in light of the “presumed jury fact findings.” *Kinetic*, 688 F.3d at 1357. Here, the jury found claim 9 of the ’647 patent valid. Thus, below, the Court first examines whether substantial evidence supported the jury’s underlying factual conclusions that there was a significant gap between the prior art and the patent, and that there were secondary indicia of non-obviousness.

First, there was conflicting expert testimony on the question whether Sidekick rendered claim 9 obvious. Samsung’s expert, Dr. Jeffay, testified Sidekick rendered claim 9 obvious because it disclosed all the limitations of claim 9 except for two, and that those two limitations linking actions to the detected structures by using a “specified connection,” and a “pop-up” menu would have been obvious based on Sidekick. *See* ECF No. 1928 at 3092-94, 3098-99; ECF No. 1717 at 1810, 1841. Yet Apple’s expert, Dr. Mowry, testified that Sidekick did not render the ’647 obvious because in addition to missing those two elements, *see* ECF No. 1928 at 3101, Sidekick did not detect “multiple structures” nor link to multiple actions. *See* ECF No. 1926 at 2802-03, 2810; ECF No. 1928 at 3101, 3104. Specifically, Dr. Mowry explained Sidekick could only detect one structure phone numbers and showed the jury Sidekick code and explained how the code used only one pattern to detect all phone numbers, including domestic and international. *See* ECF No. 1926 at 2802-06, 2809. Dr. Mowry also testified that Sidekick could link only one action dialing. *See* ECF No. 1926 at 2803, 2809; ECF No. 1928 at 3104. In response, Dr. Jeffay claimed Sidekick could detect multiple structures because it could detect multiple types of phone numbers (including domestic and international) by using different patterns, ECF No. 1717 at 1807-08, 1834-35. Dr. Jeffay also implicitly rejected Dr. Mowry’s testimony that claim 9 requires multiple actions, given that Dr. Jeffay did not testify that “multiple actions” was one of the limitations of the claim. *Id.* at 1807. Finally, Dr. Mowry testified Sidekick failed to satisfy claim 9’s requirement that the user interface enable “selecting a structure.” ECF No. 1624 at 923-24; ECF No. 1926 at 2802. Dr. Jeffay rebutted this point by stating a user “can pick any number that they want.” ECF No. 1717 at 1838-39. Based on this conflicting expert testimony, the jury was free to “make credibility determinations and believe the witness it considers more trustworthy.” *Kinetic*, 688 F.3d at 1362

(citation omitted). The jury’s finding of validity indicates that the jury made an implied finding of fact crediting Dr. Mowry’s testimony that the gap between Sidekick and the ’647 was significant because Sidekick did not disclose various elements of claim 9. *Id.* at 1363 (“[W]hether the prior art discloses the limitations of a particular claim is a question of fact to be determined by the jury[.]”); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1315 (Fed. Cir. 2009) (holding that jury was entitled to conclude, as a factual matter, that the prior art did not disclose this limitation). The Court must give that finding deference. *Kinetic*, 688 F.3d at 1356-57. Crediting Dr. Mowry’s testimony over that of Dr. Jeffay, the Court cannot say that the jury’s implied finding that these gaps were significant was not supported by substantial evidence in the record.

Further, the Court is unpersuaded by Samsung’s claim that Dr. Mowry’s testimony that claim 9 requires “multiple actions” fails as a matter of law under the Federal Circuit’s construction of “linking actions to the detected structures,” Mot. at 15, Reply at 9. The Federal Circuit held that claim 9 requires only that at least one action be linked to each detected structure. *Motorola*, 757 F.3d at 1307 (“The plain language of the claims does not require multiple actions for each structure[.]”). Apple acknowledges as much. Opp’n at 4. However, nothing in the Federal Circuit’s order prohibited the jury from finding that the plain and ordinary meaning of claim 9 requires that there be multiple actions that are linked to multiple structures.

Second, the jury’s finding of non-obviousness means the jury implicitly rejected Samsung’s claim that there were no secondary indicia of non-obviousness. ECF No. 1717 at 1811-13 (Dr. Jeffay testifying there were no secondary considerations suggesting pop-up would not be obvious and that there is no evidence Samsung copied claim 9). Again, the Court must defer to this implicit factual finding. *See Kinetic*, 688 F.3d at 1356-57. Apple cites substantial evidence to support the jury’s finding, including Google’s recognition of the need and usefulness of the invention. *See* ECF No. 1624 at 881-83 (describing PX 116, email between Google engineers discussing that for “text objects” such as email addresses and physical addresses, “one of our most powerful features is the interaction of text objects [and] other applications on the phone. For instance, users can select a phone number . . . and it will launch the dialer[.]”).

In light of these factual findings, the Court now considers whether, as a matter of law, it would have been obvious to a designer of ordinary skill in the art to bridge the gap the jury implicitly found. While Dr. Jeffay testified it would have been obvious to use a pop-up menu or to link actions using a “specified connection” based on Sidekick, Dr. Jeffay did not explain why it would have been obvious for an engineer of ordinary skill to combine additional actions with Sidekick’s dialing action such that there are *multiple* actions linked overall. Nor did he explain why, assuming Apple is correct that detecting only phone numbers does not satisfy the claim’s requirement to detect multiple structures, it would have been obvious to create an invention that detects multiple structures such as postal addresses, email addresses, and telephone numbers. ECF No. 1928 at 3103 (Dr. Mowry describing different kinds of structures). Because Samsung has failed to identify the necessary evidence, the Court cannot conclude there is clear and convincing evidence that it would have been obvious to bridge these gaps between Sidekick and claim 9.

In sum, in light of the gaps between Sidekick and claim 9, and lack of clear evidence by Samsung as to why such a gap would have been obvious to bridge, the Court finds that as a matter of law, Samsung has not produced clear and convincing evidence that the claimed invention was obvious in light of the prior art. Accordingly, the Court DENIES Samsung’s motion for judgment as a matter of law that claim 9 of the ’647 patent is invalid.

C. Invalidity of Claim 8 of the ’721 Patent

The jury found claim 8 of the U.S. Patent No. 8,046,721 (“the ’721 patent”) not invalid. Samsung moves for judgment as a matter of law that no reasonable jury could find claim 9 not invalid. Samsung moves on two grounds: (1) obviousness, and (2) indefiniteness. The Court addresses each in turn below, and DENIES Samsung’s motion.

1. Obviousness

Claim 8 of the ’721 is dependent on claim 7. The claims recite as follows:

7. A portable electronic device, comprising:
a touch-sensitive display;
memory;
one or more processors; and
one or more modules stored in the memory and configured for execution by

the one or more processors, the one or more modules including instructions:

- to detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image;
- to continuously move the unlock image on the touch-sensitive display in accordance with movement of the detected contact while continuous contact with the touch-sensitive display is maintained, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the device; and
- to unlock the hand-held electronic device if the unlock image is moved from the first predefined location on the touch screen to a predefined unlock region on the touch-sensitive display.

8. The device of claim 7, further comprising instructions to display visual cues to communicate a direction of movement of the unlock image required to unlock the device.

'721 Patent cls. 7, 8.

Samsung argues claim 8 is obvious as a matter of law because the Neonode N1 QuickStart Guide and a video and paper by Plaisant together disclosed all the limitations in claim 8. Mot. at 16-17. Samsung cites Dr. Greenberg's testimony that the Neonode Guide discloses a portable electronic phone with a touch-sensitive display with a left-to-right unlocking gesture, and that the only claim element missing from the Neonode is a moving *image* accompanying the sweep gesture. ECF No. 1717 at 1967-69; 1975; *see also* DX 342.013 (Neonode Guide describing how to "right sweep to unlock" the phone). Dr. Greenberg also testified about the Plaisant paper, titled "Touchscreen Toggle Design," which describes "touchscreens called toggles that switch state from one state to another, things like on or off, and that could include things like lock to unlock." ECF No. 1717 at 1969-70. He testified Plaisant described toggles that operate "by sliding actions," called "sliders." *Id.* at 1971. Dr. Greenberg concluded that Plaisant filled the missing claim element in the Neonode because Plaisant disclosed a sliding *image* that could be moved from one predefined location to another to change the state of the device. *Id.* at 1970-72; 1975. Thus, Dr. Greenberg testified that the combination disclosed "all of the claim limitations." *Id.* at 1975-76. Dr. Greenberg further concluded that the person of ordinary skill in the art would be "highly interested in both of them" and would "think it natural to combine these two" because "they both deal with touch base systems, they both deal with user interfaces. They both talk about changing

state . . . they both specifically describe how a sliding action is used to prevent accidental activation.” *Id.* at 1974. He reasoned that a person would think to implement sliders on a touchscreen phone because that “is just a very routine thing to think about in terms of interaction design.” *Id.* at 1974-75. Dr. Greenberg’s testimony that the claim was invalid for obviousness notwithstanding, the Court does not agree that Samsung presented clear and convincing evidence of obviousness.

First, there was conflicting expert testimony on the question of whether the combination disclosed all the claim elements. Apple’s expert, Dr. Cockburn, testified that although the Neonode describes unlocking a mobile phone using a “right sweep” gesture, it fails to disclose several key claim elements relating to an “unlock image” and its movement, including that there was “no predefined location corresponding to an unlock image,” “no continuous movement of an unlock image,” “no unlocking the device if the image is moved from one location to another,” and “no visual cues communicating the direction of movement” since “there’s no image to move.” ECF No. 1926 at 2864-65. He also testified that Plaisant, which describes a touchscreen user interface for turning on and off home appliance systems, fails to supply these missing claim elements because Plaisant does not disclose using an unlock image to unlock a portable electronic device. *Id.* at 2865-67; DX 344 (Plaisant paper noting that the research was conducted in collaboration with a group whose focus is on “providing state-of-the-art systems that are easy for the homeowner to use.”). Where, as here, the parties offered “conflicting expert testimony, the jury was free to ‘make credibility determinations’[.]” *Kinetic*, 688 F.3d at 1362 (citation omitted). In light of the jury’s validity finding, the Court “must infer that the jury found [Dr. Cockburn] to be credible and persuasive” when testifying that the prior art, even when combined, did not disclose all claim elements. *Id.*

Second, Dr. Cockburn testified, contrary to Dr. Greenberg, that a person of ordinary skill in the art would not have been motivated to combine the Neonode and Plaisant in such a way as to invent claim 8. ECF No. 1926 at 2866. He provided two reasons. First, Plaisant described “toggle designs” intended to be used with a “touch screen [that] would be mounted into a wall or into

cabinetry” for controlling “office or home appliances, like air conditioning units or heaters.” *Id.* at 2865. A reasonable jury could infer from this testimony that an ordinary artisan would not have been motivated to combine elements from a wall-mounted touchscreen for home appliances and a smartphone, particularly in view of the “pocket dialing” problem specific to mobile devices that Apple’s invention sought to address. *See* ECF No. 1623 at 636.

Additionally, Dr. Cockburn explained that Plaisant “teach[es] away from the use of sliding,” because it “tells you not to use the sliding [toggle] mechanism.” ECF No. 1926 at 2865-66. What a piece of prior art teaches and motivation to combine prior art are both questions of fact. *Cheese Sys. Inc. v. Tetra Pak Cheese & Powder Sys. Inc.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006) (citation omitted). Here, Dr. Cockburn explained that Plaisant teaches that sliders were “not preferred” among the toggle mechanisms, and “tells us that toggles that are pushed seem to be preferred over toggles that slide; and the sliding is more complex than simply touching; and also that sliders are harder to implement.” ECF No. 1926 at 2866. Dr. Greenberg disputed this point, and testified that Plaisant “teaches that the sliding toggles worked” and noted how Plaisant states that the fact that “user[s] use [sliders] correctly is encouraging.” ECF No. 1717 at 1972-73.

The Court notes that there is language in Plaisant to arguably support either expert’s interpretation concerning whether Plaisant “teaches” away from the use of sliders. This is because Plaisant evaluates the pros and cons of various types of “toggles” used to change the state of a device and concludes generally that “the evaluation of the toggles showed some important differences in personal preferences.” DX 344.002. More specifically, on the one hand, Plaisant states that “toggles that are pushed seemed to be preferred over the toggles that slide,” “sliding is a more complex task than simply touching,” and “sliders are more difficult to implement than buttons[.]” DX 344.002. On the other hand, Plaisant seems to encourage the use of sliders by

noting that users “used sliding motions successfully to manipulate the sliding toggles,” by noting that the fact that “user[s] use [sliders] correctly is encouraging,” and by noting that “another advantage of the sliding movement is that it is less likely to be done inadvertently therefore making the toggle very secure[.] This advantage can be pushed further and controls can be designed to be very secure by requiring more complex gestures[.]” DX 344.002.

As noted above, what a piece of prior art teaches is a question of fact for the jury. The Court concludes that in light of Dr. Cockburn’s testimony and the language in Plaisant suggesting Plaisant taught away from sliders, the jury’s implied finding of fact that there would have been no motivation to combine the Neonode and Plaisant was supported by substantial evidence in the record. *See Teleflex, Inc., v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1334 (Fed. Cir. 2002) (holding that expert testimony of a “lack of motivation to combine . . . constitutes substantial evidence of nonobviousness”); *Grp. One, Ltd. v. Hallmark Cards, Inc.*, 407 F.3d 1297, 1304 (Fed. Cir. 2005) (reversing judgment as a matter of law of obviousness in view of conflicting expert testimony on motivation to combine); *Harris Corp. v. Fed. Express Corp.*, 502 Fed. Appx. 957, 968 (Fed. Cir. 2013) (unpublished) (affirming denial of motion for judgment as a matter of law of obviousness where there was conflicting evidence regarding whether prior art taught away from the invention because the prior art “also included certain facts that might have discouraged an artisan from using [the] spread spectrum.”).

Finally, the jury’s validity finding means the jury implicitly rejected Samsung’s claim that there were no secondary indicia of non-obviousness. This finding is supported by substantial evidence including industry praise specifically for Apple’s slide to unlock invention. *See* PX 118 (January 2007 MacWorld video featuring Steve Jobs’ live demonstration of slide to unlock on the iPhone to an audience that began cheering). Apple also introduced various Samsung internal documents noting how Apple’s slide to unlock feature is precise, easy to use, and intuitive. *See* PX 119 at 11 (presentation prepared by Samsung’s European design team in June 2009 calling Apple’s slide to unlock invention a “[c]reative way[] of solving UI complexity.”); PX 121 at 100 (Samsung software verification group document noting that unlike Samsung’s “victory” phone, iPhone’s

“unlocking standard is precise as it is handled through sliding, and it allows prevention of any wrong motion,” and recommending a “direction of improvement” to make it the “same as iPhone, clarify the unlocking standard by sliding”); PX 157 at 19-20 (Samsung document recommending to improve Samsung phone by making it like the iPhone which is “easy to unlock, [given that] lock screen always shows guide text or arrow like the iPhone” and to make the lock icon’s movement “be smooth and continuous” like the iPhone); PX 219 at 14 (Samsung document noting that the iPhone “intuitively indicate[s] the direction and length to move when unlocking on the lock screen”); ECF No. 1623 at 638-50 (Dr. Cockburn testimony that these various Samsung documents recognized the advantages of claim 8); *Power-One, Inc. v. Artesyn Techs, Inc.*, 599 F.3d 1343, 1352 (Fed. Cir. 2010) (noting that praise in the industry, and specifically praise from a competitor tends to indicate that the invention was not obvious).

Furthermore, Apple introduced evidence of a long-felt need for its invention. *See* ECF No. 1623 at 636-37 (Dr. Cockburn’s testimony that phone designers had been trying to solve the problem of accidental activation and the “pocket dial problem” before the iPhone existed, but had only come up with “frustrat[ing]” solutions); ECF No. 1926 at 2869 (explaining that there had not been a good mechanism for unlocking “for a long time.”); ECF No. 1623 at 599, 603, 611 (Greg Christie, Apple’s Human Interface Vice President, testifying about concerns over pocket-dial problem). In light of this evidence, the Court must defer to the jury’s implicit factual finding that there were secondary indicia of non-obviousness. *See Kinetic*, 688 F.3d at 1356-57.

In light of the jury’s factual findings, the Court concludes it would be error to “fail[] to defer to the jury’s factual findings and grant[] JMOL on obviousness.” *Id.* at 1371. Because there is no clear and convincing evidence that it would have been obvious to bridge the gaps between the prior art and claim 8, the Court DENIES Samsung’s motion for judgment as a matter of law that claim 8 of the ’721 is invalid as obvious.

2. Indefiniteness

Samsung argues that the ’721 patent is indefinite as a matter of law because the claim term “unlock” is indefinite. Mot. at 19. To be valid, claims must “particularly point[] out and distinctly

claim[] the subject matter which the applicant regards as the invention.” 35 U.S.C. § 112. The purpose of this definiteness requirement is to “ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee’s right to exclude.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (abrogated on other grounds by *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014)). “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). The Supreme Court has noted that “some modicum of uncertainty” must be tolerated, given the inherent limitations of language and because “absolute precision is unattainable.” *Id.* at 2128-29. The Court DENIES Samsung’s motion.

While Samsung contends that the term “unlock” is indefinite because there is insufficient clarity as to what it means for a device to be “locked” versus “unlocked,” the specification provides a definition that establishes when a device is “locked” and when it is “unlocked:”

In the user-interface lock state (hereinafter the “lock state”), the device is powered on and operational but ignores most, if not all, user input. That is, the device takes no action in response to user input and/or the device is prevented from performing a predefined set of operations in response to the user input. . . .

In the user-interface unlock state (hereinafter the “unlock state”), the device is in its normal operating state, detecting and responding to user input corresponding to interaction with the user interface. . . . An unlocked device detects and responds to user input for navigating between user interfaces, entry of data and activation or deactivation of functions.

’721 Patent col.7 l.64-col.8 l.45. The specification, therefore, provides guidance as to what it means when the device is “locked.” According to the specification, when the device is locked it is “powered on and operational but ignores most, if not all, user input.” *Id.* While Samsung claims it is unclear what the phrase “most, if not all” means, the specification further describes what “most, if not all, user input” means. According to the specification, “the locked device responds to user input corresponding to attempts to transition the device to the user-interface unlock state or powering the device off, but does not respond to user input corresponding to attempts to navigate

between user interfaces.” *Id.* at 8:13-17. The specification later confirms that distinction between “unlocked” state and a “locked” state when stating that an “unlocked device” “detects and responds to user input for navigating between user interfaces[.]” *Id.* at 8:39-40. Accordingly, in light of these explanations, the Court finds that the claim provides sufficient clarity as to the term “unlock,” and that the term does not meet the standard of indefiniteness such that claim 8 as a whole “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus*, 134 S. Ct. at 2124.

The trial record supports the Court’s conclusion that Samsung has failed to prove indefiniteness by clear and convincing evidence. While the Court acknowledges that discerning whether a given device is in a “locked” or “unlocked” state might be difficult in certain circumstances for the general public, the Supreme Court has noted that “one must bear in mind [] that patents are ‘not addressed to lawyers, or even to the public generally,’ but rather to those skilled in the relevant art.” *Id.* at 2128; *see also Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437 (1902) (stating that “any description which is sufficient to apprise [those skilled in] the art of the definite feature of the invention, and to serve as a warning to others of what the patent claims as a monopoly, is sufficiently definite to sustain the patent”). Here, Dr. Cockburn, a person of at least ordinary skill in the art, testified that he had “no difficulty at all in understanding the difference between a locked state and an unlocked state” when he read claim 8. ECF No. 1623 at 634. He further testified that the “the plain and ordinary meaning” of the term is clear. *Id.* at 633. Perhaps more convincingly, even Samsung’s own expert, Dr. Greenberg, was able to explain when a “device will unlock” when explaining the ’721 patent and prior art to the jury. *See* ECF No. 1717 at 1968.

Accordingly, the Court finds that one of ordinary skill in the art could reasonably ascertain the scope of claim 8. The Court accordingly DENIES Samsung’s motion for judgment as a matter of law that claim 8 of the ’721 is invalid as indefinite.¹

D. Non-infringement of the ’721 Patent

¹ The Court notes that this Court’s preliminary injunction order previously concluded that the term “unlock” is not indefinite. ECF No. 221 at 52.

The jury found that the Admire, Galaxy Nexus, and Stratosphere infringe claim 8 of the '721 patent. ECF No. 1884 at 5. Samsung moves for judgment as a matter of law that no reasonable jury could find that these devices infringe the '721. Mot. at 19. The Court DENIES Samsung's motion.

First, Samsung argues that no reasonable jury could find that the Galaxy Nexus infringes. Samsung cites how claim 8 requires detecting "a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image" and continuously moving "the unlock image on the touch sensitive display in accordance with movement of the detected contact." '721 Patent cols.19-20. Samsung argues that "[t]he plain language thus requires that the image with which the user makes contact be the *same image* that then moves with user contact." Mot. at 19 (emphasis added). Accordingly, Samsung argues that because "the image with which the user makes contact on the Galaxy Nexus devices a padlock in a circle *disappears* upon user contact and is replaced by another, different image," this limitation of the claim is not met. *Id.* (emphasis in original) (citing testimony from Dr. Greenberg that the Galaxy Nexus does not infringe because the image "has to be the same . . . it can't be different," ECF No. 1717 at 1980-81).² Samsung emphasizes that Apple's own expert, Dr. Cockburn, admitted at trial that the image changes upon user contact. Mot. at 20 (citing ECF No. 1623 at 740-42). Samsung is correct that Dr. Cockburn testified that when the user contacts the unlock image in the Ice Cream Sandwich version of the Galaxy Nexus, "the image will animate, it'll change its representation slightly" and that in the Jellybean version, "the image changes slightly" to a "circle that's a spotlight onto [a series of] dots." ECF No. 1623 at 676-78, 742; *see also* ECF No. 1926 at 2861.

However, the Court disagrees that no reasonable jury could find that the Galaxy Nexus infringes claim 8. Because the Court did not construe the term "unlock image," the jury had to apply its plain and ordinary meaning, and was not obligated to accept Samsung's contention that an "unlock image" must consist of the same, single image. The jury's implicit rejection of Samsung's

² Dr. Greenberg testified that in the Ice Cream Sandwich version of the Galaxy Nexus, the new image is a larger circle. ECF No. 1717 at 1981. In the Jelly Bean Version, the new image is a series of dots. *Id.*

argument is supported by substantial evidence. Dr. Cockburn testified that he did not agree with Dr. Greenberg’s view that the accused phones do not infringe simply because the unlock image changes. *See* ECF No. 1623 at 678-79, 742 (interpreting claim 8 to allow multiple images, given that the specification teaches that “the visual representation of the unlock image can change” and explicitly states the unlock image “may be animated”); *see also* ECF No. 1926 at 2861. The jury was free to weigh the experts’ testimony and determine for itself whether the Galaxy Nexus contains an “unlock image” under the plain meaning of that term. Indeed, the reasonableness of the jury’s implicit finding that Dr. Cockburn’s interpretation of the claim was correct is demonstrated by how this Court rejected precisely the same argument Samsung raises now in this Court’s preliminary injunction order in this case. Then, as now, Samsung argued that “the term ‘unlock image’ must refer to the same single ‘unlock image’” because the claims first refer to “an unlock image” and later refer to “the unlock image.” *Compare* ECF No. 221 at 44, *with* Mot. at 19. The Court rejected Samsung’s proffered construction, concluding that “Apple’s argument that ‘unlock image’ may refer to more than one image is also supported by the specification[,] [which] . . . demonstrate[s] ‘an unlock gesture corresponding to *one of a plurality of unlock images*, according to some embodiments of the invention.’” ECF No. 221 at 45 (internal quotation marks and citations omitted).

Nor is the Court convinced by Samsung’s more specific argument that the Jelly Bean version of the Galaxy Nexus cannot infringe because Apple did not present any evidence that the second unlock image—which Dr. Greenberg testified is a “series of dots,” ECF No. 1717 at 1980-81—“moves” and thus the limitation that the unlock image continuously move in accordance with the detected contact is not met. Mot. at 21; *see* ECF No. 1717 at 1981 (Dr. Greenberg’s testimony that “the dots don’t actually move at all. The only thing that happens is that individual dots get brighter or dimmer.”). The jury could have reasonably credited Dr. Cockburn’s testimony that the second image was rather a “circle that’s a spotlight onto [a series of] dots.” ECF No. 1623 at 742; *see also id.* at 677. Dr. Cockburn testified that the “continuously move” element is met because the “spotlight effect on the dots” moves in accordance with the user’s contact. ECF No. 1623 at 677;

ECF No. 1926 at 2861. In support, Dr. Cockburn showed the jury PDX 46, a demonstrative of the Galaxy Nexus which indeed shows a circle that is a spotlight effect on a series of dots moving in accordance with the user's contact. *See* ECF No. 1623 at 677. The demonstrative shows that, contrary to Dr. Greenberg's opinion, the dots and the spotlight on them move in accordance with the user's contact. The jury could have confirmed Dr. Cockburn's testimony and the movements shown in PDX 46 by actually testing the slide to unlock feature in the Galaxy Nexus phones in evidence. *See* JX 29 A-I.

Further, while Samsung contends Dr. Cockburn did not offer any evidence in support of his contention that the unlock image in the Galaxy Nexus is a "graphical interactive user interface object" that may change form, Mot. at 20, Dr. Cockburn did demonstrate how the unlock image changes appearance by showing the jury demonstratives of representative Galaxy Nexus devices. *See* ECF No. 1623 at 676-77 (showing PDX 44, PDX 46). The jury was free to confirm Dr. Cockburn's conclusions and demonstratives by testing the Galaxy Nexus phones in evidence. *See* JX 29A-I.

Finally, the Court rejects Samsung's argument that judgment of non-infringement should be granted as to the Admire, Galaxy Nexus, and Stratosphere because Apple offered no evidence of any "instructions" required by claim 8. Mot. at 21 (citing '721 Patent cols.19-20). To the contrary, the jury heard Dr. Cockburn's expert testimony that because the accused phones are computing devices, they necessarily had "software, processors, [and] memory." ECF No. 1623 at 659; *see also id.* at 630 ("[S]oftware components are just a form of instructions); *id.* at 626 ("Source code is the set of instructions that are on a computing device that enable it to become operative in some way. So the instructions to determine the behavior of the device, and that's software.").

In sum, because there is substantial evidence to support the jury's findings of infringement, the Court DENIES Samsung's motion for judgment as a matter of law that the Admire, Galaxy Nexus, and Stratosphere do not infringe claim 8.

E. Willful Infringement of Claim 8 of the '721 Patent

Samsung moves for judgment as a matter of law that Samsung did not willfully infringe claim 8 of the '721 patent. Mot. at 21. To establish willfulness, “a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent. The state of mind of the accused infringer is not relevant to this objective inquiry. If this threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk . . . was either known or so obvious that it should have been known to the accused infringer.” *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (internal citation omitted). Thus, the willfulness inquiry is a two-prong analysis, requiring an objective inquiry and a subjective inquiry. The objective inquiry is a question for the Court, and the subjective inquiry is a question for the jury. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1007 (Fed. Cir. 2012). The objective inquiry requires a showing of “objective recklessness” by the infringer. *In re Seagate Tech.*, 497 F.3d at 1371; *Bard*, 682 F.3d at 1006 (“*Seagate* also requires a threshold determination of objective recklessness.”).

Here, the jury found that, as a subjective matter, Samsung willfully infringed the '721 patent. ECF No. 1884 at 7. Because both prongs must be established for the Court to make an ultimate finding of willfulness, failure on the objective prong defeats a claim of willfulness. Because the Court finds no objective willfulness for the reasons set forth below, the Court need not consider whether the jury’s finding of subjective willfulness was supported by substantial evidence. *See Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 920 F. Supp. 2d 1079, 1108 (N.D. Cal. 2013) (declining to examine whether the jury’s finding on subjective willfulness was supported by substantial evidence because the objective willfulness prong was not satisfied). The Court GRANTS Samsung’s motion.

As noted above, to establish objective willfulness, Apple must prove by clear and convincing evidence that there was an “objectively high likelihood that [Samsung’s] actions constituted infringement of a valid patent.” *Bard*, 682 F.3d at 1005 (citing *Seagate*, 497 F.3d at 1371). If Samsung had an objectively reasonable defense to infringement, its infringement cannot be said to be objectively willful, and objective willfulness fails as a matter of law. *See Spine*

Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc., 620 F.3d 1305, 1319 (Fed. Cir. 2010) (“The ‘objective’ prong of *Seagate* tends not to be met where an accused infringer relies on a reasonable defense to a charge of infringement.”); *Bard*, 682 F.3d at 1006 (objective willfulness determination “entails an objective assessment of potential defenses based on the risk presented by the patent. Those defenses may include questions of infringement but also can be expected in almost every case to entail questions of validity[.]”). Samsung’s defense is not reasonable if it is “objectively baseless.” *Id.* at 1007-08. An “objectively baseless” defense is one which “no reasonable litigant could realistically expect [to] succe[ed] on the merits.” *Id.* at 1007 (citation omitted).

The Court finds that Samsung’s defense to infringement of claim 8 was not objectively baseless. As a preliminary matter, as noted above, Dr. Cockburn and Dr. Greenberg had differing opinions concerning whether Plaisant “teaches” away from the use of sliders and thus whether the person of ordinary skill in the art would have a motivation to combine Plaisant and the Neonode. This is not surprising in light of the fact that there is language in Plaisant to support either expert’s interpretation. This is because Plaisant evaluates the pros and cons of various types of “toggles” used to change the state of a device and concludes generally that “the evaluation of the toggles showed some important differences in personal preferences.” DX 344.002. On the one hand, Plaisant states that “toggles that are pushed seemed to be preferred over the toggles that slide,” “sliding is a more complex task than simply touching,” and “sliders are more difficult to implement than buttons[.]” DX 344.002. On the other hand, Plaisant seems to encourage the use of sliders by noting that users “used sliding motions successfully to manipulate the sliding toggles,” by noting that the fact that “user[s] use [sliders] correctly is encouraging,” and by noting that “another advantage of the sliding movement is that it is less likely to be done inadvertently therefore making the toggle very secure[.] This advantage can be pushed further and controls can be designed to be very secure by requiring more complex gestures[.]” DX 344.002.

While Dr. Cockburn testified that there was no motivation to combine the two references, Dr. Greenberg testified to the contrary, noting how Plaisant “teaches that the sliding toggles worked” and how Plaisant states that the fact that “user[s] use [sliders] correctly is encouraging.”

ECF No. 1717 at 1972-73. Based on Dr. Greenberg’s testimony and the language in Plaisant suggesting Plaisant encouraged use of sliders, the Court cannot find that Samsung’s reliance on an invalidity defense was objectively baseless. Further, a motivation to combine may “come from the nature of a problem to be solved, leading inventors to look to references relating to possible solutions to that problem.” *Ruiz v. Found. Anchoring Sys., Inc.*, 357 F.3d 1270, 1276-77 (Fed. Cir. 2004) (citation omitted) (“[B]ecause the prior art references address the narrow problem of underpinning existing building foundations, a person seeking to solve that exact same problem would consult the references and apply their teachings together.”). Here, in light of Dr. Greenberg’s opinion and the language in the prior art references, the reasonable litigant could have believed that the two references provided a motivation to combine by describing a similar solution the use of sliding motions to solve the problem of inadvertent activation in touchscreen devices. *See* DX 344.002 (Plaisant suggesting sliding toggles are preferable for preventing inadvertent activation in touchscreen devices: “[A]nother advantage of the sliding movement is that it is less likely to be done inadvertently therefore making the toggle very secure[.]”); DX 342.013 (Neonode citing a similar inadvertent activation problem in mobile phones and advocating a similar sliding solution by stating, “[T]o make sure no unintentional calls are made[,] . . . [s]weep right to unlock your unit”).

Apple argues Samsung had no reasonable invalidity defense because this Court previously concluded at the preliminary injunction phase that Apple was likely to withstand Samsung’s obviousness challenge to the validity of the ’721 patent. Opp’n at 22-23 (citing ECF No. 221 at 51). However, the Court finds that its prior conclusion at the preliminary injunction stage does not render Samsung’s reliance on its invalidity defense objectively baseless. At the preliminary injunction stage, Samsung failed to show that the Neonode qualified as a prior art reference, and accordingly the Court disregarded the Neonode in its invalidity analysis. ECF No. 221 at 50. Further, the Court noted that Samsung’s prior expert failed to identify any reason to combine Plaisant with “a handheld device.” *Id.* at 50-51. Here, in contrast, there is no dispute that the Neonode is a prior art reference, and Samsung’s expert Dr. Greenberg has provided a reason to

combine Plaisant and the Neonode. *See* ECF No. 1717 at 1974. Thus, the Court finds that its prior conclusion at the preliminary injunction stage does not render Samsung’s reliance on its invalidity defense based on the Neonode and Plaisant objectively baseless.

Further, while Apple argues that the U.S. Patent and Trademark Office (“PTO”) considered the Neonode and Plaisant yet still issued claim 8, Opp’n at 22, the PTO’s determinations are not dispositive because the Federal Circuit has found no objective willfulness even where a defendant’s invalidity defense was based on a prior art reference that was before the PTO and the PTO found the prior art reference did not invalidate the claim. *See, e.g., Spine Solutions*, 620 F.3d at 1319-20 (reversing district court’s denial of defendant’s motion for judgment as a matter of law of no willfulness because defendant had an objectively reasonable invalidity defense based on two prior art references, irrespective of the fact that the PTO had the two prior art references before it when issuing the patent); *Univ. of Pittsburgh of Commonwealth Sys. of Higher Educ. v. Varian Med. Sys., Inc.*, 561 Fed. Appx. 934, 943-45 (Fed. Cir. 2014) (unpublished) (reversing district court’s finding that defendant’s invalidity defense was objectively unreasonable, despite acknowledging that the PTO had found that the prior art the defendant relied upon did not invalidate the asserted claims when reexamining the patent).

In sum, Samsung’s infringement of the ’721 patent was not objectively willful because Samsung’s invalidity defense was not objectively baseless. Accordingly, Apple has not met its burden to show clear and convincing evidence that Samsung acted despite an objectively high likelihood that its actions would infringe a valid patent. Samsung’s motion for judgment as a matter of law that its infringement of the ’721 patent was not willful is GRANTED.

F. Invalidity of the ’172 Patent

Samsung moves for judgment as a matter of law that no reasonable jury could find claim 18 of the ’172 patent not invalid. Mot. at 25-26. Claim 18 of the ’172 patent covers a particular form of text correction, in which a “current character string” is displayed in a first and second area of a touch screen display. JX 13. The user can replace a mistyped word (*i.e.*, the “current character string”) by selecting a delimiter or selecting a replacement word in the second area. *Id.* The user

can also keep the “current character string” by selecting it in the second area. *Id.* The jury found claim 18 of the ’172 patent not invalid. Samsung claims that a combination of two prior art references, U.S. Patent No. 7,880,730 (“Robinson”) and International Publication No. WO 2005/008899 A1 (“Xrgomics”), render claim 18 obvious. Below, the Court first examines whether substantial evidence supported the jury’s underlying factual conclusions that there was a significant gap between the prior art and the patent and that there were secondary indicia of non-obviousness. The Court DENIES Samsung’s motion.

First, the Court notes that there was conflicting expert testimony on the question of obviousness. Samsung’s expert, Dr. Wigdor, testified that Robinson disclosed every limitation of claim 18 except for one—that the “current character string [appear] in the first area.” ECF No. 1717 at 2015-17; 2023-24. Wigdor testified that Xrgomics disclosed that limitation by including the current character string in the first area, and that the person of ordinary skill in the art would combine Robinson and Xrgomics to fill the missing element in Robinson. *Id.* at 2018-19; 2023-24.

However, Apple’s expert, Dr. Cockburn, testified that Robinson missed several limitations of claim 18 in addition to the “current character string in the first area” limitation. ECF No. 1927 at 2903-05. For instance, Robinson missed the limitation that “the current character string in the first area is replaced with the suggested replacement string when the user presses a delimiter.” *Id.* at 2905. Dr. Cockburn further testified that Xrgomics, though it discloses the “current character string in the first area” limitation, *id.* at 2905, similarly does not disclose the limitation that “the current character string in the first area is replaced with the suggested replacement string when the user presses a delimiter” because Xrgomics offers alternative words that *complete* the current character string in the first area rather than *correct* that current character string. *Id.* at 2904-05 (testifying that Xrgomics is a “word completion” patent, not a “spelling correction” patent and that “there’s no correction” going on in Xrgomics because Xrgomics just adds letters to the end of the current character string *i.e.*, it offers alternative words that complete that word). Finally, contrary to what Dr. Wigdor testified, Dr. Cockburn opined that the combination of Robinson and Xrgomics did not disclose the elements of claim 18 and did not render claim 18 obvious because Xrgomics did not

“fill th[e] gaps” in Robinson. *Id.* Based on this conflicting expert testimony, the jury was free to “make credibility determinations and believe the witness it considers more trustworthy.” *Kinetic*, 688 F.3d at 1362 (citation omitted). The jury’s finding of validity indicates that the jury made an implied finding of fact affirming Dr. Cockburn’s testimony that Robinson and Xrgomics did not disclose all the elements of claim 18 and rejecting Dr. Wigdor’s opinion of obviousness. *Id.* at 1363 (“[W]hether the prior art discloses the limitations of a particular claim is a question of fact to be determined by the jury.”). In other words, the jury implicitly rejected Samsung’s argument that it would be obvious to combine two things—the “current character string in the first area” feature in Xrgomics and Robinson’s feature of having a suggested replacement string in the second area—in order to come up with claim 18’s limitation that “the current character string in the first area is replaced with the suggested replacement string when the user presses a delimiter.” Mot. at 27. The Court must give that finding deference. *Kinetic*, 688 F.3d at 1356-57. Crediting Dr. Cockburn’s testimony over Dr. Wigdor’s, the Court cannot say that the jury’s implied finding that the gap between the prior art and claim 18 was significant was not supported by substantial evidence.

Second, the jury’s finding of non-obviousness means the jury implicitly rejected Samsung’s claim, and Dr. Wigdor’s testimony, that there were no secondary indicia of non-obviousness. ECF No. 1717 at 2024; Mot. at 28. The Court must defer to this implicit factual finding. *See Kinetic*, 688 F.3d at 1356-57. Apple cites substantial evidence to support the jury’s finding, including Dr. Cockburn’s testimony that there was industry praise for claim 18 as illustrated in Samsung’s internal documents and comments from carriers “that they want . . . the claim 18 mechanism.” ECF No. 1927 at 2906; ECF No. 1623 at 698-700 (discussing PX 168, a Samsung internal document reflecting T-Mobile’s request that Samsung modify its autocorrect technology to adopt the functionality of claim 18).³

³ Samsung has directed the Court to the PTO’s recent non-final rejection of claim 18 in an *ex parte* reexamination. *See* ECF No. 1951. However, this preliminary decision does not affect the outcome here. The Federal Circuit has noted that initial rejections by the PTO are generally entitled to minimal weight. *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1584 (Fed. Cir. 1996) (noting that non-final office actions are so commonplace that they “hardly justif[y] a good faith belief in the invalidity of the claims” for willfulness purposes) (citation omitted); *see also id.* at 1584 (stating that a grant of a request for reexamination “does not establish a likelihood of patent invalidity”); *Q.G. Prods. v. Shorty, Inc.*, 992 F.2d 1211, 1213 (Fed. Cir. 1993) (noting that initial

In light of the jury’s factual findings, this Court cannot conclude that there is clear and convincing evidence that it would have been obvious, as a matter of law, to bridge the gaps between the prior art and claim 18. Accordingly, the Court DENIES Samsung’s motion for judgment as a matter of law that claim 18 of the ’172 patent is invalid.

G. Invalidity of Claim 25 of the ’959 Patent

The jury determined that asserted claim 25 of Apple’s ’959 patent was not invalid. *See* ECF No. 1884 at 7. Claim 25 depends from claim 24 and recites:

24. A computer readable medium for locating information from a plurality of locations containing program instructions to:
receive an information identifier;
provide said information identifier to a plurality of heuristics to locate information in the plurality of locations which include the Internet and local storage media;
determine at least one candidate item of information based upon the plurality of heuristics; and
display a representation of said candidate item of information.

25. The computer readable medium of claim 24, wherein the information identifier is applied separately to each heuristic.

’959 Patent cls. 24, 25. Samsung moves for judgment as a matter of law that claim 25 is invalid, based on three grounds: (1) anticipation, (2) obviousness, and (3) indefiniteness. The Court addresses each basis in turn and DENIES Samsung’s motion.

1. Anticipation

First, Samsung contends that the WAIS reference anticipates claim 25. A patent claim is invalid for anticipation under 35 U.S.C. § 102 “if each and every limitation is found either expressly or inherently in a single prior art reference.” *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). Whether a patent is anticipated is a question of

patent “rejections often occur as a part of the normal application process”); *Minemyer v. B Roc Reps., Inc.*, 2012 WL 346621, at *4 (N.D. Ill. Feb. 2, 2012) (“The cases are virtually uniform in holding that office actions at the PTO are not relevant on the question of patent invalidity or willful infringement. . . . The cases recognize that interim acceptances, rejections and adjustments are the norm at the PTO.”). Accordingly, the Court does not find that the PTO’s non-final office action is a sufficient basis for overturning the jury verdict.

fact. *Green Edge Enters., LLC v. Rubber Mulch Etc., LLC*, 620 F.3d 1287, 1297 (Fed. Cir. 2010).
Anticipation must be shown by clear and convincing evidence. *Id.* at 1292.⁴

At trial, Samsung relied on software called freeWAIS-sf 2.0 (DX 301, the “WAIS” reference) as alleged prior art, and presented testimony from three witnesses supposedly showing that the software qualified as prior art and disclosed all limitations of claim 25. “WAIS” is an acronym for “Wide Area Information Server.” Tr. at 1845:18-21. Samsung first called Brewster Kahle, founder of the Internet Archive, to testify that he conceived of the WAIS project as a system that could “basically search your own hard drive, your own personal computer of e-mail and memos or, or presentations and the like.” *Id.* at 1845:3-5, 1846:4-16, 1853:21-25. Next, Samsung called Ulrich Pfeifer to explain that he developed the freeWAIS-sf software in the mid-1990s, and that WAIS was “a program to search documents and your local computer or by the web.” *Id.* at 1863:4-16; *see also id.* at 1863:18-23, 1865:17-21 (stating that freeWAIS-sf was available online). Finally, Samsung relied on Dr. Martin Rinard for expert opinions that the WAIS reference disclosed various limitations of claim 25, including the use of a “heuristic ranking algorithm.” *Id.* at 1915:21-1916:16.

Despite Samsung’s presentation, the jury had multiple bases from which to conclude that Samsung failed to demonstrate with clear and convincing evidence that claim 25 was invalid. Dr. Rinard expressly relied on “the software distribution that contains the source code for WAIS.” Tr. at 1914:6-9; *see also id.* at 2915:11-15. Through its expert Dr. Alex Snoeren, Apple introduced testimony that freeWAIS-sf did not contain “program instructions” as required by claim 25 because it contained only source code, not an executable program. Dr. Snoeren told the jury that “the way source code works is that’s for humans to read and write. Computers don’t actually execute source code. So in order to get program instructions, you have to compile that code. So the source code itself wouldn’t actually even meet the preamble of the claim.” *Id.* at 2824:7-21. Samsung states incorrectly that Dr. Snoeren contradicted himself by relying on source code for his infringement opinions. Dr. Snoeren analyzed source code in the accused products, *see id.* at 950:12-21, but also

⁴ The Court previously denied Apple’s motion for summary judgment of no invalidity of claim 25. *See* ECF No. 1151 at 27-29.

1 explained that the accused devices had flash memory containing “program instructions,” *id.* at
2 949:12-18, and there was no dispute that the accused Samsung devices had compiled code.
3 Moreover, the parties did not request claim construction of “program instructions.” In *Versata*
4 *Software, Inc. v. SAP America, Inc.*, the Federal Circuit addressed a similar situation, where the
5 parties did not request construction of “computer instructions,” and held that “[w]hether ‘computer
6 instructions’ can include source code thus becomes a pure factual issue.” 717 F.3d 1255, 1262
7 (Fed. Cir. 2013). While the *Versata* jury concluded that the disputed source code did constitute
8 “computer instructions,” the jury here was free to reach the opposite conclusion from the
9 conflicting expert testimony.

10 Dr. Snoeren also opined that freeWAIS-sf did not teach the limitation of “plurality of
11 heuristics to locate information in the plurality of locations.” Regarding “plurality of heuristics,”
12 Dr. Snoeren critiqued Dr. Rinard’s demonstration because it repeated the same heuristic on
13 multiple computers, “so what we have here is two copies of the same heuristic,” such that “[w]e
14 don’t have a plurality of heuristics.” Tr. at 2823:7-2824:6. Regarding “plurality of locations,”
15 Dr. Snoeren also testified that the WAIS source code did not show searching on the Internet, only
16 on “a local server and a server on another machine.” *Id.* at 2825:7-19. On these points, the jury
17 could reasonably have credited Apple’s expert evidence over Samsung’s.

18 Additionally, Apple called into question whether WAIS qualified as prior art. Samsung
19 relied on the WAIS reference being known or used in the United States prior to the ’959 patent’s
20 priority date. *See* 35 U.S.C. § 102(a) (2006). Dr. Rinard admitted that he did not know of any
21 actual computers in the United States that ran freeWAIS-sf before the ’959 patent’s priority date of
22 January 5, 2000. *See* Tr. at 1953:8-25. On cross-examination, Mr. Pfeifer (the developer of
23 freeWAIS-sf) also equivocated as to whether freeWAIS-sf was available from servers in the United
24 States, or only in four countries abroad, before the ’959 patent’s priority date. *See id.* at 1870:9-21
25 (“I would not want to rule out that I put one copy of, or fetched one copy from the United States.”).
26 Mr. Pfeifer was also unable to confirm the configuration of any freeWAIS-sf systems that allegedly
27
28

existed prior to January 5, 2000. *See id.* at 1871:3-1872:14. Accordingly, the jury could have reasonably determined that Samsung failed to show that WAIS qualified as prior art.

2. Obviousness

Second, Samsung contends that claim 25 would have been obvious as a matter of law, based on a combination of “Smith” (JX 55, U.S. Patent No. 7,653,614) and “Shoham” (JX 56, U.S. Patent No. 5,855,015). As noted above, obviousness is a question of law, but requires the court to “presume that the jury resolved the underlying factual disputes in favor of the verdict [] and leave those presumed findings undisturbed if they are supported by substantial evidence.” *Kinetic*, 688 F.3d at 1356-57 (citation and quotation omitted). At trial, Dr. Rinard opined that Smith is “another example of universal search” employing heuristics, Tr. at 1930:2-10, that Shoham used “conventional heuristic search,” *id.* at 1931:19-23, and that those skilled in the art would have been motivated to combine the two, *id.* at 1931:24-1932:5. Dr. Rinard also briefly touched on secondary considerations of non-obviousness, claiming that there was no commercial success or copying. *See id.* at 1932:16-1933:9.

However, Dr. Rinard’s obviousness analysis was cursory, without substantive analysis of the disclosures of Smith or Shoham, or a limitation-by-limitation analysis of claim 25. *See generally id.* at 1929:9-1933:9. Dr. Snoeren provided greater testimony about the contents of Smith and Shoham, opining that there would have been no reason to combine Smith (“a patent for a fancy set top box or table box”) with Shoham (“a very theoretical mathematical patent”), and that such a combination would not have disclosed all elements of claim 25. *Id.* at 2827:4-25. In light of this conflicting testimony, the jury was entitled to assess the experts’ credibility on these issues. *See Kinetic*, 688 F.3d at 1362. Thus, the jury could have determined that Smith and Shoham failed to teach the elements of claim 25, and that there would have been no reason to combine those references. Based on those implied findings, the Court cannot conclude as a matter of law that claim 25 would have been obvious.

Samsung asserts that Dr. Snoeren’s failure to give a “point-by-point response” to Dr. Rinard or address secondary considerations renders Dr. Snoeren’s opinions “flawed as a matter

of law” such that they “cannot be considered in evaluating obviousness.” Mot. at 32. These arguments distort the ultimate burden of proof on obviousness. *See Novo Nordisk A/S v. Caraco Pharm. Labs., Ltd.*, 719 F.3d 1346, 1353 (Fed. Cir. 2013) (noting that “the burden of persuasion remains with the challenger during litigation” for obviousness).

3. Indefiniteness

As noted above, the Supreme Court decided *Nautilus* on June 2, 2014 (after Samsung filed its current motion) and held that indefiniteness turns on whether claims define the invention “with reasonable certainty.” 134 S. Ct. at 2124. Samsung now argues that the term “heuristic” in the ’959 patent is indefinite as a matter of law under this new standard.

During summary judgment proceedings, the Court denied Samsung’s motion for judgment that the term “heuristic” in the ’959 patent was indefinite under the now-overruled “insolubly ambiguous” standard, but noted: “Samsung remains free to raise the issue of indefiniteness again should the term ‘heuristic’ become central to Apple’s attempts to distinguish the ’959 Patent from any prior art Samsung asserts at trial.” ECF No. 1151 at 33 n.11. The parties now dispute whether Apple in fact tried to distinguish the prior art at trial on the basis of “heuristic.” Samsung contends that Apple relied exclusively on this term to rebut invalidity, while Apple argues that it relied only on “*plurality* of heuristics,” not the definition of “heuristic” itself. Without deciding this issue, and for purposes of this motion, the Court addresses Samsung’s indefiniteness arguments under the intervening *Nautilus* decision. The Court determines that Samsung has not shown by clear and convincing evidence that “heuristic” is indefinite.

The Court previously addressed the meaning of “heuristic.” In resolving Apple’s motion for a preliminary injunction, the Court construed the similar term “heuristic algorithm” in U.S. Patent No. 8,086,604 (which is related to the ’959 patent and shares a common specification), based on that patent’s specification, prosecution history, and extrinsic evidence from the parties. *See* ECF No. 221 at 15-19. On appeal, when addressing the preliminary injunction in this case, the Federal Circuit reversed other aspects of this Court’s claim construction, but did not disturb the construction of “heuristic algorithm.” *See Apple, Inc. v. Samsung Elecs. Co., Ltd.*, 695 F.3d 1370,

1 1378-80 (Fed. Cir. 2012). Although indefiniteness was not an issue in the appeal and the Federal
2 Circuit’s analysis preceded *Nautilus*, the Federal Circuit’s analysis may be some indication that
3 “heuristic” is not indefinite and has a reasonably certain meaning.

4 Later, at the summary judgment stage, the Court further addressed the meaning of
5 “heuristic.” Without objection from the parties, the Court construed “heuristic” in the ’959 patent
6 consistently with its prior construction of “heuristic algorithm,” to mean: “some ‘rule of thumb’
7 that does not consist solely of constraint satisfaction parameters.” ECF No. 1151 at 31. As noted
8 above, the Court rejected Samsung’s indefiniteness arguments in Samsung’s summary judgment
9 motion. The Court distinguished “heuristic” from other terms held to be indefinite such as
10 “fragile gel” in *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244 (Fed. Cir. 2008)
11 because “neither the term ‘heuristic’ nor the Court’s construction of it involves a word of degree,
12 pure functional language, or other danger sign that typically triggers indefiniteness concerns.” ECF
13 No. 1151 at 32.

14 Furthermore, both Dr. Rinard and Dr. Snoeren applied the term “heuristic” under this
15 Court’s construction to the accused Samsung devices and the asserted prior art without difficulty.
16 *See* Tr. at 1915:21-1916:16 (Rinard discussing how WAIS “implement[s] a rule of thumb”), 954:1-
17 17 (Snoeren identifying accused “code that actually explains how the rule of thumb works”). Other
18 than conclusory allegations that the term is “ill-defined,” Samsung provides no clear and
19 convincing evidence for holding that “heuristic” is indefinite. *See* Reply at 17-18; *cf. Bluestone*
20 *Innovations LLC v. Nichia Corp.*, No. 12-CV-00059-SI, 2014 U.S. Dist. LEXIS 87182, at *36
21 (N.D. Cal. June 24, 2014) (“Defendants have failed to provide the Court with any evidence
22 showing that someone skilled in the relevant art would be unable to ascertain the scope of claim 9
23 with reasonable certainty.”). Accordingly, the Court DENIES Samsung’s indefiniteness challenge
24 to the ’959 patent.

25 **H. Invalidity of Claim 20 of the ’414 Patent**

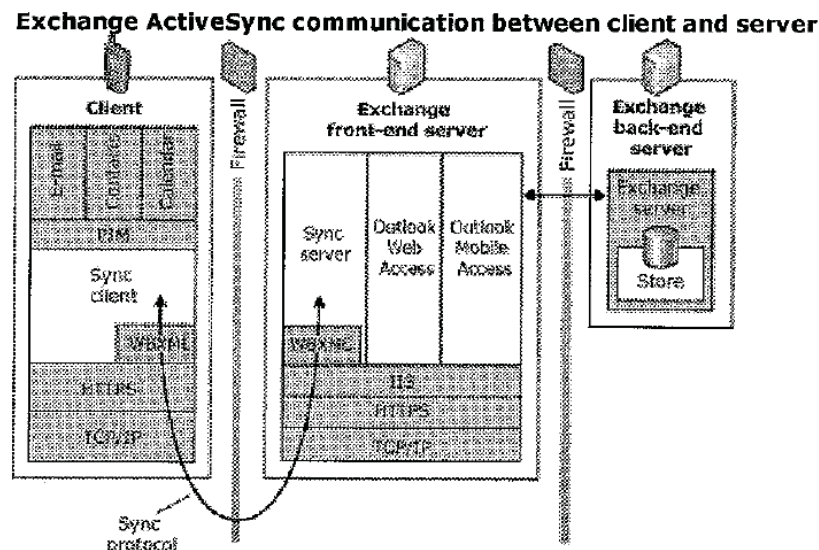
26 The jury also determined that asserted claim 20 of Apple’s ’414 patent was not invalid. *See*
27 ECF No. 1884 at 7. Claim 20 depends from claim 11 and recites:

11. A computer readable storage medium containing executable program instructions which when executed cause a data processing system to perform a method comprising:
executing at least one user-level non-synchronization processing thread, wherein the at least one user-level non-synchronization processing thread is provided by a user application which provides a user interface to allow a user to access and edit structured data in a first store associated with a first database; and
executing at least one synchronization processing thread concurrently with the executing of the at least one user-level non-synchronization processing thread, wherein the at least one synchronization processing thread is provided by a synchronization software component which is configured to synchronize the structured data from the first database with the structured data from a second database.

20. The storage medium as in claim 11 wherein the synchronization software component is configured to synchronize structured data of a first data class and other synchronization software components are configured to synchronize structured data of other corresponding data classes.

'414 Patent cls. 11, 20. Samsung now seeks judgment as a matter of law that claim 20 is invalid for anticipation. The Court determines that substantial evidence supports the verdict, and DENIES Samsung's motion.

Samsung asserts that Windows Mobile 5.0, "a system from Microsoft that runs on wireless devices" (Tr. at 2184:16-21), disclosed all elements of claim 20. To explain how Windows Mobile 5.0 operated, Samsung's expert for the '414 patent, Dr. Jeffrey Chase, relied on the following diagram from an exhibit entitled "Exchange ActiveSync communication between client and server":



DX 317 at 2; *see also* SDX 3648; SDX 3653. Dr. Chase testified that Windows Mobile 5.0 had “components called Providers for e-mail, contacts, and calendar” that “provide the synchronization processes threads I spoke about.” Tr. at 2193:9-20. The parties raise several disputes regarding the limitation of “wherein the *at least one* synchronization processing thread *is provided by* a synchronization software component.”

1. “provided by”

First, Samsung argues that Apple distorted the plain meaning of “provided by” when it argued that a synchronization software component must “create” a thread. This argument is not persuasive. Samsung relies on testimony from one of the ’414 patent’s named inventors, Gordon Freeman, who said that a thread “would be provided by” a component if the component “would have executing code and that executing code must execute in a thread.” Tr. at 2854:9-19. However, the Federal Circuit has held that “inventor testimony as to the inventor’s subjective intent is irrelevant to the issue of claim construction.” *Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1347 (Fed. Cir. 2008). Samsung did not request claim construction of “provided by” and agrees that the jury was entitled to rely on the plain and ordinary meaning of the term. *See* Reply at 19.

The jury heard testimony from Dr. Snoeren that a software component does not “provide” a thread unless it creates one: “Q. Are you saying that providing a thread is the same thing as creating a thread, sir? Yes or no? A. Yes, sir. I’ve said that, and I’ll say it again.” Tr. at 2855:7-9. Moreover, Samsung made this argument when seeking summary judgment of invalidity, and the Court rejected it, concluding that “Samsung has not established that a reasonable jury would necessarily find that a synchronization software component that ‘execute[s] on’ or ‘provid[es] the instructions’ for a thread discloses the claim limitation that the component ‘provide[]’ the thread itself.” ECF No. 1151 at 24-25. Thus, Samsung’s post-trial attempt to dispute the meaning of “provided by” is misplaced. *See Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1320-21 (Fed. Cir. 2003) (“[I]t is too late at the JMOL stage to argue for or adopt a new and more detailed

interpretation of the claim language and test the jury verdict by that new and more detailed interpretation.”).

Moreover, in opposing Apple’s motion for judgment as a matter of law of infringement of the ’414 patent, Samsung takes a contrary position about revisiting claim construction, in connection with the limitation of “configured to synchronize structured data.” In opposing Apple’s motion, Samsung argues that the jury was entitled to determine that “configured to synchronize” requires that the software component perform the synchronization directly, not “cause” another component to do so indirectly. *See* ECF No. 1906 at 6-7. Yet in Samsung’s motion, Samsung contends that the jury was *not* entitled to determine that “provided by” requires direct causation. *See* Mot. at 37. Samsung’s conflicting positions underscore the Federal Circuit’s prohibition against arguing for a new claim construction at the post-trial stage. It is too late for Samsung to propose a new construction of “provided by.”

2. “at least one synchronization processing thread”

Second, Samsung argues that even under Apple’s view of “provided by,” Windows Mobile 5.0 clearly disclosed at least one synchronization processing thread created by a synchronization software component. In addition to the “E-mail,” “Contacts,” and “Calendar” Providers shown in DX 317, Samsung claims that Windows Mobile 5.0 also included an “IMAP Mail” component. *Id.* at 36. Samsung asserts that this IMAP Mail component satisfies the requirements of claim 20 because this component was configured to synchronize structured data and created a synchronization processing thread. Under Samsung’s theory, even if the E-mail, Contacts, and Calendar components did not create threads, the IMAP Mail component did so, and claim 20 requires only one such thread. *See id.*

Apple contests Samsung’s theory about the IMAP Mail component. Apple claims that this is “an entirely new invalidity argument that was not presented to the jury.” Opp’n at 35. Apple is incorrect. During trial, Dr. Chase testified that in addition to the three Provider components (E-mail, Contacts, and Calendar), “there’s a fourth component here . . . there is in particular a component called IMAP Mail component that can synchronize data with IMAP Mail servers.” Tr.

at 2193:21-2194:16, 2196:10-13; *see also* SDX 3650 (Samsung demonstrative identifying the “IMAP Mail Component”). Under questioning by Apple’s counsel, Dr. Chase further testified that “The IMAP Mail component does create a thread, yes. It’s a synchronization processing thread.” *Id.* at 2254:10-13. Thus, Apple cannot credibly claim surprise at this argument.

Alternatively, Apple argues that a reasonable jury could have concluded that this evidence was not clear and convincing proof of anticipation. The Court agrees. While Dr. Chase referred to the IMAP Mail component, his analysis was cursory. Of his testimony that Samsung cites in its motion, only the portions above mention “IMAP.” When asked to identify three synchronization software components (which claim 20 requires), Dr. Chase pointed only to “three different classes, E-mail, Contacts and Calendar,” not the IMAP Mail component. *Id.* at 2195:9-14. Even if Dr. Chase had presented the IMAP Mail component in greater detail, “a jury may properly refuse to credit even uncontradicted testimony.” *Guy v. City of San Diego*, 608 F.3d 582, 588 (9th Cir. 2010). Although Dr. Snoeren did not discuss the IMAP Mail component specifically, he opined to the jury that he found no software components in Windows Mobile 5.0 that provide a synchronization processing thread: “Q. So is there anywhere in Windows Mobile a software component that is specific to a data class, such as E-mail, Contacts, or Calendar, and also provides a thread to synchronize that data class? A. No, Ma’am, there’s not.” *Id.* at 2849:2-17. The excerpted diagram from DX 317 also lacks any reference to IMAP. While this is a close question, the Court must “view the evidence in the light most favorable to the nonmoving party . . . and draw all reasonable inferences in that party’s favor,” *Go Daddy*, 581 F.3d at 961, and Samsung bears the ultimate burden of proving invalidity by clear and convincing evidence.

Here, Apple presented sufficient evidence for a reasonable jury to conclude that Windows Mobile 5.0 did not disclose “at least one synchronization processing thread is provided by a synchronization software component” because the relevant software components “execute on pre-existing threads provided by *other* components, and do not provide a thread themselves.” Opp’n at 33.⁵ Under cross-examination, Dr. Chase admitted that none of the “E-mail,” “Contacts,” and

⁵ The parties have previously stated that a “thread” is “a series of steps that a computer process needs to complete.” ECF No. 1151 at 24 n.8.

“Calendar” Providers that he identified in DX 317 “creates” a synchronization thread. *See id.* at 2254:4-21. Moreover, Apple’s expert Dr. Alex Snoeren disagreed with Dr. Chase’s infringement opinion, based on independent review of the Windows Mobile 5.0 source code, and testified that no software components in Windows Mobile 5.0 “provide a thread.” *Id.* at 2848:10-2849:17. Samsung did not call Dr. Chase to rebut Dr. Snoeren’s validity opinions. Accordingly, the Court finds that a reasonable jury could have found non-infringement on this basis.

Apple offers another alternative basis for confirming the verdict: that claim 20 requires three synchronization software components, and that *all three* must “provide” a synchronization processing thread. This argument is meritless because it contradicts the plain language of claim 20. Independent claim 11 (from which claim 20 depends) recites “at least one synchroniziation processing thread” that is “provided by a synchronization software component.” Apple posits that claim 11 “defines the characteristics of a synchronization software component.” Opp’n at 36. This argument distorts the claim language. Claim 11 states that “a” component must provide “at least one” thread, but does not say that any and all components must provide threads. Claim 20 further requires at least two additional “software components,” but does not say that those additional components must also provide threads. Therefore, this argument has no basis in the claim language.

For the foregoing reasons, the Court concludes that the jury’s verdict of no invalidity was reasonable, and DENIES Samsung’s motion.

I. SEC’s Liability for Indirect Infringement

The Defendants in this case are three Samsung entities: the Samsung Korean parent company, Samsung Electronics Corporation (“SEC”), and two United States subsidiaries, Samsung Telecommunications America (“STA”) and Samsung Electronics America (“SEA”). ECF No. 1714 at 1047 (undisputed fact read to the jury that STA and SEA are subsidiaries of SEC). The jury found SEC liable for direct infringement, inducing infringement, and contributory infringement with respect to certain Samsung products and Apple patents.⁶ Samsung moves for judgment as a

⁶ This includes the following Samsung products for the ’647 patent: Admire, Galaxy Nexus, Galaxy Note, Galaxy Note II, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket,

1 matter of law that SEC is not liable for indirect infringement for these products and patents, either
 2 in the form of inducing infringement under 35 U.S.C. § 271(b) or contributory infringement under
 3 35 U.S.C. § 271(c).⁷ The Court DENIES Samsung's motion.⁸

4 Patent law provides that "whoever actively induces infringement of a patent shall be liable
 5 as an infringer." 35 U.S.C. § 271(b). A claim for actively inducing infringement requires scienter
 6 and mens rea. *Global Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011). Thus, to
 7 prevail on an inducement claim, a patentee must show "first that there has been direct
 8 infringement, and second that the alleged infringer knowingly induced infringement and possessed
 9 specific intent to encourage another's infringement." *Kyocera Wireless Corp. v. Int'l Trade*
 10 *Comm'n*, 545 F.3d 1340, 1353 54 (Fed. Cir. 2008) (internal quotation marks and citation omitted);
 11 *accord DSU Med. Corp. v. JMS Co. Ltd.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc). "[M]ere
 12 knowledge of possible infringement by others does not amount to inducement; [rather,] specific
 13 intent and action to induce infringement must be proven." *DSU*, 471 F.3d at 1305 (citation
 14 omitted). Specific intent requires a "showing that the alleged infringer's actions induced infringing
 15 acts and that he knew or should have known his actions would induce actual infringements." *Id.* at
 16 1304 (citation omitted). "While proof of intent is necessary, direct evidence is not required; rather,
 17 circumstantial evidence may suffice." *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 668 (Fed.
 18 Cir. 1988). "The requisite intent to induce infringement may be inferred from all of the
 19 circumstances." *Id.* at 669. There is no requirement that direct evidence be introduced, nor is a
 20 jury's preference for circumstantial evidence over direct evidence unreasonable *per se*." *Liquid*

21
 22 Galaxy S III, Stratosphere. ECF No. 1884 at 2, 6 (Amended Verdict Form). This also includes the
 following products for the '721 patent: Admire, Galaxy Nexus, Stratosphere. *Id.* at 5, 6.

23 ⁷ Apple accused SEC of inducing only STA, not SEA, to infringe the '647 and '721. ECF No. 1884
 at 2, 5.

24 ⁸ Samsung also argues that there can be no finding of indirect infringement given that there is no
 liability for direct infringement by STA. Mot. at 38 (citing *Dynacore Holdings Corp. v. U.S.*
 25 *Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004), for the proposition that there can be a valid
 finding of inducement and contributory infringement only if there is a predicate offense of direct
 26 infringement). Because the Court rejects Samsung's motions for judgment as a matter of law of
 non-infringement of the '721 and the '647, the Court rejects Samsung's argument that there is no
 27 liability for direct infringement and thus only considers here Samsung's other argument that "even
 if there were direct infringement, there is no evidence to support the claims for indirect
 28 infringement." *Id.*

Dynamics Corp. v. Vaughan Co., 449 F.3d 1209, 1219 (Fed. Cir. 2006). Moreover, “[t]he drawing of inferences, particularly in respect of an intent-implicating question . . . is peculiarly within the province of the fact finder that observed the witnesses.” *Rolls Royce Ltd. v. GTE Valeron Corp.*, 800 F.2d 1101, 1110 (Fed. Cir. 1986). A patentee bears the burden of proving inducement by a preponderance of the evidence. *See Fujitsu Ltd. v. Belkin Int’l, Inc.*, No. 10-CV-03972-LHK, 2012 U.S. Dist. LEXIS 142102, at *120 (N.D. Cal. Sept. 28, 2012).

Here, there is sufficient evidence to support the jury’s verdict that SEC induced STA to infringe. As a preliminary matter, the requirement that the alleged infringer “knew or should have known his actions would induce actual infringement necessarily includes the requirement that he or she knew of the patent.” *DSU*, 471 F.3d at 1304; *Global Tech Appliances*, 131 S. Ct. at 2068; *Mentor H/S, Inc. v. Med. Device Alliance, Inc.*, 244 F.3d 1365, 1379 (Fed. Cir. 2001). Apple presented evidence that SEC knew about the ’647 patent and Apple’s allegation of infringement since August 2010 when Apple made a presentation to Samsung that Samsung was infringing the ’647, and knew about all Apple’s other patents since February 8, 2012 when Apple filed its complaint. ECF No. 1714 at 1043 (undisputed facts read to the jury); PX 132 at 15 (August 2010 Presentation to Samsung); PX 3003 at 33 (deposition of Jun Won Lee, Director of Licensing for SEC) (describing how Apple told Samsung that Samsung was infringing Apple’s patents). *See EON Corp. IP Holdings, LLC v. Sensus USA, Inc.*, No. C 12 1011 EMC, 2012 WL 4514138, at *1 (N.D. Cal. Oct. 1, 2012) (complaint suffices to establish knowledge element of induced infringement).

Further, other facts presented at trial provided sufficient circumstantial evidence for a reasonable jury to conclude that SEC intended to encourage STA’s infringement. The jury learned STA sold more than 37 million accused units in the United States, and that STA bought these units from SEC, its parent company. ECF No. 1714 at 1208-09 (Vellturo) (SEC shipped devices to STA for sale in the United States); ECF No. 1715 at 1285-86 (Vellturo) (SEC manufactured, designed, and shipped accused units to the United States for resale to carriers and customers by STA); PX 3001 (Justin Denison, Chief Strategy Officer at STA) (noting SEC is parent of STA). The jury also

learned that some design teams at STA in the United States worked with and “under [the] direction” of SEC’s research and development team in South Korea in order to help design, develop, test, and commercialize Samsung telecommunication devices which STA sold in the United States. *See* PX 3004 at 87-88 (Tim Sheppard, Vice President of Finance and Operations at STA); *see also* ECF No. 1716 at 1607 (testimony of Dale Sohn, CEO of STA, stating SEC made the final decision to include the operating platform in its phones). SEC also exercised a high degree of control over STA by directly setting the wholesale price at which STA was to sell phones to carriers in the United States. PX 3004 at 188. Drawing all reasonable inferences in Apple’s favor, a reasonable jury could find that SEC induced STA’s infringement, given that SEC controlled the design and manufacture of the smartphones which STA sold, and controlled the price at which STA sold the devices to carriers in the United States. *See Water Techs.*, 850 F.2d at 668-69 (upholding district court’s finding of specific intent to induce based on defendant’s knowledge of the patent and because defendant helped direct infringer make the infringing product and exercised control over manufacture of the product); *Ricoh Co., Ltd. v. Quanta Computer, Inc.*, 550 F.3d 1325, 1343 (Fed. Cir. 2008) (reversing district court’s summary judgment finding of no inducement because defendant’s role as the designer and manufacturer of the infringing products “may evidence an intent sufficiently specific to support a finding of inducement.”).

Samsung’s arguments to the contrary fail. Samsung argues there is no evidence that SEC had the specific intent required for inducement. Mot. at 38; Reply at 21. Samsung argues that even assuming SEC had knowledge of the ’647 patent, Dr. Jeffay’s testimony established SEC’s belief that it did not infringe the ’647 and that the ’647 is not valid, and thus Samsung did not know that the acts it was inducing constituted infringement. *Id.* The Court is not persuaded because this issue is not one in which the evidence permits “only one reasonable conclusion,” as required for this Court to grant Samsung judgment as a matter of law under Rule 50. *See Conceptus, Inc. v. Hologic, Inc., Inc.*, No. C 09 02280 WHA, 2012 WL 44237, at *8-9 (N.D. Cal. Jan. 9, 2012) (finding sufficient evidence to support jury’s finding of indirect infringement and rejecting argument that because there was evidence that defendant believed plaintiff’s patent was invalid and not infringed,

there was insufficient evidence to show intent for indirect infringement); *Water Techs.*, 850 F.2d at 668-69 (finding defendant liable for inducement, despite an asserted “subjective belief that he had a non-infringing [product]”). Ultimately, because “[i]ntent is a factual determination particularly within the province of the trier of fact,” this Court sees no reason to disturb the jury’s finding that SEC had intent to induce infringement. *Fuji Photo Film Co. Ltd. v. Jazz Photo Corp.*, 394 F.3d 1368, 1378 (Fed. Cir. 2005) (declining to disturb jury’s verdict because intent to induce infringement “is a factual determination.”).

For the reasons above, sufficient evidence supports the jury’s finding that SEC is liable for inducement. Accordingly, the Court need not reach the question of whether the jury’s finding of contributory infringement for these same products and patents was also supported by substantial evidence because an additional finding on an alternative theory of indirect infringement will not change the outcome. *See Apple*, 920 F. Supp. 2d at 1111 (declining to reach whether jury’s finding of induced infringement was supported by substantial evidence in light of Court’s conclusion that jury’s finding of direct infringement by SEC was supported by substantial evidence). Accordingly, the Court DENIES Samsung’s motion for judgment as a matter of law that SEC is not liable for indirect infringement.

J. Double Recovery

Samsung claims the jury’s verdict “creates impermissible double recovery” with respect to the Galaxy S II, Galaxy S II Epic 4G Touch, and Galaxy S II Skyrocket (the “Galaxy S II Products”). Mot. at 39. Samsung notes how in the first case between the parties, Case No. 11-CV-01846, there was a final judgment awarding damages for design patent infringement by the Galaxy S II Products, and that the award for these products represented Samsung’s profits, pursuant to 35 U.S.C. § 289. *Id.* (citing ECF No. 2271 at 9-10, post-trial order recognizing that jury awarded Apple 40 % of Apple’s calculation of Samsung’s profits). Samsung notes how in this case, the jury awarded damages for infringement of utility patents by the Galaxy S II Products. ECF No. 1884 (Amended Verdict Form). Accordingly, Samsung claims the Court should deduct the full amount

of the Galaxy S II awards in this case as impermissible double recovery at this time. Mot. at 39. The Court DENIES Samsung's request.

As a preliminary matter, the Court notes that it denied Samsung's motion in limine before trial which effectively raised this same issue by asking the Court to exclude evidence of damages on sales for which Apple had already obtained an award of Samsung's profits in the first case. *See* ECF No. 1283-3 at 24-27 (motion); ECF No. 1398 at 3 (case management order). The Court allowed evidence of other forms of damages for the Galaxy S II Products in this second trial on the basis that if the judgment in the first case is vacated by the Federal Circuit, Apple would likely wish to seek recovery in the form of lost profits or reasonable royalty damages for those sales in this second case. ECF No. 1411 at 24 (pretrial conference transcript). Given this possibility, to prevent the necessity of holding a damages retrial in the instant case, the Court issued a verdict form in the instant case which separated out the damages for the Galaxy S II Products in the relevant time periods for which damages in both cases might overlap. *Id.*

The Court declines Samsung's request to deduct the full amount of the Galaxy S II awards in this case at this time. As this Court recognized at the hearing concerning Samsung's motion in limine, *see* ECF No. 1411 at 23-24, it is well settled law that a patentee that receives profits under 35 U.S.C. § 289 is not entitled to a further recovery for utility patent infringement from the same sale. *Catalina Lighting, Inc. v. Lamps Plus, Inc.*, 295 F.3d 1277, 1291 (Fed. Cir. 2002); 35 U.S.C. § 289 (a patentee "shall not twice recover the profit made from the infringement."). It is thus clear, as Apple concedes, that Apple may only recover one form of damages for each infringing sale, regardless of how many patents the Galaxy S II Products infringe. ECF No. 1334-3 at 20 (Apple's opposition to Samsung's motion in limine). Accordingly, this Court has already assured Samsung that the Court will not allow Apple to attain a double recovery for each infringing sale of these products. *See* ECF No. 1411 at 24. The only remaining question is when this Court will take action by formally eliminating any duplicative damages: before entering final judgment in this case before this case is appealed, as Samsung requests, or *after* appeals of both cases are resolved. The Court already answered that question by holding at the pretrial conference that after the appeals of both

cases are resolved and assuming “both survive appeal” the Court will “consult with the parties [] to determine only one recovery for each sale.” *Id.*

Samsung’s arguments to the contrary are unavailing. Samsung claims that because the jury’s verdict in the instant case “creates” and “includes” a double recovery, the Court must deduct the full amount of the Galaxy S II awards from the verdict now *before* entering final judgment in this case and before this case goes up on appeal. Mot. at 39-41. The Court is not persuaded. For one thing, the verdict in the instant case does not in and of itself “create” or “include” a double recovery; it is only when Apple *receives* two awards for each infringing sale that an impermissible double recovery occurs. The cases Samsung cites are not to the contrary. *See, e.g., Catalina*, 295 F.3d at 1291 (recognizing that “once [the patentee] *receives* profits under § 289 for each sale, [the patentee] is not entitled to further recovery from the same sale[.]”) (emphasis added). Samsung has not yet paid Apple anything for Samsung’s sales of Galaxy S II Products.

Second, Samsung does not cite any case suggesting that in this context, where there are two different cases with two separate judgments, damages must be deducted before the second case is appealed. While it is clear that Apple may not actually *receive* two awards for the same infringing sale of a product, Samsung cites no case holding that a patentee cannot have, pending on appeal, two separate judgments in two different cases which grant the patentee two possible forms of damages for the same infringing sale. This is the situation that will occur here, as the parties have already appealed the judgment in the first case,⁹ and the parties have suggested they will appeal the instant case. Samsung’s citation to *Arlington Industries, Inc. v. Bridgeport Fittings, Inc.*, No. 3:01-CV-0485, 2010 WL 815466, at *4 (M.D. Penn. Mar. 3, 2010), *aff’d per curiam*, 477 Fed. Appx. 740 (Fed. Cir. 2012) (unpublished), is unavailing. Mot. at 41. There, where a jury had awarded both the full amount of the patentee’s request for lost profits and a reasonable royalty for the same sales, the district court rejected the patentee’s request to enter judgment as determined by the jury and delay deduction of double recovery from the judgment until after appeal. *Id.* The court reduced

⁹ Samsung’s opening brief to the Federal Circuit included an appeal of the infringer’s profits award with respect to the Galaxy S II Products. Brief of the Petitioner-Appellant, *Apple, Inc. v. Samsung Elecs., Ltd.*, No. 14-1335 (Fed. Cir. May 23, 2014), Docket No. 33.

1 the total award before entering judgment. *Id.* The Federal Circuit summarily affirmed the opinion
2 without reasoning. *See* 477 Fed. Appx. 740. Critically, however, *Arlington* involved a double
3 damages award in *the same case*, and did not hold or suggest that when there are two cases with
4 two separate judgments, damages must be deducted before the second case is appealed.¹⁰ Given
5 that there is no clear statement of law on this issue, the Court finds no reason to deviate from its
6 previous decision to address the issue of double recovery after appeal of both cases are resolved.
7 This decision is most efficient. Notably, if this Court strikes the damages awarded in the instant
8 case as impermissible double recovery now, and then the judgment of design patent infringement
9 in the *first* case gets vacated on appeal, this Court will have to reinstate the damages award in this
10 case on remand after the appeal of this case to ensure Apple actually receives damages for each
11 infringing sale, assuming the judgment of infringement in this case withstands appellate review.¹¹

12 ¹⁰ The same goes for Samsung's other cited cases. *See, e.g., Aero Prods. Int'l, Inc. v. Intex*
13 *Recreation Corp.*, 466 F.3d 1000 (Fed. Cir. 2006) (reversing as impermissible double recovery
14 district court's denial of defendant's post-trial motion and court's judgment entering a jury award
15 of damages *in same case* for both patent and trademark infringement); *Catalina*, 295 F.3d at 1291-
16 92 (reversing judgment in one case involving double award of infringer's profits and reasonable
17 royalties).

18 ¹¹ The Court denies Apple's request that this Court calculate a supplemental damages award and
19 prejudgment interest in Case No. 11-CV-01846 at this time. Despite the fact that the Court
20 previously ruled that it would wait until the appeals in the first case are resolved before calculating
21 supplemental damages and prejudgment interest in that case, *see* ECF No. 2271 at 6, 8 (March
22 2013 post-trial order); ECF No. 2947 at 3 (damages retrial post-trial order declining Apple's
23 request to reconsider Court's decision), Apple in its opposition to Samsung's motion for judgment
24 as a matter of law in Case No. 12-CV-00630 renews its request for a supplemental damages award
25 and pre-judgment interest in Case No. 11-CV-01846. Opp'n at 40-41. Apple's request is
26 procedurally improper, as it is made in connection with briefing in the *second* case between the
27 parties, not the *first* case. Second, the Court rejects Apple's request on the merits. Apple now
28 claims that the Court deferred the award in part to obtain appellate guidance on how supplemental
damages should be calculated, but that in light of the fact that Samsung has not challenged this
Court's rulings on supplemental damages in its opening appellate brief, the Federal Circuit will not
"be providing any further guidance on supplemental damages." Opp'n at 40. However, this Court
previously explained that obtaining the Federal Circuit's guidance "*both as to the merits* as well as
to how to calculate supplemental damages, before proceeding with an accounting, is the most
efficient and acceptable way to proceed." ECF No. 2947 at 3 (emphasis added). The Court
continues to conclude that it is more efficient to wait for the Federal Circuit's guidance on the
merits issue of whether Samsung's products infringe Apple's patents before calculating
supplemental damages and prejudgment interest in that case. *See* ECF No. 2947 at 3 (citing *Intron,*
Inc. v. Benghiat, No. Civ.99 501 (JRT/FLN), 2003 WL 22037710, at *16 (D. Minn. Aug. 29,
2003)).

Accordingly, consistent with this Court’s ruling at the pretrial conference, the Court will, if necessary, “consult with the parties [] to determine only one recovery for each sale” after the appeals of both cases are resolved. ECF No. 1411 at 24. The Court will allow for appropriate briefing on the double recovery issue at that time. The Court DENIES Samsung’s motion to deduct any double recovery from the verdict at this time.

K. Infringement of Claim 15 of the ’239 Patent

Samsung’s ’239 patent is directed to a “remote video transmission system.” Against Apple, Samsung asserted claim 15, which recites:

15. An apparatus for transmission of data, comprising:
a computer including a video capture module to capture and compress video in real time;
means for transmission of said captured video over a cellular frequency.

’239 Patent cl. 15. The jury found that none of the three accused Apple products (iPhone 4, iPhone 4S, and iPhone 5) infringe. *See* ECF No. 1884 at 11. Samsung seeks judgment as a matter of law of infringement. The Court finds that substantial evidence supports the jury’s verdict and DENIES Samsung’s motion.

As an initial matter, Samsung claims that “[n]o reasonable jury” could find non-infringement because “substantial evidence was presented to conclude claim 15 was infringed.” Mot. at 44. Samsung invokes the wrong legal standard: even if substantial evidence could support a contrary verdict, Samsung must show a *lack* of substantial evidence that favors the existing verdict, such that “only one reasonable conclusion” is possible. *Ostad*, 327 F.3d at 881. Here, substantial evidence supports the non-infringement determination.

Samsung focuses on three limitations in claim 15, arguing that Apple’s expert, Dr. James Storer, made improper arguments for each limitation. First, Samsung argues that Dr. Storer incorrectly testified that the claimed “video capture module” is restricted to a “video card,” must receive analog signals, and must be plugged into another component. However, Samsung mischaracterizes the trial testimony. In explaining his non-infringement opinion, Dr. Storer stated that he reviewed a bill of materials for an accused iPhone 5 (Tr. at 2738:24-2739:8), a live disassembly of an iPhone 5 (*id.* at 2741:8-25), and the testimony of Apple engineer Roberto Garcia

(*id.* at 2738:13-23) to determine that the accused devices do not capture video. Contrary to Samsung’s position, Dr. Storer expressly acknowledged that “[c]laim 15 only requires a video capture module,” not a video card, and opined that no such module exists in the accused phones. *Id.* at 2742:6-15. Dr. Storer did testify that no component of the accused phones receives “analog video,” and “[t]here’s not a cable being plugged in coming from a remote source.” *Id.* at 2743:10-17. This was not improper argument of claim construction. Samsung did not request claim construction of “video capture module” even though the Court provided last-minute construction of other terms in claim 15 at Samsung’s request. Thus, the jury was entitled to evaluate the plain and ordinary meaning of the term based on the evidence at trial. *See* ECF No. 1301 at 5. Dr. Storer testified that he personally worked with video capture modules in the 1990s, and that the iPhones lacked such hardware. *See id.* at 2727:2-15. Furthermore, Samsung did not object to this testimony. *See Price v. Kramer*, 200 F.3d 1237, 1252 (9th Cir. 2000) (noting that failure to object to testimony waives argument on appeal).

Next, Samsung claims Apple offered improper arguments about “means for transmission of said captured video over a cellular frequency.” The Court construed this term to mean: “one or more modems connected to one or more cellular telephones, and software performing a software sequence of initializing one or more communications ports on said apparatus, obtaining a cellular connection, obtaining said captured video, and transmitting said captured video.” ECF No. 1532 at 14. Samsung claims that Dr. Storer gave improper opinions that a “port” required a specific kind of hardware, and that “connected to” requires a cable. Again, Samsung mischaracterizes the testimony. Dr. Storer told the jury that the “electrical connections between chips” that Samsung’s expert identified in the accused iPhones were not “ports” as understood at the ’239 patent’s priority date. Tr. at 2751:14-2752:9. While Dr. Storer referred to a lack of “cables” connecting the iPhones to any modems (*id.* at 2745:6-14), he also opined that the phones’ baseband processor which Samsung’s expert identified as the claimed “modem” could not be “connected to one or more cellular telephones” because the baseband processor was itself part of the phone (*id.* at 2745:15-

2746:18). Thus, Apple presented reasoned expert opinions based on the Court’s claim construction that the jury could have credited.

Finally, Samsung contends that Apple improperly tried to limit “video” to “something other than streaming video and video frames.” Mot. at 45. At trial, Samsung argued that Apple’s FaceTime application transmits video. In response, Dr. Storer testified that “[t]here is no video at all on FaceTime” because “an individual frame is created and then it’s immediately transmitted,” and disagreed with Samsung’s expert because “[a] single frame is not video.” Tr. at 2754:1-25; *see also id.* at 2713:10-2714:3 (Garcia testimony regarding absence of video in FaceTime). Samsung did not object to this testimony and now identifies no reason why these opinions contradict the plain and ordinary meaning of “video.” Dr. Storer agreed on cross-examination that his expert report used the phrase, “the FaceTime application prepares to transmit video” (*id.* at 2781:10-17), but this does not amount to an admission that FaceTime employs “video” as claimed, particularly because Mr. Garcia distinguished between “video” and “a video frame” (*id.* at 2713:20-23).

Additionally, Samsung argues that Dr. Storer compared the accused products to commercial embodiments of the ’239 patent, instead of the claim language. Samsung’s argument is misplaced. As detailed above, Apple presented specific evidence about its accused products and why they do not infringe. Samsung points to *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, where the Federal Circuit reversed summary judgment of non-infringement because the district court relied solely on commercial embodiments, and thus “eschewed the cardinal principle that the accused device must be compared to the claims rather than to a preferred or commercial embodiment.” 314 F.3d 1313, 1347 (Fed. Cir. 2003). However, that is not the situation here. The jury heard substantial evidence in addition to Dr. Storer’s discussion of the inventors’ actual products, and also received instructions to “not compare the Samsung and Apple commercial products to each other.” ECF No. 1847 at 32; *see Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1470 (Fed. Cir. 1997) (denying new trial where patentee made only a “a few passing references” to commercial products and “the jury instructions properly cautioned the jury not to compare commercial embodiments to determine infringement”).

The jury needed to conclude that only one of the limitations of claim 27 above was not present in the accused iPhones to reach a verdict of non-infringement. The jury received substantial evidence to conclude that any of several limitations were not infringed. Accordingly, Samsung's motion regarding infringement of the '239 patent is DENIED.

III. CONCLUSION

For the reasons discussed above, the Court:

(1) DENIES Samsung's motion for judgment as a matter of law of non-infringement of claim 9 of the '647 patent.

(2) DENIES Samsung's motion for judgment as a matter of law of invalidity of claim 9 of the '647 patent.

(3) DENIES Samsung's motion for judgment as a matter of law of invalidity of claim 8 of the '721 patent.

(4) DENIES Samsung's motion for judgment as a matter of law of non-infringement of the '721 patent.

(5) GRANTS Samsung's motion for judgment as a matter of law that Samsung did not willfully infringe the '721 patent.

(6) DENIES Samsung's motion for judgment as a matter of law of invalidity of the '172 patent.

(7) DENIES Samsung's motion for judgment as a matter of law of invalidity of claim 25 of the '959 patent.

(8) DENIES Samsung's motion for judgment as a matter of law of invalidity of claim 20 of the '414 patent.

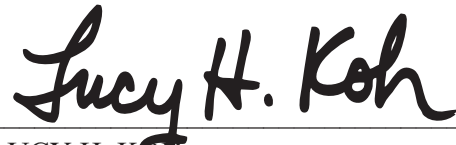
(9) DENIES Samsung's motion for judgment as a matter of law that SEC is not liable for indirect infringement.

(10) DENIES Samsung's request that the Court deduct the full amount of the Galaxy S II awards as impermissible double recovery.

(11) DENIES Samsung's motion for judgment as a matter of law of infringement of claim 15 of the '239 patent.

1 **IT IS SO ORDERED.**

2 Dated: September 9, 2014



LUCY H. KOH
United States District Judge

United States District Court
For the Northern District of California

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United States District Court
For the Northern District of California

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

APPLE, INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
)	
Plaintiff and Counterdefendant,	)	ORDER GRANTING IN PART AND
	)	DENYING IN PART APPLE'S MOTION
v.	)	FOR JUDGMENT AS A MATTER OF
	)	LAW
SAMSUNG ELECTRONICS CO., LTD., a)	
Korean corporation; SAMSUNG	)	[UNDER SEAL]
ELECTRONICS AMERICA, INC., a New York)	
corporation; and SAMSUNG)	
TELECOMMUNICATIONS AMERICA, LLC,)	
a Delaware limited liability company,)	
)	
Defendants and Counterclaimants.)	

On May 5, 2014, after a thirteen-day trial and approximately four days of deliberation, a jury in this patent case reached a verdict. ECF No. 1884. On May 23, 2014, Apple filed a motion for judgment as a matter of law, amended judgment, new trial, and damages enhancements. ECF No. 1897-3 ("Mot."). On June 6, 2014, Samsung filed an opposition. ECF No. 1906 ("Opp'n"). On June 13, 2014, Apple filed a reply. ECF No. 1919 ("Reply"). The Court held a hearing on the post-trial motions on July 10, 2014. Having considered the law, the record, and the parties' arguments, the Court GRANTS Apple's request for judgment as a matter of law of non-infringement of claim 15 of the '239 patent with respect to Apple's iPad products, GRANTS Apple's request for

Case No.: 12-CV-00630
ORDER GRANTING IN PART AND DENYING IN PART APPLE'S MOTION FOR JUDGMENT AS A MATTER OF LAW

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1 supplemental damages and prejudgment interest, and DENIES Apple's motion for judgment as a
 2 matter of law in all other respects.

3 I. LEGAL STANDARD

4 Federal Rule of Civil Procedure 50 permits a district court to grant judgment as a matter of
 5 law "when the evidence permits only one reasonable conclusion and the conclusion is contrary to
 6 that reached by the jury." *Ostad v. Or. Health Scis. Univ.*, 327 F.3d 876, 881 (9th Cir. 2003). A
 7 party seeking judgment as a matter of law after a jury verdict must show that the verdict is not
 8 supported by "substantial evidence," meaning "relevant evidence that a reasonable mind would
 9 accept as adequate to support a conclusion." *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361,
 10 1366 (Fed. Cir. 2005) (citing *Gillette v. Delmore*, 979 F.2d 1342, 1346 (9th Cir. 1992)). The Court
 11 must "view the evidence in the light most favorable to the nonmoving party . . . and draw all
 12 reasonable inferences in that party's favor." See *E.E.O.C. v. Go Daddy Software, Inc.*, 581 F.3d
 13 951, 961 (9th Cir. 2009) (internal quotations and citations omitted).

14 A new trial is appropriate under Rule 59 "only if the jury verdict is contrary to the clear
 15 weight of the evidence." *DSPT Int'l, Inc. v. Nahum*, 624 F.3d 1213, 1218 (9th Cir. 2010). A court
 16 should grant a new trial where necessary "to prevent a miscarriage of justice." *Molski v. M.J.*
 17 *Cable, Inc.*, 481 F.3d 724, 729 (9th Cir. 2007).

18 II. ANALYSIS

19 A. Infringement of Claim 8 of the '721 Patent by Samsung's Galaxy S II Products

20 Apple moves for judgment as a matter of law that Samsung's accused Galaxy S II products
 21 infringe claim 8 of the '721 patent or, in the alternative, for a new trial on infringement and
 22 damages for those products. Mot. at 3. The '721 patent discloses unlocking a portable electronic
 23 device by using a predetermined gesture on a touch-sensitive screen. See generally '721 Patent
 24 col.1. The '721 patent targeted the problem of "unintentional activation or deactivation of functions
 25 due to unintentional contact with the touch screen" in portable devices. *Id.* Apple asserted claim 8
 26 of the '721 patent against Samsung. Claim 8 depends from claim 7. Both claims recite:

27 7. A portable electronic device, comprising:
 28 a touch-sensitive display;

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memory;
 one or more processors; and
 one or more modules stored in the memory and configured for execution by the one
 or more processors, the one or more modules including instructions:
 to detect a contact with the touch-sensitive display at a first predefined location
 corresponding to an unlock image;
 to continuously move the unlock image on the touch-sensitive display in accordance
 with movement of the detected contact while continuous contact with the
 touch-sensitive display is maintained, wherein the unlock image is a
 graphical, interactive user-interface object with which a user interacts in
 order to unlock the device; and
 to unlock the hand-held electronic device if the unlock image is moved from the
 first predefined location on the touch screen to a predefined unlock region on
 the touch-sensitive display.

8. The device of claim 7, further comprising instructions to display visual cues to
 communicate a direction of movement of the unlock image required to
 unlock the device.

Apple accused six Samsung phones of infringing the '721 patent. For the Admire, Galaxy Nexus,
 and Stratosphere, Apple accused the "slide to unlock" feature in those phones. For the Galaxy S II,
 Galaxy S II Epic 4G Touch, and Galaxy S II Skyrocket ("Galaxy S II products"), Apple accused
 only the "slide to answer" feature.¹ While the jury found that the Admire, Galaxy Nexus, and
 Stratosphere infringe claim 8, the jury found that the Galaxy S II products do not infringe. ECF No.
 1884 at 5. The Court DENIES Apple's motion, as explained below.

"To prove infringement, the plaintiff bears the burden of proof to show the presence of
 every element or its equivalent in the accused device." *Uniloc USA, Inc. v. Microsoft Corp.*, 632
 F.3d 1292, 1301 (Fed. Cir. 2011). "If any claim limitation is absent from the accused device, there
 is no literal infringement as a matter of law." *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d
 1241, 1247 (Fed. Cir. 2000). Accordingly, the jury needed to identify only one limitation missing
 from the accused products to reach its verdict.

The sole dispute between the parties here is whether a reasonable jury could have found
 that Samsung's "slide to answer" features do not infringe, but that the "slide to unlock" features do
 infringe. At trial, Apple's expert Dr. Andrew Cockburn testified that the "slide to answer"

¹ After the July 10, 2014 hearing, and without permission from the Court, Apple filed additional
 exhibits and argument, claiming that the accused function of the Galaxy S II Epic 4G Touch was
 "the operation used to retrieve missed messages, as opposed to the operation used to respond to
 incoming phone calls." ECF No. 1945 at 1. Apple's new evidence and argument are untimely and
 will be disregarded.

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1 functionality in the Galaxy S II products was “very similar” to the “slide to unlock” feature utilized
 2 by the non-Galaxy S II accused phones. *Id.* at 633-36, 653-64, 673-76. Dr. Cockburn testified that
 3 both “slide to unlock” and “slide to answer” infringe because they “detect a contact with the touch-
 4 sensitive display” at an “unlock image”; allow the user to “continuously move the unlock image . .
 5 . in accordance to the detected contact”; provide “visual cues” for the “direction of movement of
 6 the unlock image required to unlock the device”; and “unlock the device” when the unlock image is
 7 moved “to a predefined unlock region.” *See id.* at 673-74. Apple also argues that Figure 7 in the
 8 ’721 patent discloses a form of “slide to answer,” so this feature must fall within the scope of claim
 9 8.

10 The Court concludes that a reasonable jury could have distinguished “slide to answer” from
 11 “slide to unlock” for purposes of infringement. The verdict must stand unless the evidence,
 12 “construed in the light most favorable to the nonmoving party, permits only one reasonable
 13 conclusion, and that conclusion is contrary to the jury’s verdict.” *Pavao v. Pagay*, 307 F.3d 915,
 14 918 (9th Cir. 2002). Notably, neither party requested claim construction of any terms in the ’721
 15 patent. Accordingly, the jury was instructed to rely on the plain and ordinary meaning of the claim
 16 language. *See* ECF No. 1847 at 30; *see also ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509,
 17 520 (Fed. Cir. 2012) (“In the absence of such a construction, however, the jury was free to rely on
 18 the plain and ordinary meaning.”).

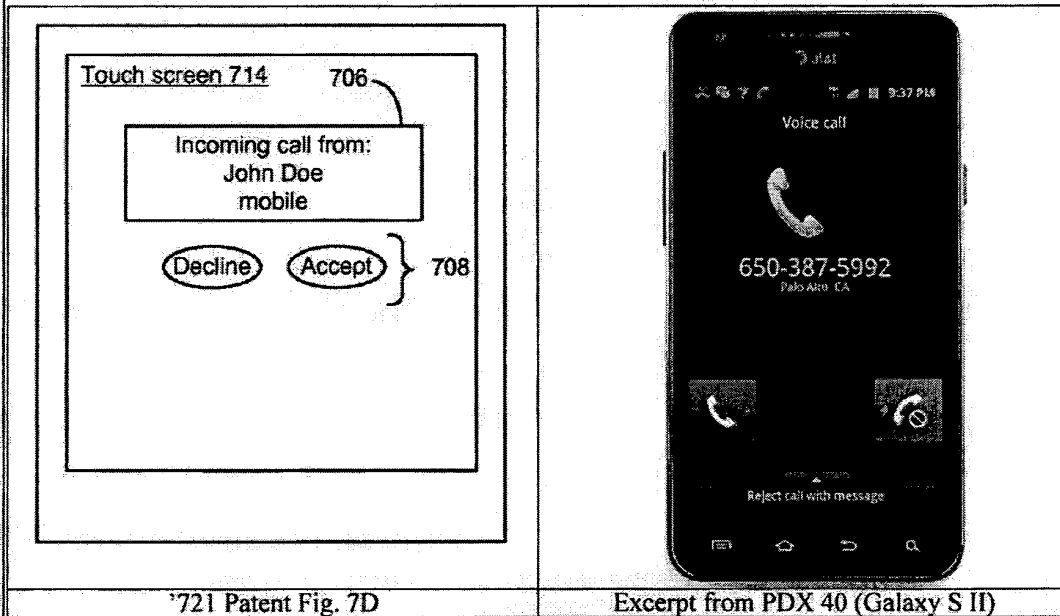
19 Contrary to Apple’s arguments, the jury’s non-infringement verdict for the Galaxy S II
 20 products does not contradict the ’721 patent or the record. As an example, the jury could have
 21 reasonably determined that the “slide to answer” functionality does not “unlock the hand-held
 22 electronic device,” as claimed. The patent describes a “lock state” as a condition where a phone
 23 ignores all inputs other than unlocking or powering off: “In the user-interface lock state
 24 (hereinafter the ‘lock state’), the device 100 is powered on and operational but ignores most, if not
 25 all, user input. . . . In other words, the locked device 100 responds to user input corresponding to
 26 attempts to transition the device 100 to the user-interface unlock state or powering the device 100
 27 off, but does not respond to user input corresponding to attempts to navigate between user
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1 interfaces.” ’721 patent col.7 l.64-66, col.8 ll.12-17. However, in Samsung’s “slide to answer”
2 feature, the phone allows the user to answer or decline a call directly, which indicates that the
3 phone responds to user inputs. The Galaxy S II products also include the functionality of “Reject
4 call with message,” which allows the user to send the caller a pre-set text message instead of
5 accepting or declining the call. The jury could have verified this by testing the functionality on the
6 phones in evidence. JX 32 (Galaxy S II); JX 33 (Galaxy S II Epic 4G Touch); JX 34 (Galaxy S II
7 Skyrocket); ECF No. 1866-1 (final admitted exhibit list); *see also* PDX 40 (video demonstrative of
8 “slide to answer” on Galaxy S II products). Based on at least these statements in the patent and the
9 accused devices themselves, the jury could have decided that Samsung’s “slide to answer” screen
10 is not a “lock state,” and that sliding to answer or decline a call does not “unlock” the device.

11 The verdict is also consistent with Figure 7 of the ’721 patent. Apple claims that Figures
12 7A-7D demonstrate sliding to answer. However, that embodiment arguably does not show sliding
13 to answer a call because it does not result in entry into an active call. Rather, Figure 7D shows that,
14 after sliding to unlock, the user can press either “Decline” or “Accept” in response to an incoming
15 call: “In FIG. 7D, the user completes the unlock action At this point, the user may interact
16 with the virtual buttons 708 and accept or decline the incoming call.” ’721 patent col.16 ll.4-11.
17 Thus, the patent explains that a screen where the user can accept or decline a call is an “unlocked”
18 state. However, Samsung’s accused “slide to answer” screen also permits the user to accept or
19 decline a call, without further action:
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'721 Patent Fig. 7D

Excerpt from PDX 40 (Galaxy S II)

Accordingly, a reasonable jury could have determined that sliding to answer on the accused devices is not a form of unlocking because the phone is in an “unlocked” state when it presents these multiple functions. Apple did not request a construction for “unlock”; to the extent Apple seeks such a construction now, Apple’s request is untimely. *See Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1320-21 (Fed. Cir. 2003) (“[W]here the parties and the district court elect to provide the jury only with the claim language itself, and do not provide an interpretation of the language in the light of the specification and the prosecution history, it is too late at the JMOL stage to argue for or adopt a new and more detailed interpretation of the claim language and test the jury verdict by that new and more detailed interpretation.”).

Additionally, Apple points out that Dr. Greenberg did not testify to any infringement defense specific to the Galaxy S II products. Mot. at 5. However, Apple bore the burden of proof on infringement, and Apple cites no case holding that a jury must rely on expert testimony to find non-infringement, and courts have held otherwise. *See Creative Compounds, LLC v. Starmark Labs.*, 651 F.3d 1303, 1314 (Fed. Cir. 2011) (“If the patentee fails to meet that burden [of proving infringement], the patentee loses regardless of whether the accused comes forward with any evidence to the contrary.”); *Intel Corp. v. Broadcom Corp.*, No. CIV.A. 00-796-SLR, 2003 WL

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360256, at *14 (D. Del. 2003) (denying patentee's motion for judgment as a matter of law of infringement; "Broadcom was not required to put on its own expert to disprove infringement because it was Intel that bore the burden of proving infringement.").

For these reasons, the Court cannot conclude that the evidence "permits only one reasonable conclusion" and substitute its judgment for the jury's. *Pavao*, 307 F.3d at 918. Apple's motion regarding infringement of the Galaxy S II products is DENIED.

B. Infringement of Claim 20 of the '414 Patent

The '414 patent covers "asynchronous data synchronization amongst devices," which the parties nicknamed "background sync." Apple asserted claim 20 of the '414 patent against Samsung. The jury found that none of the ten accused Samsung products infringes the '414 patent. See ECF No. 1884 at 9. Apple now moves for judgment as a matter of law of infringement or, alternatively, a new trial on infringement and damages. Claim 20 depends from claim 11. Both claims recite:

11. A computer readable storage medium containing executable program instructions which when executed cause a data processing system to perform a method comprising:
 executing at least one user-level non-synchronization processing thread, wherein the at least one user-level non-synchronization processing thread is provided by a user application which provides a user interface to allow a user to access and edit structured data in a first store associated with a first database; and
 executing at least one synchronization processing thread concurrently with the executing of the at least one user-level non-synchronization processing thread, wherein the at least one synchronization processing thread is provided by a synchronization software component which is configured to synchronize the structured data from the first database with the structured data from a second database.

20. The storage medium as in claim 11 wherein the synchronization software component is configured to synchronize structured data of a first data class and other synchronization software components are configured to synchronize structured data of other corresponding data classes.

'414 Patent cls. 11, 20. Apple claims that it presented evidence that all Samsung accused products satisfy every limitation of claim 20, while Samsung conceded infringement of several limitations and presented insufficient proof of non-infringement. However, as set forth below, the jury's non-infringement verdict is supported by substantial evidence and is not contrary to the clear weight of the evidence. Accordingly, Court DENIES Apple's motion.

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1 Apple's theory of infringement is that the Android operating system, as installed on the
 2 accused Samsung devices, contains "Sync Adapters" that perform the synchronization functions in
 3 claim 20. It is undisputed that claim 20 requires at least three distinct "synchronization software
 4 components." As the Court explained in its summary judgment order: "The first is the claimed
 5 synchronization software component 'configured to synchronize structured data of a first data
 6 class' and the other two are the 'other synchronization software components' configured 'to
 7 synchronize structured data of other corresponding data classes.'" ECF No. 1151 at 23. Moreover,
 8 claim 20 requires that each synchronization software component be configured to "synchronize
 9 structured data" from a different data class. *See* '414 patent cl.20.

10 At trial, the parties presented opposing expert testimony from Dr. Alex Snoeren (Apple)
 11 and Dr. Jeffrey Chase (Samsung), who both analyzed relevant source code. The experts concurred
 12 that the accused software includes six Sync Adapters, two for each of three data classes: Calendar,
 13 Contacts, and Email. *See* Tr. at 980:1-15 (Snoeren), 2166:12-23 (Chase); *see also* SDX 3634. The
 14 experts further agreed that the "Google Calendar" Sync Adapter for the "Calendar" data class and
 15 the "Google Contacts" Sync Adapter for the "Contacts" data class are "synchronization software
 16 components . . . configured to synchronize structured data." *See* Tr. at 981:11-17; SDX 3635. In
 17 support of Apple, Dr. Snoeren testified that the "Gmail" Sync Adapter for the "Email" data class is
 18 also a synchronization software component, and that therefore the accused software has three such
 19 components corresponding to different data classes. *See* Tr. at 981:18-982:3. Dr. Snoeren reviewed
 20 Google documentation for the Sync Adapters (PX 172) and opined that all six Sync Adapters call a
 21 function called "PerformBackgroundSync," which allegedly establishes that the Gmail Sync
 22 Adapter can perform the claimed synchronization function. *Id.* at 984:23-986:16. Alternatively, Dr.
 23 Snoeren stated that three Sync Adapters that use the Microsoft Exchange protocol ("Exchange
 24 Calendar," "Exchange Contacts," and "Exchange Mail") also synchronize structured data. *See id.* at
 25 986:17-987:4.

26 Samsung argues that the jury could have determined that the accused software does not
 27 include at least three synchronization software components that were each "configured to
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1 synchronize structured data.” The Court agrees that substantial trial evidence permitted a
 2 reasonable jury to determine non-infringement on at least this basis. Dr. Chase explained to the
 3 jury that “there are no Sync Adapters of the E-mail data class” that are configured to synchronize
 4 structured data. *Id.* at 2167:20-2168:6. He disagreed directly with Dr. Snoeren’s analysis after
 5 reviewing the same source code for the Gmail Sync Adapter that Dr. Snoeren examined. *See id.* at
 6 2170:12-2171:5. Dr. Chase opined that the Sync Adapters are not “configured to synchronize”
 7 because they do not synchronize data themselves, but rather indirectly “cause” synchronization by
 8 calling other software components. *Id.* at 2180:17-2181:11 (“I can call the mechanic to fix my car,
 9 and if that call causes the mechanic to fix my car, I really can’t say that I did it myself or I could do
 10 it myself”). Furthermore, Dr. Chase told the jury that “[t]here’s no synchronization of structured
 11 data of these classes in the Exchange Sync Adapters” because “the code passes a synchronization
 12 request along to another component of Exchange called the Exchange Service.” *Id.* at 2713:23-
 13 2174:6. Samsung also called Google manager Paul Westbrook, who testified that the Gmail Sync
 14 Adapter “passes messages between the Sync Manager here to this Mail Engine here,” and that it is
 15 the Mail Engine that performs synchronization, to optimize the speed of the Gmail Android
 16 application. *Id.* at 1649:20-1650:12. Mr. Westbrook also testified that the Exchange Sync Adapters
 17 only pass messages without synchronizing. *Id.* at 1653:1-17. Based on this expert and factual
 18 testimony, the jury could have decided that the accused products lack three distinct synchronization
 19 software components, and thus do not infringe.

20 Apple contends that Samsung made improper claim construction arguments to the jury by
 21 stating that “*configured to synchronize*” is different from “causing” another software component to
 22 synchronize. According to Apple, “Samsung proposed that the jury ‘import [] additional limitations
 23 into the claims’ . . . by suggesting that the claim required that a sync adapter be configured to
 24 perform all synchronization or to perform synchronization in a specific way.” Mot. at 13. Apple
 25 further asserts that Samsung’s alleged claim construction “is also inconsistent with the
 26 specification and the prosecution history,” and cites portions of the ’414 patent’s intrinsic record.
 27 *Id.* at 13-14.

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1 Apple's arguments regarding claim construction are unfounded. Apple relies heavily
2 throughout its papers on *Moba B.V. v. Diamond Automation, Inc.* In *Moba*, the district court
3 construed a method claim prior to trial, but when resolving post-trial motions, "reasoned that the
4 jury reasonably could have determined from the testimony presented that sequential performance is
5 a necessary characteristic" of the method claim. 325 F.3d 1306, 1313 (Fed. Cir. 2003). The Federal
6 Circuit reversed, holding that "the district court allowed the jury to add an additional limitation to
7 the district court's construction." *Id.* Thus, *Moba* dealt with a situation where the district court had
8 already construed the claim at issue, but relied on an extra limitation when reviewing the verdict.
9 However, the Federal Circuit has clarified that parties may not re-argue claim construction in post-
10 trial motions:

11 When issues of claim construction have not been properly raised in connection with
12 the jury instructions, it is improper for the district court to adopt a new or more
13 detailed claim construction in connection with the JMOL motion. On JMOL, the
14 issue here should have been limited to the question of whether substantial evidence
15 supported the verdict under the agreed instruction. *See Moba, B.V. v. Diamond*
16 *Automation, Inc.*, 325 F.3d 1306, 1313-14 (Fed. Cir. 2003). In other words, where
the parties and the district court elect to provide the jury only with the claim
language itself, and do not provide an interpretation of the language in the light of
the specification and the prosecution history, it is too late at the JMOL stage to
argue for or adopt a new and more detailed interpretation of the claim language and
test the jury verdict by that new and more detailed interpretation.

17 *Hewlett-Packard*, 340 F.3d at 1320-21. In *ePlus, Inc. v. Lawson Software, Inc.*, the parties disputed
18 whether the jury could decide that the unconstrued claim term "determining" required an element
19 of control. 700 F.3d 509, 520 (Fed. Cir. 2012). The Federal Circuit rejected the appellant's
20 argument as "essentially raising a claim construction argument regarding the meaning of the term
21 'determining' in the guise of a challenge to the sufficiency of the evidence of infringement," and
22 held that in the absence of an express construction, "the jury was free to rely on the plain and
23 ordinary meaning of the term." *Id.* Accordingly, it is improper to create a new claim construction
24 after the verdict, and parties may not revisit claim construction for terms governed by plain and
25 ordinary meaning.

26 Here, Apple seeks a post-trial construction for "configured to synchronize," raising new
27 arguments regarding the '414 patent's specification and prosecution history, despite never
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1 requesting such a construction before. At trial, Apple did not object to Dr. Chase's testimony as
 2 improperly arguing claim construction. *See Price v. Kramer*, 200 F.3d 1237, 1252 (9th Cir. 2000)
 3 (noting that failure to object to testimony waives argument on appeal). Furthermore, this Court
 4 already addressed and rejected Apple's argument before trial. When Apple sought summary
 5 judgment of infringement, the Court noted that: (1) the parties did not seek a construction of
 6 "configured to synchronize," (2) that plain and ordinary meaning applied, and (3) that "a jury could
 7 reasonably conclude that the accused Sync Adapters merely direct other components to perform
 8 synchronization operations and are not themselves 'configured to synchronize structured data' as
 9 required by the claim." ECF No. 1151 at 23-24. Apple's attempt to revisit this decision is
 10 unsupported by fact or law. *See Oracle Am. v. Google Inc.*, No. 10-CV-03561-WHA, 2012 U.S.
 11 Dist. LEXIS 75026, at *9 (N.D. Cal. May 30, 2012) ("Rule 50 is not an occasion for yet another
 12 round of summary judgment based on new slants on the case law.").

13 Apple's remaining arguments challenge Samsung's interpretation of the conflicting
 14 testimony. *See* Mot. at 10-11; Reply at 4-6. However, "we do not weigh the evidence or make
 15 credibility determinations in assessing the propriety of granting judgment as a matter of law."
 16 *Harper v. City of Los Angeles*, 533 F.3d 1010, 1021 (9th Cir. 2008). Because substantial evidence
 17 supports the jury's non-infringement verdict, the Court DENIES Apple's motion with respect to the
 18 '414 patent.

19 C. Infringement of Claim 25 of the '959 Patent

20 The '959 patent is directed to a "universal interface for retrieval of information in a
 21 computer system," also colloquially called "universal search." Apple asserted claim 25 of the '959
 22 patent against Samsung. The jury found that none of the ten accused Samsung products infringes
 23 the '959 patent. *See* ECF No. 1884 at 9. Apple seeks judgment as a matter of law of infringement
 24 or, alternatively, a new trial on infringement and damages. Claim 25 depends from claim 24. Both
 25 claims recite:

26 24. A computer readable medium for locating information from a plurality of
 27 locations containing program instructions to:

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1 receive an information identifier; provide said information identifier to a plurality of
 2 heuristics to locate information in the plurality of locations which include
 3 the Internet and local storage media;
 4 determine at least one candidate item of information based upon the plurality of
 5 heuristics; and
 6 display a representation of said candidate item of information.

25. The computer readable medium of claim 24, wherein the information identifier
 is applied separately to each heuristic.

7 '959 Patent cls. 24, 25. Apple claims that it presented evidence that all products satisfy each
 8 limitation of claim 25, while Samsung unsuccessfully challenged only one limitation. The Court
 9 disagrees and DENIES Apple's motion. The jury's non-infringement verdict is supported by
 10 substantial evidence and is not contrary to the clear weight of the evidence.

11 The parties focus on claim 25's requirement for instructions to "provide said information
 12 identifier to a plurality of heuristics to locate information in the plurality of locations which include
 13 the Internet and local storage media." To prove infringement of this element, Apple relied on
 14 expert testimony from Dr. Snoeren. *See generally* Tr. at 940:21-945:5, 952:8-956:23. In the
 15 accused products, Dr. Snoeren identified the infringing functionality as the Quick Search Box (or
 16 "Google Search") in the Gingerbread, Jelly Bean, and Ice Cream Sandwich versions of Android.
 17 *Id.* at 940:21-941:20, 942:7-19 (Gingerbread), 943:13-944:7 (Jelly Bean and Ice Cream Sandwich).
 18 For Gingerbread, Dr. Snoeren told the jury that the "Web Module in the Samsung products"
 19 provides a heuristic for locating information on the Internet because it "combine[s] places that the
 20 user has actually previously browsed using the web browser and suggestions that the Google search
 21 suggestion server has presented." *Id.* at 956:8-23. For Jelly Bean and Ice Cream Sandwich, Dr.
 22 Snoeren testified that the "Google Module" is "the heuristic module that on these versions of the
 23 phone provide the Internet searching applications." *Id.* at 945:2-5; *see* PDX 91.24 (Apple
 24 demonstrative).

25 However, Samsung presented sufficient rebuttal evidence to permit the jury to decide that
 26 the accused devices lack instructions to search "a plurality of locations which include the Internet,"
 27 as claim 25 requires. Bjorn Bringert, a Google engineer who worked on "all" versions of the
 28 Google search app (Tr. at 1568:15-22), explained that the accused Google search functionality
 employs a software method called `blendResults()` that does not search the Internet, but rather

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1 “blends” data previously retrieved from a Google server and a local database. *See id.* at 1567:8-23
 2 (“Q. Now this Blend Results, does that search the Internet? A. No, it doesn’t. . . . The blender
 3 doesn’t go and buy them or locate them.”). Samsung’s expert Dr. Martin Rinard testified to the
 4 same conclusion: “What it’s doing is taking information that has already been located, either in the
 5 local database or by the Google servers, and putting it together. So it can’t possibly be any of the
 6 heuristics in claim 25.” *Id.* at 1890:11-21.

7 Apple claims that Samsung’s positions contradicted the plain claim language because claim
 8 25 “does not require the accused device or application to search the Internet every time the user
 9 inputs a query,” and “[t]he fact that something else *initially located* information on the Internet
 10 does not affect whether the heuristic *also* locates information on the Internet.” Mot. at 19-20.
 11 Apple’s argument is misguided. The ’959 patent requires heuristics to “locate information *in* the
 12 plurality of locations which include the Internet.” Apple implies that a system infringes if it locates
 13 information that is stored locally but is, or was at some time, also present on the Internet. However,
 14 Apple never requested such a strained claim construction, and the jury was free to credit the
 15 testimony from Dr. Bringert and Dr. Rinard and conclude that the accused search features did not
 16 infringe. Apple’s reliance on *Moba v. Diamond Automation* is once again misplaced. As explained
 17 above, *Moba* held that the district court improperly added a “sequential performance” requirement
 18 to a previously construed method claim when assessing a jury verdict. 325 F.3d at 1313-14. Here,
 19 Samsung made no such argument. Rather, it is Apple that asserts a new claim construction position
 20 after trial, when Apple did not request additional claim construction, and plain and ordinary
 21 meaning applied to the terms that Apple now raises.

22 Apple also argues that Dr. Rinard took an inconsistent position regarding invalidity of claim
 23 25 because he opined that the “WAIS” prior art reference applied a heuristic after data was
 24 retrieved, suggesting that the data did not need to be on the Internet. However, Dr. Rinard’s
 25 testimony was not so contradictory: he described a “relevance ranking heuristic” that sorted data
 26 entries, but separately identified searches “from the Internet” that the WAIS reference performed.
 27 *Id.* at 1928:8-20, 1927:20-24. Moreover, the jury concluded that claim 25 was not invalid, so it
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1 could have determined reasonably and consistently that claim 25 reads on neither the WAIS
2 reference nor the accused devices due to lack of searches on the Internet.

3 Samsung further argues that the jury could have decided that the accused products lacked a
4 “plurality” of heuristics because Dr. Snoeren identified only a single heuristic for each product—
5 either the Web Module (for Gingerbread) or the Google Module (for Jelly Bean and Ice Cream
6 Sandwich). *See* Opp’n at 14-15. Samsung fails to explain the basis for this argument, in light of Dr.
7 Snoeren’s identification of other “modules” in the accused operating systems, such as Browser and
8 Contacts in Jelly Bean and Ice Cream Sandwich. *See* Tr. at 950:22-951:8 (“I found in the case of
9 Gingerbread two modules, the Contacts Module and the Web Module, and in the other two
10 versions there were four.”); PDX 91.24. However, even setting this issue aside, substantial
11 evidence supports the jury’s non-infringement verdict, as explained above. Apple’s motion
12 regarding infringement of the ’959 patent is DENIED.

13 **D. Willful Infringement of Claim 9 of the ’647 Patent**

14 Apple also seeks judgment as a matter of law that Samsung (specifically, SEC and STA)
15 willfully infringed the ’647 patent. The Federal Circuit set the relevant standard for the willfulness
16 inquiry for patent infringement: “a patentee must show by clear and convincing evidence that the
17 infringer acted despite an objectively high likelihood that its actions constituted infringement of a
18 valid patent. The state of mind of the accused infringer is not relevant to this objective inquiry. If
19 this threshold objective standard is satisfied, the patentee must also demonstrate that this
20 objectively-defined risk . . . was either known or so obvious that it should have been known to the
21 accused infringer.” *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (internal
22 citation omitted). Thus, the willfulness inquiry is a two-prong analysis, requiring an objective
23 inquiry and a subjective inquiry. The objective inquiry is a question for the Court, and the
24 subjective inquiry is a question for the jury. *See Bard Peripheral Vascular, Inc. v. W.L. Gore &*
25 *Assocs., Inc.*, 682 F.3d 1003, 1007 (Fed. Cir. 2012). A patent owner must prove willfulness “by
26 clear and convincing evidence.” *Seagate*, 497 F.3d at 1371.

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1 In this case, the jury found that, as a subjective matter, Samsung did not willfully infringe
2 the '647 patent. ECF No. 1884 at 7. In other words, the jury considered whether the "objectively-
3 defined risk (determined by the record developed in the infringement proceeding) was either
4 known or so obvious that it should have been known to the accused infringer," *Seagate*, 497 F.3d at
5 1371, and determined that it was not. Apple posits that Samsung willfully infringed because Apple
6 gave written notice to Samsung of the '647 patent in August 2010 (*see* PX 132), and Samsung
7 subsequently copied the "quick links" feature and continued to infringe even after this lawsuit
8 began. However, Samsung points to substantial evidence that supports the jury's view to the
9 contrary. Specifically, Apple's expert Dr. Mowry admitted on cross-examination that his expert
10 report noted that "the accused browser functionality has existed in Android since at least version
11 1.5 (Cupcake) . . . and that there have been no changes in the accused functionality," and
12 acknowledged that Cupcake was released in April 2009. Tr. at 919:9-920:14. Because the accused
13 features appeared before Apple notified Samsung of the '647 patent, this timing could negate any
14 inference of copying by Samsung. The jury also could have concluded that Samsung had
15 reasonable defenses to infringement, despite the ultimate verdict of infringement and no invalidity.
16 Samsung presented expert testimony from Dr. Kevin Jeffay on both non-infringement and
17 invalidity of claim 9 of the '647 patent, and Samsung did not present evidence regarding the
18 adequacy of Samsung's defenses throughout the lawsuit.²

19 As explained above, willfulness requires both that the jury find subjective willfulness and
20 that the court find objective willfulness. Here, the jury found no subjective willfulness, and the
21 Court agrees that substantial evidence in the record supports this finding. Therefore, even if the
22 Court were to find the objective prong satisfied, there can be no ultimate willfulness determination.
23 Accordingly, the Court need not reach the objective analysis. Apple's motion is DENIED.

24
25
26 ² The parties also dispute whether Apple proved that it practices the '647 patent (for purposes of
27 establishing that Samsung copied the patented feature), and Samsung's alleged ability to design
28 around the patent. Resolving these disputes is unnecessary because the jury could have relied on
the other evidence discussed here to find no subjective willfulness.

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E. Whether Samsung Failed to Establish Affirmative Defenses

Apple moves for judgment as a matter of law that Samsung failed to prove the affirmative defenses listed in Samsung's Answer, including waiver, acquiescence, estoppel, laches, failure to mitigate, prosecution history estoppel, prosecution laches, "acts of plaintiff," and "actions of others." Mot. at 22 (citing ECF No. 107). Apple notes that Samsung did not offer any evidence at trial on these defenses. *Id.* The Court denies Apple's motion.

Because Samsung did not include these defenses in the joint pretrial statement, which the parties stated specified the "issues of fact and law remaining to be litigated," ECF No. 1455-1 at 25, Samsung abandoned those defenses and they were eliminated from the case. *Cf. S. Cal. Retail Clerks Union and Food Employers Joint Pension Tr. Fund v. Bjorklund*, 728 F.2d 1262, 1264 (9th Cir. 1984) ("We have consistently held that issues not preserved in the pretrial order [under Rule 16(e)] have been eliminated from the action."³ Nonetheless, Apple does not cite, nor has this Court found, any case in the Ninth Circuit or Federal Circuit holding that when a party abandons an issue pretrial, the opposing party is entitled to judgment as a matter of law.⁴ To the contrary, the Federal Circuit recently clarified that judgment as a matter of law should be granted only on issues that were "litigated, or fairly placed in issue, during the trial." *Alcon Research Ltd. v. Barr Laboratories, Inc.*, 745 F.3d 1180, 1193 (Fed. Cir. 2014) (citation omitted). In *Alcon*, the Circuit held that "[a] court should not render judgment [as a matter of law under Rule 50(b)] with respect

³ Final pretrial orders are governed by Rule 16(e), which provides that a pretrial order "shall control the subsequent course of the action unless modified by a subsequent order." The Ninth Circuit has held that a final pretrial order supersedes the pleadings and that claims or defenses set forth in the pleadings but omitted from the final pretrial order are not properly before the district court. *Bjorklund*, 728 F.2d at 1264. Here, the parties filed a joint pretrial statement and attached a proposed Rule 16 pretrial order which held that the parties had specified the "issues of fact and law remaining to be litigated" in the pretrial statement and that the order would "supplement the pleadings and govern the course of trial of this action." ECF No. 1455-1 at 25, 28. This Court subsequently filed a pretrial conference order that did not specifically adopt the parties' proposed order by specifying the remaining issues of fact and law to be litigated. ECF No. 1398 (Case Management Order). Nonetheless, the Court finds that Samsung's concession that the pretrial statement supplemented the pleadings suffices to deem that Samsung abandoned its defenses.

⁴ The case Apple cites, *Bjorklund*, 728 F.2d 1262, is inapposite. It merely held that because a Rule 16(e) pretrial order controls the subsequent course of the action, a defendant's failure to preserve an issue by failing to raise it in the pretrial order prevents him from asserting that that issue is a material issue of fact that precludes summary judgment. *Id.* at 1264-65.

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1 to claims 'reference[d] in the complaint' but not raised in the pretrial statement or litigated at trial
2 [because] 'a reference in the complaint is not sufficient to support a judgment.'" *Id.* Here, by
3 analogy, because Samsung raised these defenses in its Answer but did not raise them in the pretrial
4 statement nor litigate them at trial, this Court finds that no judgment may be rendered on these
5 defenses. Other courts have rejected similar motions in other patent cases. *See, e.g., VirnetX Inc. v.*
6 *Apple Inc.*, 925 F. Supp. 2d 816, 848-50 (E.D. Tex. 2013) (denying plaintiff's motion for judgment
7 as a matter of law on defenses which were "never presented to the jury" because both parties had
8 agreed to narrow their claims and defenses before trial, and the court would not "penalize
9 [defendant's attempt to] narrow issues [for trial] by entering judgment" against the defendant).
10 Accordingly, the Court denies Apple's motion.

11 **F. Request for Enhanced Damages for the '721 Patent and the '647 Patent**

12 35 U.S.C. § 284 states that "the court may increase the damages up to three times the
13 amount found or assessed." Apple asks this Court to award enhanced damages based on Samsung's
14 allegedly willful infringement of the '721 and '647 patents. Mot. at 23. However, a "finding of
15 willful infringement is a prerequisite to the award of enhanced damages." *i4i Ltd. P'ship v.*
16 *Microsoft Corp.*, 598 F.3d 831, 858 (Fed. Cir. 2010); *see also Bard*, 682 F.3d at 1005. Because this
17 Court grants Samsung's motion for judgment as a matter of law that Samsung did not willfully
18 infringe the '721 patent in a separate Order, and denies Apple's motion for judgment as a matter of
19 law that Samsung willfully infringed the '647 patent, *see supra* Part II.D, the Court has no basis to
20 grant enhanced damages for the '721 and the '647 patents, and thus DENIES Apple's request.

21 **G. Supplemental Damages**

22 Apple seeks an award of supplemental damages through the date of judgment for infringing
23 sales not considered by the jury. 35 U.S.C. § 284 requires that courts award compensation for every
24 infringing sale, and the Federal Circuit has held that a patent holder is entitled to supplemental
25 damages for infringing sales that the jury did not consider. *See Finjan, Inc. v. Secure Computing*
26 *Corp.*, 626 F.3d 1197, 1212-13 (Fed. Cir. 2010). Thus, "[c]ourts routinely grant motions for a
27 further accounting where the jury did not consider certain periods of infringing activity[.]" *Metso*
28

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1 *Minerals, Inc. v. Powerscreen Int'l Distribution Ltd.*, 833 F. Supp. 2d 333, 347 (E.D.N.Y. 2011);
 2 *see also Itron, Inc. v. Benghiat*, Case No. 99-cv-501-JRT-FLN, 2003 WL 22037710, at *15 (D.
 3 Minn. Aug. 29, 2003) (granting motion for accounting of infringing activities); *Hynix*
 4 *Semiconductor Inc. v. Rambus Inc.*, 609 F. Supp. 2d 951, 960-61 (N.D. Cal. 2009) (awarding
 5 supplemental damages for infringement occurring between verdict and entry of judgment).

6 The Court agrees that an award of supplemental damages is necessary here, as there are
 7 sales for which the jury did not make an award, because they occurred after the jury reached its
 8 verdict. This would include sales of the Galaxy S III and the Galaxy Note II. Mot. at 29; Opp'n at
 9 27. Consistent with Federal Circuit case law and this Court's approach in the first case between the
 10 parties, the Court intends to calculate the supplemental damages award for these products starting
 11 from May 6, 2014, the day after the jury verdict. *See* Case No. 11-CV-01846, ECF No. 2271 at 3
 12 ("*Apple I Order*") ("Consistent with the *Presidio Components* decision, the Court intends to
 13 calculate the supplemental damages award beginning on August 25, 2012, the day after the
 14 verdict."). The Court will calculate supplemental damages using the same methodology the Court
 15 adopted in the first case, namely that the per-product rate should be calculated based on the jury's
 16 verdict: "[The Court will] determine the per-sale amount on a product-by-product basis, and use
 17 that per-sale amount to determine the supplemental damages amount for each product that has
 18 remained on the market for any post-verdict period. Because the jury returned an award for each
 19 product separately, the Court can simply divide the jury award for each product by that product's
 20 number of sales to calculate this per-product amount." *Apple I Order* at 5.

21 However, the Court denies Apple's request that the Court calculate and award supplemental
 22 damages at this time before the Court enters final judgment. Mot. at 31. Courts have found it
 23 appropriate to delay orders for the submission of evidence of the number of post-verdict sales and
 24 hearings thereon pending the resolution of appeals, to "avoid potentially unnecessary expenditures
 25 of time and money in preparing such an accounting[.]" *Itron*, 2003 WL 22037710, at *16; *see also*
 26 *Eolas Techs., Inc. v. Microsoft Corp.*, 2004 WL 170334, at *8 (N.D. Ill. Jan. 15, 2004), *vacated in*
 27 *part on other grounds*, 399 F.3d 1325 (Fed. Cir. 2005) ("I grant the motion and will require an
 28

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1 accounting after any appeal in this case is terminated.”). Because the parties have indicated that an
 2 appeal is anticipated, proceeding without the Federal Circuit’s guidance may cause unnecessary
 3 expenditures of time and resources should the Circuit reverse any part of the jury’s verdict on
 4 liability. The Court thus finds it appropriate to delay the consideration of evidence of actual post-
 5 verdict sales and calculation of supplemental damages until after the completion of the appeal in
 6 this case. The Court made this same determination in the first case. *See Apple I* Order at 6, 8; Case
 7 No. 11-CV-01846, ECF No. 2947 at 3.

8 Finally, Samsung argues Apple is not entitled to supplemental damages because the verdict
 9 indicates the jury’s damages award was a lump-sum royalty intended to compensate Apple for all
 10 past and future infringement, and that granting supplemental damages would breach the jury’s role
 11 in awarding damages. Opp’n at 24-25. Because the jury verdict does not expressly state whether it
 12 compensates Apple for Samsung’s both past and future use of the patented technology or only
 13 compensates Apple for past use, it is ambiguous on this point. In interpreting an ambiguous verdict
 14 form,⁵ this Court has “broad discretion” to determine if “the verdict figure represented past
 15 infringement as well as ongoing infringement.” *Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d
 16 1365, 1378 (Fed. Cir. 2010). The Court rejects Samsung’s argument, as explained below.

17 In *Telcordia*, the district court rejected the defendant’s argument that the jury’s damages
 18 award was necessarily a lump-sum award intended to compensate the patentee for past and future
 19 infringement, reasoning that the evidence at trial provided no way of knowing one way or the other
 20 what the jury actually did. *Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 592 F. Supp. 2d 727, 728 n.8
 21 (D. Del. 2009), *aff’d in part, vacated in part*, 612 F.3d 1365 (Fed. Cir. 2010) (rejecting defendant’s
 22 argument that the court could not grant patentee an ongoing royalty until expiration of the patent
 23 because the jury awarded a lump-sum that covered future infringement, reasoning that (1) the jury
 24 issued a general verdict; (2) the jury heard different sets of damages numbers from the parties’ two
 25 experts, which the jury could accept, reject, or vary; (3) the jury’s award was different from the
 26 damages award advanced by either party’s expert; and (4) there was “nothing in either the record or
 27

28 ⁵ Neither party requested a special verdict form that indicates the jury’s intent on this issue.

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1 verdict form from which the court could determine whether the jury based its award on a lump-
2 sum, paid-up license; running royalty rate; some variation or combination of the two; or rejected
3 the theories and reached its own number.”). When the defendant appealed the district court’s order
4 granting the patentee equitable relief in the form of an ongoing royalty, the Federal Circuit
5 affirmed, reasoning that the court did not abuse its “broad discretion” in interpreting the verdict
6 form because the verdict form was ambiguous, neither party had proposed the jury’s exact \$6.5
7 million award, and it was “unclear whether the jury based its award on a lump-sum, paid-up
8 license, running royalty, some variation or combination of the two, or some other theory.”⁶
9 *Telcordia*, 612 F.3d at 1378. The Federal Circuit thus implicitly affirmed the district court’s
10 rationale that when a record is unclear as to what the jury actually did, it is appropriate to reject a
11 defendant’s argument that the jury’s award necessarily compensated the patentee for future
12 infringement.

13 Similarly, in *Whitserve, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 35-38 (Fed. Cir.
14 2012), the Federal Circuit vacated and remanded the district court’s denial of supplemental
15 damages for infringement after the verdict but before final judgment was entered because the court
16 had failed to explain its reasons for denying such damages. However, in the midst of doing so, the
17 Circuit rejected the defendant’s argument that the patentee’s supplemental damages request was
18 properly denied because the jury had necessarily awarded a lump-sum license for all past and
19 future infringement. *Id.* at 38. The Circuit noted that “nothing in the record would support” that
20 conclusion because “the parties limited their damages arguments to past infringement rather than
21 projected future infringement” and the “jury’s verdict did not indicate that the award was meant to
22 cover future use of [plaintiff’s] patents[.]” *Id.* at 35, 38; *see also id.* at 35 (“We can not [sic] accept
23 [defendant’s] suggestion that a paid-up license was awarded [by the jury].”).

24
25
26 ⁶ The Federal Circuit noted that while the district court’s decision was not clearly erroneous, the
27 Federal Circuit itself could not “determine whether the jury compensated *Telcordia* for all of
28 Cisco’s infringing activities.” *Telcordia*, 612 F.3d at 1378.

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1 Here, in light of the ambiguity concerning whether the jury actually awarded a lump-sum
 2 royalty to compensate Apple for past *and* future infringement, the Court rejects Samsung's
 3 argument that the jury did so. As in *Whitserve* and *Telcordia*, there is no express statement in the
 4 verdict form that the damages award would encompass damages for future infringement. *See* ECF
 5 No. 1884. The verdict form did not require the jury to denote which damages theories it applied. *Id.*
 6 Further, as in *Telcordia*, the jurors were presented with several sets of damages numbers during Dr.
 7 Chevalier and Dr. Velturo's testimony at trial, which the jurors could have chosen to accept,
 8 reject, or vary, and the jury's award of \$119,625,000 is different from the damages award proposed
 9 by both parties' experts. Finally, the fact that the verdict form chart with respect to the Galaxy S II
 10 Products expressly indicated that the award would be made for sales through the "Present" supports
 11 the interpretation that the jury could have believed that its damages awards for all products were
 12 meant to compensate Apple only for past infringing sales. *See* ECF No. 1884 at 10 (asking jury to
 13 provide their "dollar breakdown" for each of certain products – the Galaxy S II Epic 4G Touch, the
 14 Galaxy S II Skyrocket, and Galaxy S II – for each of the following three time periods only: (1)
 15 "August 1, 2011- June 30, 2012"; (2) "July 1, 2012 –August 24, 2012"; and (3) "August 25, 2012 –
 16 Present.").

17 While Samsung argues the evidence is clear that the jury made its damages award based on
 18 calculations by Samsung's expert Dr. Chevalier, Opp'n at 25-26 (citing Chevalier Declaration,
 19 ECF No. 1907-5),⁷ Apple rebuts that there are "multiple ways the jury could have reached its total
 20 damages number by starting from Dr. Velturo's proposed reasonable royalty damages[.]" Reply at
 21 17. The Court need not dissect the verdict to resolve this dispute because even assuming the jury
 22 utilized Dr. Chevalier's reasonable royalty numbers as a starting point, that would not prove that
 23 the jury awarded a *lump-sum* to compensate for past *and* future infringement as opposed to
 24 compensating Apple for past infringement on a per-unit, per-patent running royalty basis for all
 25

26 ⁷ Dr. Chevalier claims that the jury's allocation of damages between the '647, '721, and '172
 27 patents and between the accused products for each patent, and the fact that the jury did not grant a
 28 uniform per-unit royalty for all products, demonstrates a lump-sum verdict. *See* ECF No. 1907-5, ¶
 67. She also claims that the fact that the jury reallocated the total damages number when
 calculating damages for the Galaxy S II products further indicates a lump sum. *See id.* ¶ 68.

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1 sales made through the trial.⁸ This is because although Dr. Chevalier testified her total proposed
 2 award of “roughly \$38.4 million” was a “lump sum,” ECF No. 1938 at 2422, she did not testify
 3 that this lump-sum was intended to cover past *and* future infringement, and her damages exhibit
 4 nowhere describes her damages total as a “lump-sum,” let alone a lump-sum covering past and
 5 future infringement. *See generally* DX 453A. [REDACTED]
 6 [REDACTED]. Even her testimony and demonstratives at trial
 7 repeatedly referred to her \$0.35 per-unit, per-patent royalty rate. *See* SDX 3791 (describing
 8 “royalty rate per patent per unit” of \$0.35); ECF No. 1938 at 2422 (“I concluded that a reasonable
 9 royalty would be \$0.35 per patent, per unit.”); *id.* at 2432 (noting she arrived at the \$0.35 “per
 10 patent, per unit” number by applying *Georgia-Pacific* factors); *id.* at 2435 (stating that her
 11 reasonable royalty number came from “applying that \$0.35 per patent, per unit [sic] to each of the
 12 accused units based on which patents they’re accused of infringing.”). If anything, the fact that Dr.
 13 Chevalier calculated her reasonable royalty damages for the Galaxy S II Products in distinct time
 14 periods only through the “Present,” [REDACTED] [REDACTED]

15 [REDACTED]
 16 [REDACTED], suggests that if the jury based its calculation on Dr. Chevalier’s numbers, the jury likely
 17 would have believed her numbers were intended to compensate Apple only for past infringement.⁹

18 Because the record suggests it is plausible that the jury intended to award Apple damages
 19 only for past infringing sales, the Court cannot conclude that the jury necessarily awarded a lump-
 20 sum award intended to cover past and future infringement. Accordingly, under *Whitserve* and
 21 *Telcordia*, the Court rejects Samsung’s argument and finds that an award of supplemental damages
 22 is warranted.

23
 24
 25
 26 [REDACTED]
 27 ⁹ While Samsung argues that the jury must have followed the final jury instruction that they could
 28 award a “one-time lump sum,” that is not dispositive because the jury was also instructed that a
 reasonable royalty award could be based on a running per-unit royalty. *See* ECF No. 1847 at 50.

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H. Prejudgment Interest

Under 35 U.S.C. § 284, the district court has considerable discretion in awarding prejudgment interest. *See Bio-Rad Labs., Inc. v. Nicolet Instrument Corp.*, 807 F.2d 964, 969 (Fed. Cir. 1986). The purpose of prejudgment interest is to “compensate[] the patent owner for the use of its money between the date of injury and the date of judgment.” *Oiness v. Walgreen Co.*, 88 F.3d 1025, 1033 (Fed. Cir. 1996). Such interest is usually awarded from the date of infringement to the date of judgment. *See Nickson Indus. Inc., v. Rol Mfg. Co., Ltd.*, 847 F.2d 795, 800 (Fed. Cir. 1988). “[P]rejudgment interest should ordinarily be awarded absent some justification for withholding such an award[.]” *Gen. Motors Corp. v. Devex Corp.*, 461 U.S. 648, 657 (1983) (holding that an award of prejudgment interest is generally appropriate after a finding of patent infringement). As in the first patent infringement case between Apple and Samsung, *see Apple I* Order at 7-8, the Court concludes here that Apple is entitled to an award of prejudgment interest.

The rate of prejudgment interest is left to the wide discretion of this Court, which may award interest at or above the prime rate. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 1545 (Fed. Cir. 1991). Courts may use the prime rate, the prime rate plus a percentage, the U.S. Treasury Bill rate, state statutory rate, corporate bond rate, or whatever rate the court deems appropriate. *Junker v. HDC Corp.*, No. C-07-05094 JCS, 2008 WL 3385819, at *6 (N.D. Cal. July 28, 2008). The parties have proposed two different rates. Apple proposes the prime rate. Mot. at 30-31. Samsung argues that the lower 52-week Treasury Bill rate is appropriate, consistent with this Court’s approach in the first case between the parties. Opp’n at 28; *Apple I* Order at 7. In determining the appropriate rate, courts have considered whether, during the period of infringement, the plaintiff “borrowed money at a higher rate, what that rate was, or [whether] there was a causal connection between any borrowing and the loss of the use of the money awarded as a result of [the defendant’s] infringement.” *Laitram Corp. v. NEC Corp.*, 115 F.3d 947, 955 (Fed. Cir. 1997) (upholding district court’s decision to use the Treasury Bill rate in case where district court found no evidence of “a causal connection between any borrowing and the loss of the use of the money awarded as a result of the infringement.”). Such factors would make an award at a

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1 higher rate more appropriate. Here, although Apple has submitted a declaration stating that Apple
 2 borrowed in the public markets at rates higher than the Treasury Bill rate, *see* Robinson Decl., ECF
 3 No. 1897-8 ¶ 9, Apple maintains substantial cash reserves and has not presented any evidence that
 4 it needed to borrow money *because* it was deprived of the damages award. Thus, here, as in
 5 *Laitram*, and as this Court found in the first case, the Court concludes the 52-week Treasury Bill
 6 rate is sufficient. The Treasury Bill rate has been accepted and employed by many courts in patent
 7 cases as a reasonable method of placing a patent owner in a position equivalent to where it would
 8 have been had there been no infringement. *See, e.g., Datascope Corp. v. SMEC, Inc.*, 879 F.2d 820,
 9 829 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 1024 (1990).

10 Finally, the Court addresses the appropriateness of compounding. Apple seeks annual
 11 compounding. Mot. at 31. The Federal Circuit has explained that “the determination whether to
 12 award simple or compound interest [] is a matter largely within the discretion of the district court.”
 13 *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 557 (Fed. Cir. 1984). Courts “have
 14 recognized that compounding is necessary to fully compensate the patentee.” *Sealant Sys. Int’l,*
 15 *Inc. v. TEK Global S.R.L.*, No. 5:11-CV-00774-PSG, 2014 WL 1008183, at *6 (N.D. Cal. Mar. 7,
 16 2014) (citation omitted). “Because a patentee’s damages include the foregone use of money,
 17 compounding is needed to account for the time value of money.” *Id.* (citation omitted). Thus,
 18 “courts have approved annual compounding and even daily compounding.” *Id.* (citation omitted).
 19 As Samsung has not indicated any objection to compounding, Opp’n at 28-30, the Court concludes,
 20 as it did in the first case, that annual compounding should be utilized. *See Apple I* Order at 7-8.

21 Accordingly, when the anticipated appeal of this case is resolved, and the final damages
 22 amount settled, this Court will award Apple prejudgment interest at the 52-week Treasury Bill rate,
 23 compounded annually. The Court declines Apple’s request that the Court calculate and award
 24 prejudgment interest at this time before any appeal is resolved. Mot. at 31. Because both parties
 25 have indicated that they may challenge the legal sufficiency of the jury’s award, it will be more
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efficient to calculate prejudgment interest after appeal, when the final amount of the judgment is known. The Court made this same decision in the first case. *See Apple I* Order at 8.¹⁰

I. Non-infringement of Claim 27 of the '449 Patent

The '449 patent is directed to an "apparatus for recording and reproducing digital image and speech." Samsung asserted claim 27 of the '449 patent against Apple. The jury found that all five accused Apple products infringe the '449 patent, and awarded damages of \$158,400.00 for that infringement. *See* ECF No. 1884 at 11-12. Apple now moves for judgment as a matter of law of non-infringement or, alternatively, a new trial on infringement and damages. Claim 27 depends from claim 25. Both claims recite:

25. A digital camera comprising:

a lens,
an imaging device which converts an optical image into an analog signal;
an A/D converter which converts said analog signal from said imaging device to a digital signal;
a compressor which compresses said digital signal outputted from said A/D converter, and generates compressed data by using a different compressing method for moving image signals and for still image signals;
a recording circuit which records compressed data, said compressed data including a moving image signal, and a still image signal;
a decompressor which decompresses said compressed data by using a different decompressing method according to whether said recorded compressed data is a moving image signal or a still image signal;
a reproducing circuit which reproduces a moving image signal, a sound signal in synchronous to said moving image signal, and a still image signal; and
a display which displays said moving image signals and still image signals outputted from said reproducing circuit, and a list of said moving image signal and still image signal as a search mode, and a list of classifications as a classification mode;
wherein said recording circuit records each one of said plurality of image signals with classification data, and
said display lists a plurality of classifications and a number of images belonging to each classification.

27. A digital camera according to claim 25,
wherein said classification is able to change by a direction of a user.

'449 Patent cls. 25, 27. Apple contends that Samsung's trial evidence failed to demonstrate infringement of at least four limitations of claim 27. Considering each of these limitations in turn,

¹⁰ The Court rejects Samsung's argument that prejudgment interest must be calculated on a final judgment amount that has subtracted \$158,400, which represents Samsung's award for Apple's infringement of Samsung's '449 patent. Opp'n at 30. Samsung cites no law for the proposition that subtraction of the counterclaimant's award is required prior to calculating prejudgment interest on an award relating to infringement of the patentee's patents.

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1 the Court concludes that substantial evidence supports the jury's finding of infringement, and the
 2 verdict is not contrary to the clear weight of the evidence, and accordingly DENIES Apple's
 3 motion.

4 First, Apple contends that the accused iPhone 4S, iPhone 5, and iPod Touch 5th Generation
 5 products lack a "reproducing circuit which reproduces . . . a sound signal in synchronous to said
 6 moving image signal," as claim 27 requires. Apple states that Samsung's expert for the '449 patent,
 7 Kenneth Parulski, identified an "audio circuit" in the accused devices (*see* SDX 3742), but argues
 8 this audio circuit cannot reproduce synchronous audio. Apple points to the testimony of Apple
 9 engineer Tim Millet and allegedly contradictory testimony from another Samsung expert, Dr. Dan
 10 Schonfeld. However, the record contains sufficient evidence to support the jury's determination.
 11 Mr. Millet did testify that Apple's "software team" decided not to use the "audio subsystem"
 12 contained in the three disputed products for audio processing. Tr. at 2699:20-2700:13. However,
 13 Mr. Millet also testified on cross-examination that he was not an expert on Apple's software, *see*
 14 *id.* at 2701:14-16, and the jury was free to assess the credibility of his direct testimony. Samsung's
 15 expert explained how the accused products have reproducing circuits for sound, *see id.* at 2609:22-
 16 2610:14, while Apple's expert, Dr. Jim Storer, did not offer a non-infringement opinion based on
 17 the absence of a "reproducing circuit" despite talking with Apple engineers, *see id.* at 2721:20-
 18 2722:6. Next, contrary to Apple's position, the cited testimony from Samsung's '239 patent expert
 19 did not contradict Samsung's position for the '449 patent: Dr. Schonfeld stated that integrated
 20 circuits require software generally, but said nothing about the '449 patent or a "reproducing
 21 circuit" in the accused devices. *See id.* at 2558:1-4. It is also undisputed that Apple's products can
 22 reproduce audio—a fact that the jury could have confirmed from the representative devices
 23 admitted into the record (JX 38-46A).

24 Second, Apple argues that none of the five accused products contains the claimed
 25 "compressor" or "decompressor." Apple's theory is that these limitations require components that
 26 compress or decompress "*both* still images and videos," and that its products use "*separate and*
 27 *distinct* components to compress/decompress still images and videos." Mot. at 33-34. Apple's
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1 argument is unpersuasive. This Court did not construe the claim terms “compressor” and
2 “decompressor,” and instructed the jury to apply plain and ordinary meaning for terms not
3 construed. *See* ECF No. 1847 at 30. On cross-examination from Apple’s counsel, Mr. Parulski
4 testified that he “identified a single Apple design chip with the circuitry that performs both
5 compressing methods,” even though certain components of the chip originate with different
6 manufacturers. Tr. at 2638:25-2639:6, 2643:5-14 (“That’s one integrated circuit.”). Mr. Millet also
7 told the jury that a system on chip (“SOC”) is “essentially a single integrated circuit that integrates
8 a large number of different components,” and that the Apple A6 chip in the infringing devices
9 contains circuitry for compressors and decompressors. *Id.* at 2688:13-20, 2701:21-2702:8. Apple’s
10 contention that the “SOC contains *dozens* of different components, most unrelated to compression
11 or decompression” (Reply at 20) is misplaced because the presence of additional components does
12 not negate infringement. *See Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997)
13 (in a “comprising” claim, “other elements may be added and still form a construct within the scope
14 of the claim”).

15 Third, Apple challenges the sufficiency of Samsung’s proof that the accused products
16 contain a “recording circuit” that records image signals “with classification data.” Samsung
17 identified the Camera Roll feature in Apple’s products as meeting this limitation. Apple’s non-
18 infringement argument is that the Camera Roll includes all photos and videos taken with the
19 device, so there is no “classification” of those images. *See* Mot. at 35. Apple also argues that the
20 ’449 patent requires recording of “image signals *with* classification data,” such that the
21 classification data must be recorded simultaneously with the images. The Court disagrees that there
22 is inadequate evidence to support the verdict. The parties did not request construction of
23 “classification data,” so its plain and ordinary meaning applies. Mr. Parulski testified that the
24 accused products store information about “which images are in the Camera Roll and the other
25 rolls,” based on his inspection of Apple’s source code and testimony from Apple’s corporate
26 representative. Tr. at 2615:22-2616:9; *see also id.* at 2637:9-16. While Dr. Storer testified that the
27 Camera Roll does not include classification data, *see id.* at 2775:25-2778:24, the jury could have

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1 credited Mr. Parulski's explanation and concluded that the fact that the accused devices can
2 distinguish Camera Roll photos from other photos indicates the presence of classification data.

3 Fourth, Apple contests infringement of the '449 patent limitation requiring a display with "a
4 list of said moving image signal and still image signal as a search mode." According to Apple, the
5 Camera Roll displays an array of thumbnails, which cannot be a "list." Dr. Storer opined that the
6 '449 patent is directed toward avoiding the need to browse through numerous images, which is
7 what a thumbnail array provides, *id.* at 2767:11-20, but Mr. Parulski offered a contrary opinion and
8 explained that Figure 8 of the patent shows a sample search mode with thumbnails, *id.* at 2613:5-
9 2614:10. Thus, a reasonable jury could have rejected Dr. Storer's characterization of the Camera
10 Roll as not having a "list of said moving image signal and still image signal as a search mode."

11 For the foregoing reasons, Apple's motion regarding non-infringement of the '449 patent is
12 DENIED.

13 **J. Non-infringement of Claim 15 of the '239 Patent with Respect to iPad Products**

14 Apple moves for judgment as a matter of law that its iPad products do not infringe claim 15
15 of the '239 patent. Mot. at 36. Apple notes that Samsung accused Apple's iPad products of
16 infringing the '239 patent for two years of litigation; that Samsung included this claim and Apple
17 included its counterclaim for declaratory judgment of non-infringement in the joint pretrial
18 statement, *see* ECF No. 1455-1 at 2-3, 8; and that the Court informed the jury of Samsung's claim
19 of infringement in the preliminary jury instructions, *see* ECF No. 1543. Apple further notes that
20 Samsung told Apple and the Court during the third week of trial that Samsung was no longer
21 accusing the iPad 2, iPad 3, iPad 4, and iPad mini of infringement of claim 15. Mot. at 36 (citing
22 ECF No. 1764-5, letter from Samsung counsel to Apple counsel); ECF No. 1743 (Updated List of
23 Accused Products by Samsung). Samsung did not present any evidence of infringement by Apple's
24 iPad products at trial. The Court grants Apple's motion, as explained below.

25 The Federal Circuit's recent holding in *Alcon Research Ltd. v. Barr Laboratories, Inc.*, 745
26 F.3d 1180 (Fed. Cir. 2014), guides the analysis. There, the plaintiff had asserted two patents in its
27 complaint, but subsequently sent the defendant a letter stating that the plaintiff had decided to

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1 dismiss those claims of infringement, but never formally moved to dismiss those claims. The
2 plaintiff did not assert those claims in the pretrial order, and did not adduce any evidence related to
3 those patents at trial. *Id.* at 1184, 1193. The district court denied the defendant's post-trial motion
4 to amend the judgment under Rule 59(e) in order to enter judgment as a matter of law of non-
5 infringement of those two patents, and the Federal Circuit affirmed. *Id.* at 1186-87. The Federal
6 Circuit held that judgment was not warranted because the patents were not "litigated, or fairly
7 placed in issue, during the trial." *Id.* at 1193 (citation omitted). The Circuit noted that in
8 determining if this standard is met, courts should "assess[] both what the parties expected to try
9 given their statements and conduct and what they actually litigated at trial." *Id.* The Circuit held
10 that the patents were not "litigated, or fairly placed in issue, during the trial" because (1) the
11 plaintiff had informed the defendant of its decision to drop its claims; (2) the claims were omitted
12 from the pretrial order; (3) neither party set forth any arguments or evidence on the merits of
13 infringement of those claims; and (4) the defendant never filed a counterclaim for declaratory
14 judgment of non-infringement. *Id.* The Circuit further noted that "[a] court should not render
15 judgment with respect to claims 'reference[d] in the complaint' but not raised in the pretrial
16 statement or litigated at trial [because] 'a reference in the complaint is not sufficient to support a
17 judgment.'" *Id.* (citation omitted).

18 Here, the Court concludes that the issue of whether Apple's iPad products infringe the '239
19 patent was "litigated, or fairly placed in issue, during the trial." Although Samsung presented no
20 evidence at trial on the issue of infringement as to the iPad products, it is clear that both Apple and
21 Samsung expected to try the issue of infringement as to those products and that these claims were
22 not akin to claims merely "referenced in the complaint," for the following reasons. First, Samsung
23 included its infringement claim as to these products in the pretrial statement, and Apple included its
24 counterclaim for declaratory judgment of non-infringement as to these products in the pretrial
25 statement as well. Second, the jury was explicitly informed of Samsung's claim of infringement as
26 to these products in the preliminary jury instructions, and was informed that Apple "denie[d] that it
27 has infringed the claims asserted by Samsung," ECF No. 1543. Third, Samsung did not withdraw

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1 its claim until the *third* week of trial, albeit before presenting its affirmative case. Samsung's
 2 withdrawal at such a late stage in the proceeding was prejudicial to Apple. Apple was forced to
 3 prepare Apple's defense to Samsung's claim in advance of trial and had to try Apple's case for
 4 three weeks assuming that Apple had to reserve time to rebut Samsung's claim. Finally, Samsung's
 5 dismissal of its claim of infringement did not moot Apple's counterclaim by indicating that
 6 Samsung would not sue Apple for infringement as to those products in the future. Under these
 7 circumstances, the Court finds that the issue of non-infringement was "fairly placed in issue" such
 8 that Apple is entitled to a determination on the issue, unlike in *Alcon* where (1) the parties
 9 explicitly recognized in the pretrial order that the plaintiff had dropped those patents, (2) the jury
 10 never learned of the infringement claim, and (3) the defendant never filed a counterclaim.¹¹

11 This Court notes that in affirming the district court's denial of judgment to the defendant in
 12 *Alcon*, the Federal Circuit emphasized that the defendant had not filed a counterclaim for
 13 declaratory judgment of non-infringement, and noted that such a filing would likely have
 14 compelled a different outcome. *Alcon*, 745 F.3d at 1193 (noting that "if the accused infringer does
 15 not file a counterclaim, then it is up to the patentee to decide what claims are to be litigated and
 16 decided at trial" but "[i]f an accused infringer has filed a counterclaim, then the patentee has notice
 17 that, even if it drops its infringement claims, the issue of infringement remains to be litigated.");
 18 *see also Tol-O-Matic, Inc. v. Proma Produkt-Und Mktg. Gesellschaft m.b.H.*, 945 F.2d 1546,
 19 1554 (Fed. Cir. 1991), *abrogated on other grounds, Markman v. Westview Instruments, Inc.*, 52
 20 F.3d 967 (Fed. Cir. 1995) ("There must be sufficient and explicit notice of the claims at risk" to
 21 grant judgment as a matter of law). Here, Apple's filing of a counterclaim means Samsung had
 22 notice that the issue of infringement was still at issue even after Samsung withdrew its
 23 infringement claims. This is because Apple never withdrew Apple's counterclaim after Samsung

24 ¹¹ The Federal Circuit reached a similar conclusion in an analogous case pre-*Alcon*. *See, e.g., Strub*
 25 *v. Axon Corp.*, 168 F.3d 1321, 1998 WL 537721, at *10-11 (Fed. Cir. Aug. 17, 1998)
 26 (unpublished) (reversing district court's denial of the plaintiff's motion for judgment as a matter of
 27 law of validity because defendant's counterclaim for declaratory judgment of invalidity was part of
 28 the pre-trial order and defendant waited until the close of evidence to withdraw the counterclaim,
 reasoning that "[w]ithdrawal of a clearly presented claim at such a late stage in the proceeding was
 clearly prejudicial to [the plaintiff] which was forced to prepare a defense to this claim in advance
 of trial," and thus plaintiff was entitled to judgment on that claim).

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1 gave Apple notice that Samsung was withdrawing Samsung's claim of infringement as to the iPad
2 products.

3 Finally, Samsung argues Apple somehow waived its argument that Apple's non-
4 infringement counterclaim was still at issue after Samsung withdrew its infringement claim
5 because Apple did not file any response to this Court's order, issued in the middle of trial, that the
6 parties file an update regarding which Apple products were accused of infringing Samsung's
7 patents. Opp'n at 35. This argument fails. The Court's order, *see* ECF No. 1737, never asked Apple
8 to state whether Apple withdrew its non-infringement counterclaim, so there was no reason for
9 Apple to file any such statement.

10 In sum, the Court finds that Apple's counterclaim was fairly placed in issue during the trial.
11 Because Samsung had the burden to show infringement, *Medtronic, Inc. v. Mirowski Family*
12 *Ventures, LLC*, 134 S.Ct. 843, 850–51 (2014), but presented no evidence, the Court GRANTS
13 Apple's motion for judgment as a matter of law that the iPad products do not infringe the '239
14 patent.

15 **K. New Trial on Infringement for '414 and '959; New Trial on Willfulness for all**
16 **Apple Patents Other than '721; New Trial on Damages for all Apple's Patents**

17 Apple seeks a new trial on various bases, and the Court addresses each in turn below.

18 **1. Assertions that Apple Does Not Practice the '172, '414, and '959 Patents**

19 Apple seeks a new trial on infringement for the '414 and '959, a new trial on willfulness for
20 all Apple's patents other than the '721, and a new trial on damages for all of Apple's patents on the
21 basis that Samsung improperly and prejudicially told the jury that Apple does not and has never
22 practiced the '414 patent, '959 patent, and U.S. Patent No. 8,074, 172 ("the '172 patent"). Mot. at
23 37. The Court DENIES Apple's motion.

24 The Court first sets forth the relevant procedural history. This Court's case narrowing order
25 required Apple and Samsung early on in this case to each "limit their asserted claims to 5 per side"
26 at trial. ECF No. 471 at 2. In October 2013, Samsung filed a motion to enforce the Court's case
27 narrowing order, arguing that Apple was attempting to assert eight claims at trial by arguing that
28 Samsung infringed five claims and separately arguing that Apple practiced three extra claims -

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1 Claim 34 of the '959 patent, Claim 27 of the '172 patent, and Claim 11 of the '414 patent
2 (hereinafter "extra claims"). See ECF No. 804-3 at 3. Apple argued in response that the three extra
3 claims for which Apple wanted to present evidence of Apple's practice were not "asserted claims"
4 that should count towards the five claim limit at trial. ECF No. 845 at 2. At the hearing on
5 Samsung's motion to enforce, the Court disagreed with Apple. The Court noted that if Apple
6 wanted to argue at trial that it practiced those extra claims, those claims would count towards
7 Apple's limit of five "asserted claims" and Apple would have to accordingly reduce the number of
8 claims it asserted for infringement. ECF No. 1133 at 158. The Court also gave Apple a choice. The
9 Court stated that if Apple was going to argue at trial that Apple practiced the extra claims to rebut
10 Samsung's argument that Apple does not practice the patents, in the interest of fairness Samsung
11 would be allowed to challenge the validity of the extra claims. *Id.* at 155-59, 170. This was because
12 the Court reasoned it would be unfair for Apple to use the extra claims as a sword for damages
13 purposes by arguing Apple practices those claims, yet prevent Samsung from challenging the
14 validity of those claims. *Id.* In response, Apple elected to withdraw the three extra claims and not
15 present evidence of practice. *Id.* at 170. The Court confirmed this in its order memorializing the
16 hearing. See ECF No. 1057 at 2 ("At the hearing, Apple stated that it would not seek to introduce at
17 trial any evidence of its three unasserted claims, i.e., claim 34 of the '959 patent, claim 27 of the
18 '172 patent, and claim 11 of the '414 patent. Accordingly, the Court denies Samsung's motion to
19 enforce Apple's compliance with the Court's case narrowing order [] as moot.").

20 At the pretrial hearing on the parties' motions in limine, the parties and the Court revisited
21 this issue. The Court again told Apple that if Apple wanted to assert its practice of the extra claims
22 in order to wipe out a potential non-infringing alternative, that in the interest of fairness, the claims
23 would count as one of Apple's five asserted claims and would be subject to an invalidity challenge
24 by Samsung. ECF No. 1411 at 48-50, 54-55, 58 ("If you want to put this claim at issue, you are
25 welcome to do that. It just needs to be one of your five, three of your five if you'd like to use all
26 three. That's just your choice . . . [If you assert the practice of these claims,] it counts as one of
27 your five and it is potentially going to be invalidated . . . I'm not going to let this be litigated
28

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1 behind the door in a sword and shield fashion where they can't challenge validity, but you get to
 2 use it defensively. That's just not going to happen. What's your choice?"). The Court also
 3 explicitly gave Apple the offer to litigate the validity of the unasserted claims before trial. *Id.* at 51
 4 ("Are you prepared [to] litigate the validity? I'm willing to do the validity on these three and we
 5 could potentially invalidate these three unasserted claims before the trial on this and it would be a
 6 non-issue."); *id.* at 54 (Court informing parties that the Court could decide validity before trial if
 7 Apple agreed). Apple rejected the Court's offer and again chose to "stick with [its] original five
 8 [claims]." *Id.* at 58. Accordingly, the Court precluded Apple from contending at trial that Apple
 9 practices the extra claims and held that Apple "may not rebut any Samsung contention that Apple
 10 products constitute an acceptable noninfringing alternative to the '414, '172, or '959 patents[.]"
 11 ECF No. 1398 at 3. The Court noted in its Order that "it gave Apple an opportunity to rebut
 12 Samsung's contention that Apple products constitute acceptable noninfringing alternatives by
 13 contending that Apple practices unasserted claims of the '414, '172, or '959 patents so long as
 14 Apple was willing to litigate the validity of the unasserted claims either before or during the March
 15 31, 2014 trial. Apple declined the Court's offer." *Id.*

16 Before trial, the parties filed a joint motion to supplement Preliminary Jury Instruction No.
 17 20 and filed Proposed Final Jury Instruction No. 18 which would inform the jury that "Apple does
 18 not contend that it practices the '414, '172, or '959 patents" in this action. ECF No. 1418 at 2. The
 19 Court's final preliminary jury instructions accordingly stated that "[i]n this case, Apple does not
 20 contend that it practices the '414, '172, and '959 patents." ECF No. 1542 at 22. The parties also
 21 filed a "joint amended pretrial statement and order" in which the parties stated in the "Undisputed
 22 Facts" section that "Apple's products do not practice claim 25 of the '959 patent, claim 20 of the
 23 '414 patent, or claim 18 of the '172 patent," which are the claims Apple asserted against Samsung
 24 for infringement purposes (hereinafter "asserted claims"). ECF No. 1455-1 at 9.

25 During Samsung's opening statement, Samsung told the jury that Apple does not practice
 26 the '172, '414, and '959 patents and never has. *See* ECF No. 1622 at 357, 359, 386-87, 391, 401,
 27 413-14. Shortly thereafter, Apple filed a motion asking this Court to permit Apple to introduce

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evidence to rebut Samsung's assertions by claiming Apple practices and used to practice the patents, and asking for a curative instruction to minimize the prejudice resulting from Samsung's assertions. ECF No. 1567 at 5-6. The Court denied Apple's motion "for curative action as to whether Apple currently practices the '414, '172, and '959 Patents." ECF No. 1578 at 1. Nonetheless, the Court ordered Apple to file a supplemental brief "as to what timely produced and/or timely disclosed evidence exists in the record as to whether Apple in the past practiced" the three asserted claims. *Id.*

In response, Apple submitted a brief identifying only the following evidence. ECF No. 1581-3. With respect to claim 20 of the '414, Apple submitted a quote from the deposition of Gordon Freedman, the inventor of the '414 patent, in which he noted that an iPhone synchronization prototype included "software that embodied all the ideas in claim 20 of the '414 patent" and that that software was "essentially what was in the shipping product." ECF No. 1581-5 at 216-218. With respect to claim 18 of the '172 patent, Apple submitted a quote from the deposition of Kenneth Kocienda, an inventor of the '172 patent, in which he noted that he did not "think" that the "first original iPhone practice[d] claim 18" but then in response to the question whether "other non-English language keyboards for the iPhone practice claim 18," he responded "I believe that the languages which I listed earlier, Japanese, Chinese, et cetera, do employ this." ECF No. 1581-6 at 128. With respect to claim 25 of the '959, Apple cited to Apple's Response to Interrogatory No. 42 dated June 13, 2013 and Apple's Third Supplemental Response to Interrogatory No. 25 dated June 19, 2013, in which Apple identified source code files with respect to iOS version 6 as implementing the functionality that practices "the asserted claims of the '959" patent. ECF No. 1581-7 at 17-18 and ECF No. 1581-8 at 16. Apple expressly conceded in its supplemental brief that "Apple's experts did not provide opinions that Apple practices or has practiced" the asserted claims. ECF No. 1581-3. The Court subsequently denied, on the record, Apple's motion seeking a curative action regarding whether Apple practiced the patents in the past. ECF No. 1623 at 613.

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1 During Samsung's closing statement, Samsung's counsel suggested to the jury that any
 2 damages award should be reduced because Apple does not practice Apple's asserted patents. *See*
 3 ECF No. 1929 at 3270 (claiming that Apple "seek[s] lots of money for things that Apple itself does
 4 not even use"); *id.* at 3328-29. Samsung also argued Samsung could not have copied the asserted
 5 patents because they have never been used in Apple's products. *Id.* at 3256 ("You can't copy it if
 6 it's not there, if Apple doesn't practice it."); *id.* at 3257-58 ("If it's not in your product, someone
 7 can't copy it. And why would someone come [sic] to your product if you're not practicing those
 8 same patents?"); *id.* at 3265-66 ("By the way, [Apple] wasn't practicing most of these patents, at
 9 this point all of them."); *id.* at 3277 ("[T]he iPhone doesn't practice most of these patents."); *id.* at
 10 3287 ("Well, we've already seen that most of these patents aren't used in the iPhone.").

11 Apple now contends it was manifestly unfair for the Court to allow Samsung to tell the jury
 12 at various points that Apple does not and has never practiced the asserted patents, without giving
 13 Apple a chance to rebut. Apple argues that the prejudicial value of those statements and the fact
 14 that Apple could not rebut them renders a new trial necessary. The Court rejects Apple's argument.

15 Apple argues it was unfair for the Court to allow the jury to "reach a verdict [and calculate
 16 damages] based on false information," which prejudiced Apple. Mot. at 38-40. Yet any argument
 17 by Samsung that Apple does not *currently* practice the *asserted* claims of the '959, '414, and '172
 18 patents was not "false" in light of Apple's multiple admissions pre-trial that Apple does not
 19 practice the asserted claims. *See* ECF No. 1133 at 162-63 (Apple stating at December 2013 hearing
 20 that Apple does not practice the three asserted claims); ECF No. 1455-1 at 9 ("joint amended
 21 pretrial statement and order" in which the parties stated in the "Undisputed Facts" section that
 22 "Apple's products do not practice claim 25 of the '959 patent, claim 20 of the '414 patent, or claim
 23 18 of the '172 patent."); ECF No. 1581-3 at 1 (Apple conceding that "Apple's experts did not
 24 provide opinions that Apple practices" the three asserted claims); ECF No. 1418 at 2 (joint
 25 stipulation pre-trial stating that "Apple does not contend that it practices the '414, '172, or '959
 26 patents").

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1 With respect to Samsung's arguments that Apple *never* practiced the *asserted* claims in the
 2 past, the Court fails to see how Samsung's assertions were "false" given that this Court explicitly
 3 gave Apple the opportunity to present its evidence of past practice of the asserted claims, and
 4 Apple's evidence was weak at best. Moreover, Apple did not obtain any expert opinion that Apple
 5 practiced those claims, as Apple expressly conceded. ECF No. 1581-3 at 1 ("Apple's experts did
 6 not provide opinions that Apple . . . has practiced" the three asserted claims).¹²

7 With respect to any argument by Samsung that Apple does not practice and has never
 8 practiced the three *unasserted* extra claims, the Court is not convinced by Apple's claim that Apple
 9 was prejudiced by not being able to rebut Samsung's arguments. Apple's claim is unavailing
 10 because this Court gave Apple the choice not once, but twice, to rebut by presenting evidence at
 11 trial that Apple practices the extra claims, but Apple declined the Court's offer both times. When
 12 given the choice not to present evidence of Apple's practice of these extra claims, or to do so with
 13 the consequence of opening up those claims to a validity challenge by Samsung and to have those
 14 claims count as one of its five "asserted" claims, Apple itself *chose* not to present such evidence
 15 and to only assert the five other claims Apple originally asserted for infringement purposes.

16 The Court notes that Apple's choice was a strategic decision beneficial to Apple. This is
 17 because Apple chose not to assert claims which were broader and thus more vulnerable to validity
 18 challenges. For example, claim 20 of the '414 patent (asserted claim) depends from claim 11 of the
 19 '414 (unasserted claim). Independent claim 11 requires only one "synchronization software
 20 component," but asserted dependent claim 20 requires at least three distinct software components.
 21 See ECF No. 1151 at 23. Before and during trial, Apple repeatedly relied on the fact that claim 20

22 ¹² Furthermore, the cases Apple cites in support of its proposition that the Court had an "obligation"
 23 to permit Apple to rebut Samsung's statements are inapposite, as one case is a criminal case which
 24 held only that *false* information can open the door to otherwise inadmissible rebuttal evidence, see
 25 e.g., *United States v. Sine*, 493 F.3d 1021, 1037 (9th Cir. 2007), and another, *Dillon, Read & Co. v.*
 26 *United States*, 875 F.2d 293, 300 (Fed. Cir. 1989), stands for the unremarkable proposition that a
 27 trial court should not allow stipulations with respect to facts the court knows are false. Apple's
 28 other cited case for the proposition that a curative instruction is needed when there is "attorney
 misconduct" is also inapposite. See *United States v. Schuler*, 813 F.2d 978, 979-83 (9th Cir. 1987)
 (holding that without a curative instruction, a prosecutor's reference during closing argument to a
 non-testifying defendant's behavior during trial – his alleged laughter when testimony about the
 threats he made was presented to the jury – violated Fed. R. Evid. 404(a), Due Process, and the
 defendant's Fifth Amendment right not to testify, and thus warranted reversal).

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1 requires three software components to rebut Samsung's invalidity arguments based on the
 2 Windows Mobile 5.0 prior art reference. *See* ECF No. 853-4 at 7 (Apple's opposition to Samsung's
 3 motion for summary judgment) ("The 'sync client' does not meet claim 20's requirement for
 4 *multiple* components (let alone multiple data-class specific components) and thus does not
 5 anticipate.") (emphasis in original); Tr. at 2828:25-2829:11, 2847:1-10 (Dr. Snoeren testimony:
 6 "So, again, in claim 20 we need those three different software synchronization components, and
 7 each one of them has to meet all of the limitations from 11."). Thus, Apple would have faced a
 8 greater challenge defending the validity of unasserted claim 11 as opposed to the validity of
 9 asserted claim 20.

10 Similarly, asserted claim 25 of the '959 patent requires searches in a "plurality of locations,
 11 which include the Internet and local storage media." '959 Patent cls. 24, 25. However, claim 34
 12 (unasserted) does not have these limitations. Apple has repeatedly relied upon claim 25's
 13 requirement for a plurality of locations including the Internet to distinguish Samsung's "freeWAIS-
 14 sf" prior art reference. *See* Tr. at 2825:7-2826:1 (Dr. Snoeren testimony); ECF No. 1908-3 at 28-29
 15 (Apple's opposition to Samsung's motion for judgment as a matter of law) (arguing that
 16 freeWAIS-sf "would not have the ability to locate information in a plurality of locations that
 17 includes both the Internet and local storage media"). Accordingly, Apple would have faced a
 18 greater challenge defending the validity of unasserted claim 34 as opposed to the validity of
 19 asserted claim 25.

20 Apple's choice to assert the asserted claims as opposed to the unasserted claims was a
 21 strategic decision beneficial to Apple. The Court finds that Apple cannot now complain that its *own*
 22 decision led to an unfair result or prejudice by "undermin[ing] Apple's infringement, willfulness,
 23 and damages arguments." Mot. at 39.

24 Furthermore, Apple has also not explained why the Court should not have pressed Apple to
 25 make an election between not presenting evidence of Apple's practice of the extra claims, or
 26 presenting such evidence with the consequence of opening up those claims to a validity challenge.
 27 In other words, Apple has not explained why it would be fair for Apple to use the unasserted
 28

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1 claims as both a shield and a sword by arguing at trial that Apple practices the claims in order to
 2 support its damages arguments and wipe out Samsung's non-infringing alternative arguments, but
 3 simultaneously prevent Samsung from challenging the validity of those claims. Absent any
 4 persuasive explanation from Apple, such an election was necessary in the interest of fairness to
 5 Samsung.

6 The Court further rejects Apple's argument that Apple somehow did not *know* that Apple's
 7 choice with respect to the unasserted claims would mean Samsung would be allowed to argue at
 8 trial that Apple does not practice the asserted patents. *See* Reply at 23; Mot. at 39 ("What began as
 9 an order limiting what *Apple* could affirmatively contend at trial on a single issue thus morphed
 10 into a license for *Samsung* to make numerous false and misleading statements[.]") (emphasis in
 11 original). This claim is belied by the fact that at the pretrial conference, when Apple decided once
 12 again to stick with its original five claims, Apple itself acknowledged that its choice not to argue
 13 that Apple practices the extra claims would mean Samsung would be able to argue Apple does not
 14 practice the patents. ECF No. 1411 at 58 ("[I]f you rule that, [Samsung] can argue that Apple
 15 practices no claim in all these patents, and, therefore, that the iPhone is a non-infringing
 16 alternative; if that's your ruling, we will abide by it, and we would like to stick with our five
 17 claims."); *see also id.* at 61 (the Court informed the parties that "Samsung will be able to argue that
 18 the Apple products are non-infringing alternatives" because Apple does not practice the patents).¹³

19
 20
 21 ¹³ The Court further notes that Apple's cited case for the proposition that "false statements"
 22 warrant a new trial is distinguishable. *Wharf v. Burlington N.R.R. Co.*, 60 F.3d 631, 637 (9th Cir.
 23 1995), was a case in which an employee sued his employer for a workplace injury, and the Ninth
 24 Circuit held the district court should have granted a new trial. The defense counsel had allowed the
 25 court to tell the jury the stipulated fact that the plaintiff "still ha[d] his job" with the defendant,
 26 even though defense counsel knew that this "fact" was false because the defendant had already
 27 decided to terminate plaintiff. *Id.* The court found this false information prejudiced the plaintiff
 28 who could have asked the jury to award more damages if he knew he did not actually still have his
 job. *Id.* at 638. Because the lawyer's misconduct prevented the jury from considering the full extent
 of the damages caused by the defendant's negligence, a new trial was warranted. *Id.* In this case,
 unlike in *Wharf*, the Court cannot conclude that the statements by Samsung with respect to practice
 of the unasserted claims were "false," as they went to a *contested* issue that Apple itself chose not
 to address when electing to instead assert its five other claims of infringement.

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1 Given that Apple was given ample opportunities to make its choice, and that its choice was
 2 a strategic decision intended to benefit Apple, this Court finds that Apple's assertion that it could
 3 not present evidence of its practice of the unasserted claims does not suffice to meet Rule 59,
 4 which permits this Court to grant a new trial only in rare situations when it is necessary to "prevent
 5 a miscarriage of justice." Fed. R. Civ. P. 59.

6 Finally, the Court is not convinced by Apple's contention that "adherence to a case
 7 narrowing procedure cannot justify depriving Apple of the right to present the truth about its
 8 property rights." Mot. at 40-41; Reply at 24. In support, Apple claims that *In re Katz Interactive*
 9 *Call Processing Patent Litigation*, 639 F.3d 1303, 1312-13 (Fed. Cir. 2011), "suggest[s] that a case
 10 narrowing procedure could violate the patentee's due process rights where it results in preventing
 11 the patentee from introducing evidence concerning unasserted claims that 'present[] unique issues
 12 as to liability or damages.'" Mot. at 40-41. The Court rejects Apple's suggestion that this Court's
 13 decision to limit Apple to asserting five claims violated Apple's due process rights. In *Katz*, after
 14 selecting the total number of claims the district court would allow the patentee to assert at trial, the
 15 patentee asked the district court to stay the disposition of various extra claims which the patentee
 16 did not select. *In re Katz*, 639 F.3d at 1309-10. The district court denied the patentee's motion
 17 because the patentee failed to demonstrate that these extra claims "presented unique issues as to
 18 liability or damages" so as to justify a stay. *Id.* at 1312. The Federal Circuit affirmed, rejecting the
 19 patentee's due process argument and reasoning that the patentee had not shown that the district
 20 court's claim selection procedure "was inadequate to protect Katz's rights with respect to the
 21 unasserted claims." *Id.* at 1311. The Circuit noted that *if* the patentee had demonstrated that "some
 22 of its unselected claims presented unique issues as to liability or damages" and the district court
 23 had refused to permit the patentee to assert those claims, such a "decision would be subject to
 24 review and reversal." *Id.* at 1312-13. However, the Circuit noted that the patentee had "made no
 25 effort to make such a showing with respect to any of the unselected claims." *Id.* at 1313. Similarly
 26 here, although Apple now claims that "Apple's practice [] was highly relevant and unique
 27 information that the jury would have considered in determining infringement and damages," Reply
 28

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at 24, Apple failed to explain in specific detail before trial how its three extra claims presented any “unique issues as to liability or damages” which would have required this Court to deviate from its decision to limit each party to five claims. The Court acted within its discretion when limiting the parties to five claims each in order to keep this complex case manageable for the jury. *See Joao Control & Monitoring Sys., LLC v. Ford Motor Co.*, No. 13-CV-13615, 2014 WL 106926, at *3 (E.D. Mich. Jan. 10, 2014) (citing Federal Circuit cases “establish[ing] the broad discretion of a district court to ‘limit the scope of trial in a patent case by limiting the number of claims that can be asserted.’”) (citation omitted). To credit Apple’s argument that Apple should have been allowed to essentially assert eight claims because its extra claims were relevant to infringement and damages – while insulating three of these claims from invalidity challenges – would eviscerate that discretion by mandating that courts allow parties to assert all claims potentially relevant to the case. It would also conflict with the *Katz* decision which emphasized, while affirming the district court’s decision, that in “complex cases,” the district court “needs to have broad discretion to administer the proceeding.” *In re Katz*, 639 F.3d at 1313 (citation omitted).

Ultimately, the Court concludes that even crediting Apple’s concerns, the circumstances of this case do not reach the high standard under Rule 59, which permits this Court to grant a new trial only in rare situations where necessary to “prevent a miscarriage of justice.” Fed. R. Civ. P. 59. Accordingly, the Court DENIES Apple’s motion for a new trial on the basis that Samsung made improper statements concerning Apple’s practice of its patents.

2. Reference to the Possibility of a Permanent Injunction

Apple seeks a new trial on infringement for the ’414 and ’959, a new trial on willfulness for all Apple’s patents other than the ’721, and a new trial on damages for all of Apple’s patents in order to correct Samsung’s allegedly prejudicial reference its opening statement that Apple is seeking “to get an order saying that none of these phones can be sold in the United States anymore.” ECF No. 1622 at 358. Mot. at 41. The Court DENIES Apple’s motion.

The procedural history is as follows. The Court initially overruled Apple’s objection to Samsung’s reference in Samsung’s opening slides to how Apple is seeking a permanent injunction

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1 in this case because the reference allegedly suggested Apple was “not entitled to the damages” and
 2 also because “equitable relief is to be decided by the Court.” ECF No. 1517-3 at 7 (motion); ECF
 3 No. 1538 at 1 (ruling); ECF No. 1555 (denying motion for reconsideration). Nonetheless, after
 4 Samsung’s opening statement in which Samsung told the jury Apple is seeking “to get an order
 5 saying that none of these phones can be sold in the United States anymore,” ECF No. 1622 at 358,
 6 the Court prohibited Samsung from making further reference to Apple’s permanent injunction
 7 request on the ground that such references would be irrelevant. *See* ECF No. 1623 at 615. The
 8 Court denied Apple’s request for a curative instruction, *see* ECF Nos. 1567 at 8-9 (motion) & 1578
 9 (order), stating on the record that any such instruction would unnecessarily “highlight the issue.”
 10 ECF No. 1623 at 615. The Court also denied Apple’s request for a final jury instruction, *see* ECF
 11 Nos. 1758 at 120-21 & 1848.

12 The Court denies Apple’s request for a new trial. As an initial matter, there is no rule
 13 holding that as a matter of law, references to the possibility of a permanent injunction must be
 14 excluded in patent trials. Rather, whether to allow such references at trial is a matter within the
 15 court’s discretion subject to balancing under Federal Rule of Evidence 403. *See, e.g., Broadcom*
 16 *Corp. v. Emulex Corp.*, No. 09-CV-01058, ECF No. 770 at 2 (C.D. Cal. Aug. 10, 2011) (granting
 17 motion in limine in patent case to exclude reference to the possibility of permanent injunction relief
 18 under Rule 403 because the defendant “offer[ed] no reasoned basis for being permitted to refer to
 19 injunctive relief.”)¹⁴ Here, this Court’s decision to allow the reference during opening statements
 20 was made after a balancing of the appropriate Rule 403 factors. Although this Court ruled after
 21 opening statements that no further references to the possibility of permanent injunctive relief
 22 should be made, the Court finds that Samsung’s one reference during its opening statement was not
 23 so prejudicial as to warrant a new trial under Rule 59 “to prevent a miscarriage of justice.” *Molski*,
 24 481 F.3d at 729. Apple does not cite, nor has this Court found, any case in which a new patent trial

25
 26
 27 ¹⁴Apple conceded at trial that the question of whether a party may reference a permanent injunction
 28 is a matter “completely in [the Court’s] discretion. It’s a judgment for [the Court] to make.” ECF
 No. 1621 at 255.

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1 was granted on the ground that the jury heard a reference to a permanent injunction request or on
 2 the ground that a curative instruction with respect to that issue was not given.¹⁵

3 Further, under Ninth Circuit case law, granting a motion for a new trial on the basis of
 4 attorney misconduct is only appropriate where the “flavor of misconduct . . . sufficiently permeate
 5 an entire proceeding to provide conviction that the jury was influenced by passion and prejudice in
 6 reaching its verdict.” *Kehr v. Smith Barney, Harris Upham & Co., Inc.*, 736 F.2d 1283, 1286 (9th
 7 Cir. 1984) (citation omitted). While Apple claims that Samsung’s reference during its opening
 8 statement invited the jury to “decide the case based on the potential consequences of the verdict,
 9 not the facts or the law,” Mot. at 42, the Court is not convinced that the jury’s consideration of the
 10 evidence was so tainted or influenced as a result of this one reference as to warrant a new trial.
 11 After Samsung’s opening statement, the jury heard evidence from multiple witnesses over the
 12 course of thirteen days of trial, and there were no further references to Apple’s request for
 13 permanent injunctive relief. Accordingly, the Court DENIES Apple’s motion for a new trial due to
 14 Samsung’s allegedly prejudicial reference in its opening statement to the possibility of permanent
 15 injunctive relief.

16 3. Reference to Federal Circuit Preliminary Injunction Decision

17 Apple seeks a new trial on infringement, willfulness, and damages for the '959 patent to
 18 correct Samsung’s allegedly prejudicial references to the Federal Circuit’s preliminary injunction
 19 decision in this case, *see Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370 (Fed. Cir. 2012). Mot. at
 20 42. In that decision, the Federal Circuit held Apple did not satisfy its burden necessary for a

21
 22 ¹⁵ *Ciena Corp. v. Corvis Corp.*, 352 F. Supp. 2d 526, 529 (D. Del. 2005), which Apple cites, was a
 23 decision on a motion for reconsideration of the district court’s denial of a permanent injunction in a
 24 patent case. There, the court simply cited, without any reasoning, the court’s previous motion in
 25 limine ruling which “required [Defendant] not to refer to the injunctive remedy in the presence of
 26 the jury.” Apple also cites *Computer Associates Int’l, Inc. v. American Fundware, Inc.*, 831 F.
 27 Supp. 1516, 1530 (D. Colo. 1993), which is a breach of contract and trade secret misappropriation
 28 case, not a patent case, that granted a motion in limine excluding reference to the plaintiff’s claim
 for injunctive relief. Neither case held that a new trial must be granted when the possibility of
 injunctive relief is referenced at trial. Finally, *United States v. Schuler*, 813 F.2d 978, 982 (9th Cir.
 1987), is clearly distinguishable, as it is a criminal case where the prosecutor improperly made
 comments about the conduct of a non-testifying defendant, and the Ninth Circuit granted a new
 trial because the failure of the district court to give a curative instruction violated the defendant’s
 Fifth Amendment rights.

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1 preliminary injunction with respect to U.S. Patent No. 8,086,604 ("the '604 patent"), and thus
 2 reversed this Court's decision granting a preliminary injunction on the '604. *Id.* at 1377. The Court
 3 DENIES Apple's motion.

4 Apple claims that the following allegedly prejudicial statement was made by Samsung's
 5 counsel during Samsung's opening statement:

6 "What happened is [Apple] sued on a different search patent. [Apple] sued on the '604
 7 patent, not [the '959], and [Apple] went to court and they got an injunction against
 8 [Samsung] doing this type of search. We didn't think it was right. We didn't agree, but we
 9 complied. And so we – it wasn't hard to do. I mean, we turned that off. We appealed it, and
 the court of appeals reversed and said we were right, Apple was wrong, we're entitled to do
 it, and then dropped that patent."

10 ECF No. 1622 at 402. Apple claims that when making this statement, Samsung incorrectly told the
 11 jury that the Federal Circuit ruled Samsung is entitled to use Apple's universal search feature
 12 claimed in the '959 patent, even though the '959 patent was not at issue in the appeal. Mot. at 42-
 13 43. Apple further claims that Samsung also improperly cross-examined Dr. Velturo, Apple's
 14 damages expert, by asking him to admit that the only reason Samsung removed the Quick Search
 15 Box feature from its products was this Court's preliminary injunction order, and that Samsung
 16 reincorporated that feature into its products only because that decision was ultimately reversed.
 17 Mot. at 43 (citing ECF No. 1715 at 1341-42). In sum, Apple claims that Samsung's statements
 18 prejudiced Apple because they "suggested to the jury that an appeals court sided with Samsung and
 19 against Apple on an issue that was relevant in the current trial, when in fact the Federal Circuit's
 20 decision had no relevance to the issues that were before the jury." Mot. at 43.

21 Apple previously moved for a curative instruction and proposed final jury instructions to
 22 correct Samsung's allegedly prejudicial statement in its opening statement, *see* ECF No. 1567;
 23 ECF No. 1758 at 122, but this Court denied both requests. *See* ECF No. 1578 at 2; ECF No. 1848.
 24 The Court finds no reason to change course and thus denies Apple's request, for two reasons.

25 First, Apple's claim that Samsung incorrectly suggested to the jury that the Federal Circuit
 26 ruled Samsung is entitled to use Apple's universal search feature *claimed in the '959* is meritless in
 27 light of the fact that Samsung's opening statement explicitly told the jury that Apple attained a
 28

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1 preliminary injunction with respect to the '604 patent, not the '959 patent, and that this decision
 2 was reversed by the Federal Circuit. ECF No. 1622 at 402. Samsung never mentioned the '959
 3 patent in connection with the Federal Circuit decision. Samsung even explicitly told the jury at
 4 other times throughout trial that Apple attained a preliminary injunction with respect to the '604
 5 patent. *See* ECF No. 1714 at 1031-33 (Cross of Dr. Snoeren); ECF No. 1715 at 1342 (Cross of Dr.
 6 Vellturo).

7 Second, Apple's claim that the Federal Circuit's decision had no relevance to the current
 8 trial is belied by the fact that Apple itself, when given the choice by this Court, chose to make the
 9 decision relevant. This Court expressly told Apple before trial that if Apple chose to argue that
 10 Samsung removed the Quick Search Box feature and then reincorporated it due to customer
 11 complaints about the feature's absence, Samsung would be allowed to rebut by telling Samsung's
 12 side of the story – *i.e.*, that Samsung removed the Quick Search Box only to comply with this
 13 Court's grant of a preliminary injunction to Apple regarding the '604, and reincorporated the
 14 feature only in response to the Federal Circuit's reversal of that injunction. *See* ECF No. 1621 at
 15 255 (THE COURT: "But if you're going to say, yes, we want to get into the fact that this was
 16 removed and customers complained and it was reincorporated, then I think [the fact that the
 17 injunction was issued and it was reversed by the higher court] comes in. . . . So take your pick.
 18 Which one do you want?"). Apple's counsel elected to make Apple's argument, which opened the
 19 door to rebuttal. *See id.* (APPLE'S COUNSEL: "The first. We're going to put it in."). Thus, when
 20 Apple subsequently told the jury that Samsung removed the Quick Search Box and restored it as a
 21 result of customer complaints, *see* ECF No. 1622 at 322-23; ECF No. 1624 at 996-98, Samsung
 22 permissibly rebutted Apple's allegation by referring to the Federal Circuit's decision. ECF No.
 23 1622 at 402-403; ECF No. 1714 at 1030-33 (cross of Dr. Snoeren). Because Apple *chose* to argue
 24 that Samsung removed the Quick Search Box feature and reincorporated it due to customer
 25 complaints, Apple knowingly opened the door to Samsung's references to the Federal Circuit's
 26 preliminary injunction decision and chose to make the decision relevant. Accordingly, the Court
 27 finds that a new trial is not warranted, and DENIES Apple's motion.

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III. CONCLUSION

For the reasons discussed above, the Court:

(1) DENIES Apple's motion for judgment as a matter of law of infringement of claim 8 of the '721 patent.

(2) DENIES Apple's motion for judgment as a matter of law of infringement of claim 20 of the '414 patent.

(3) DENIES Apple's motion for judgment as a matter of law of infringement of claim 25 of the '959 patent.

(4) DENIES Apple's motion for judgment as a matter of law that Samsung willfully infringed claim 9 of the '647 patent.

(5) DENIES Apple's motion for judgment as a matter of law that Samsung failed to establish its affirmative defenses.

(6) DENIES Apple's request for enhanced damages for the '721 patent and the '647 patent.

(7) GRANTS Apple's request for supplemental damages.

(8) GRANTS Apple's request for prejudgment interest.

(9) DENIES Apple's request for judgment as a matter of law of non-infringement of claim 27 of the '449 and vacatur of the damages award.

(10) GRANTS Apple's request for judgment as a matter of law of non-infringement of claim 15 of the '239 patent with respect to Apple's iPad products.

(11) DENIES Apple's request for a new trial on infringement for the '414 and '959, a new trial on willfulness for all Apple patents other than the '721, and a new trial on damages for all Apple's patents.

IT IS SO ORDERED.

Dated: September 8, 2014



LUCY H. KOH
United States District Judge

United States District Court
For the Northern District of California

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

APPLE, INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
)	
Plaintiff and Counterdefendant,	)	ORDER DENYING SAMSUNG'S
	)	MOTION TO STRIKE PORTIONS OF
v.	)	DR. VELLTURO'S SUPPLEMENTAL
	)	EXPERT REPORT
SAMSUNG ELECTRONICS CO., LTD., a)	
Korean corporation; SAMSUNG	)	[SEALED VERSION]
ELECTRONICS AMERICA, INC., a New York)	
corporation; and SAMSUNG)	
TELECOMMUNICATIONS AMERICA, LLC,)	
a Delaware limited liability company,)	
)	
Defendants and Counterclaimants.)	

Samsung moves to strike portions of Apple's February 17, 2014 Supplemental Expert Report of Christopher A. Vellturo, Ph.D. as untimely under Fed. R. Civ. P. 26 and contrary to this Court's prior rulings regarding off-the-market lost profits. *See* ECF No. 1420-3 ("Mot."). Apple filed an Opposition, and Samsung filed a Reply. *See* ECF Nos. 1438-3 ("Opp'n"), 1445. Having considered the briefing, relevant record, and applicable law, the Court DENIES the Motion for the reasons stated below.

1 **I. BACKGROUND**

2 On February 4, 2014, the parties stipulated to exchange updated sales information for
3 accused products, as well as “supplemental calculations of damages incorporating” that data. ECF
4 Nos. 1235, 1239. On February 17, 2014, the agreed date for exchanging supplemental calculations,
5 Apple served Dr. Velturo’s Supplemental Report addressing Apple’s asserted damages. Samsung
6 seeks to strike two aspects of Dr. Velturo’s Supplemental Report. First, Samsung argues that Dr.
7 Velturo’s new analysis of Apple’s off-the-market lost profits for the ’647 patent contradicts this
8 Court’s ruling on damages in a prior case involving Apple and Samsung, No. 11-CV-1846-LHK.
9 *See* Mot. at 2-5; *see also* Joint Pretrial Statement at 13-14, 22-23 (ECF No. 1336) (noting dispute).
10 Second, Samsung attacks Dr. Velturo’s attempts to rely on certain new deposition testimony and
11 sales information produced after his August 12, 2013 Opening Report. *See* Mot. at 2 n.1. Apple
12 opposes.

13 **II. LEGAL STANDARDS**

14 Samsung moves to strike pursuant to Fed. R. Civ. P. 26, contending that Apple failed to
15 timely disclose Dr. Velturo’s opinions under Rule 26(a)(2). *See* Mot. at 3. As the moving party,
16 Samsung bears the burden of showing a discovery violation has occurred. *See, e.g., Dong Ah Tire*
17 *& Rubber Co. v. Glasforms, Inc.*, No. 06-CV-3359, 2008 WL 4786671, at *2 (N.D. Cal. Oct. 29,
18 2008). Once Samsung satisfies that burden, it becomes Apple’s burden to show that Apple’s
19 failure to comply with Rule 26 was either justified or harmless. *See Yeti by Molly Ltd. v. Deckers*
20 *Outdoor Corp.*, 259 F.3d 1101, 1106-07 (9th Cir. 2001).

21 **III. DISCUSSION**

22 **A. Off-the-Market Lost Profits for the ’647 Patent**

23 On November 7, 2013, in a prior case involving Apple and Samsung, *Apple, Inc. v.*
24 *Samsung Electronics Co., Ltd.*, No. 5:11-CV-1846-LHK (N.D. Cal.) (“*Apple I*”), this Court
25 addressed the parties’ arguments about the proper timing for analyzing Apple’s asserted off-the-
26 market (or “blackout”) lost profits—damages corresponding to times when Samsung was allegedly
27 infringing but should have been unable to sell the accused products until Samsung had built non-
28

1 infringing alternatives. The issue presented was whether potential design-arounds must be
2 considered beginning on the date of first infringement, or on the date when Samsung first received
3 notice of infringement. *See* Order Re: Design Around Start Dates at 1-2, *Apple I* (N.D. Cal. Nov.
4 7, 2013) (“*Apple I* Order”). Under the circumstances that the parties presented in *Apple I*, the
5 Court accepted Samsung’s position and ruled that “one would need to begin the *analysis* at the date
6 of first infringement to avoid arbitrarily ignoring actions the infringer could have taken in lieu of
7 infringing.” *Id.* at 5. That ruling reduced Apple’s damages demand in *Apple I* by \$305 million.
8 *See* Opp’n at 4.

9 Turning to the present case, Samsung used the same arguments about design-around dates
10 to restrict Apple’s damages theories in this second litigation. On October 10, 2013, Samsung filed
11 a *Daubert* motion to exclude Dr. Velturo’s opinions on off-the-market lost profits. *See* Samsung
12 Mot. to Exclude Ops. at 13 (ECF No. 802-3). In his Opening Report on Apple’s damages theories
13 in this case, Dr. Velturo analyzed off-the-market lost profits based on notice dates, not first
14 infringement dates. *See* Opening Expert Rpt. of Christopher A. Velturo, Ph.D. (“Velturo Opening
15 Rpt.”) ¶ 306, Tbl. 4. For four of Apple’s five asserted patents, the date of first infringement
16 preceded the notice date. *See id.* By requiring Dr. Velturo to analyze non-infringing alternatives
17 at the earlier dates of first infringement instead of the later notice dates, Apple’s lost profits
18 recovery would drop by as much as [REDACTED]. Samsung Mot. to Exclude Ops. at 13 (ECF No.
19 802-3). In its *Daubert* motion to exclude Dr. Velturo’s initial opinions about blackout damages,
20 Samsung wielded the same arguments about design-around dates that it asserted in *Apple I*: “Dr.
21 Velturo’s failure to use the date of first infringement for his lost profits calculations is improper.”
22 *Id.* On February 25, 2014, the Court granted Samsung’s *Daubert* motion to preclude Dr. Velturo
23 from using “notice dates rather than first-infringement dates in his lost profits analysis” because
24 “this Court ruled in favor of Samsung on that issue” in *Apple I*. Feb. 25, 2014 Order at 2-3 (ECF
25 No. 1326).

26 On February 17, 2014 (after the *Apple I* Order, and while Samsung’s *Daubert* motion in the
27 instant case was pending), Apple served Dr. Velturo’s Supplemental Report, which now includes
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1 off-the-market lost profits calculations for the '647 patent using the date of first infringement. For
 2 the '647 patent, the current alleged date of first infringement ([REDACTED]) falls *after* the
 3 notice date ([REDACTED]). See Supplemental Expert Rpt. of Christopher A. Velturo, Ph.D.
 4 ("Velturo Supp. Rpt.") ¶ 5; Velturo Opening Rpt. ¶ 306, Tbl. 4. Previously, Dr. Velturo did not
 5 calculate such damages for the '647 patent because the notice date preceded infringement. See
 6 Velturo Opening Rpt. ¶ 309. Now, by analyzing non-infringing alternatives on the first date of
 7 infringement instead of the earlier notice date, Dr. Velturo opines that Apple is entitled to an
 8 additional [REDACTED] in off-the-market lost profits for the '647 patent. See Velturo Supp. Rpt.
 9 ¶¶ 4-6; Mot. at 1.

10 Despite prevailing in the *Apple I* Order and in its *Daubert* motion in the instant case,
 11 Samsung now argues that Dr. Velturo's new off-the-market lost profits calculations for the '647
 12 patent should be stricken—even though they are based on design-around periods beginning on the
 13 first infringement date. According to Samsung, the *Apple I* Order does not require that design-
 14 arounds be analyzed at the date of first infringement if the notice date is earlier. Mot. at 4-5.
 15 However, Samsung maintains that the date of first infringement is still the appropriate date for
 16 Apple's four other patents for which the date of first infringement precedes the notice date. On the
 17 other hand, Apple contends that this Court has already held that design-arounds should be analyzed
 18 as of the first infringement date, and points out that Samsung advocated such a rule but now
 19 contradicts itself to reduce its potential damages exposure for the '647 patent. Opp'n at 2-4.

20 Samsung's arguments are unpersuasive. The Court concludes that Dr. Velturo's
 21 supplemental opinions on blackout damages for the '647 patent are not inconsistent with the *Apple*
 22 *I* Order. In *Apple I*, this Court held that "potential design arounds ought to be considered as of the
 23 date of first infringement," based on the relevant dates and issues presented in that dispute. *Apple I*
 24 Order at 10. The Court applied the underlying reasoning of Federal Circuit precedent in
 25 concluding that "reconstructing the hypothetical market requires one to factor out infringement
 26 entirely," and that it is legally improper to "arbitrarily ignor[e] actions the infringer could have
 27 taken in lieu of infringing." *Id.* at 5. Specifically, in *Grain Processing Corp. v. American Maize-*
 28

United States District Court
For the Northern District of California

1 *Products*, the Federal Circuit addressed lost profits and stated that “a fair and accurate
2 reconstruction of the ‘but for’ market also must take into account, where relevant, alternative
3 actions the infringer foreseeably would have undertaken had he not infringed.” 185 F.3d 1341,
4 1350-51 (Fed. Cir. 1999).

5 However, *Grain Processing* also confirmed that “[t]he critical time period for determining
6 availability of an alternative is the period of infringement for which the patent owner claims
7 damages, i.e., the ‘accounting period.’” *Id.* at 1353 (citation omitted). This is because the lost
8 profits inquiry is based on what the patentee would have earned “had the Infringer not infringed.”
9 *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 507 (1964) (citation omitted); *see*
10 *also Grain Processing*, 185 F.3d at 1349 (“To recover lost profits, the patent owner must show
11 ‘causation in fact,’ establishing that ‘but for’ the infringement, he would have made additional
12 profits.” (citing *King Instruments Corp. v. Perego*, 65 F.3d 941, 952 (Fed. Cir. 1995))).
13 Accordingly, the Federal Circuit has held that the relevant time frame for assessing lost profits
14 (including the absence of non-infringing alternatives) is during the period of infringement, when
15 the infringer made sales that would have otherwise gone to the patentee.

16 Contrary to these principles, Samsung now proposes a rule that would require analysis of
17 potential design-arounds before the infringement period—in this case, on the notice date of [REDACTED]
18 [REDACTED] which precedes the first infringement date of [REDACTED] by over one year. *See*
19 *Vellturo Supp. Rpt.* ¶ 5. Samsung provides no authority that requires assessing design-arounds
20 before infringement even began, when no lost profits could have been available. Indeed, *Grain*
21 *Processing* counsels that “[w]hen an alleged alternative is not on the market *during the accounting*
22 *period*, a trial court may reasonably infer that it was not available as a noninfringing substitute at
23 that time,” and the infringer “then has the burden to overcome this inference by showing that the
24 substitute was *available during the accounting period*.” 185 F.3d at 1353 (emphases added).
25 According to Apple’s allegations, Samsung decided to infringe instead of designing around the
26 ‘647 patent, despite receiving notice more than a year earlier. *See Opp’n* at 4. As a factual matter,
27 Samsung may show that various non-infringing alternatives were developed before Samsung’s first
28

1 infringement date and were available during the relevant accounting period. *See Apple I* Order at
 2 5. However, Samsung provides insufficient justification for holding, as a matter of law, that a
 3 patentee's damages expert must consider non-infringing alternatives at a notice date that precedes
 4 the infringement accounting period.

5 Furthermore, under Samsung's current view, early notice of infringement would make it
 6 easier for an infringer to avoid liability for lost profits because the infringer could choose to
 7 infringe and later assert the availability of design-arounds at the earlier notice date, instead of the
 8 date it first infringed. Also, an infringer could be subject to potentially *greater* lost profits damages
 9 if it received notice *after* infringing, instead of before. Such a rule could create a disincentive for a
 10 patentee to provide early notice or for an accused infringer to pursue early non-infringing
 11 alternatives. Indeed, Samsung previously argued that early notice should be encouraged: "If Apple
 12 were right about the law, the statute intended to encourage early notice would reward *not* giving
 13 early notice." Samsung's Resp. to Apple's Statement Regarding Design Around Dates at 5, *Apple*
 14 *I* (ECF No. 2598). Samsung's current position regarding the '647 patent runs contrary to this
 15 principle.

16 Moreover, as Apple points out, Samsung vigorously argued that design-around periods
 17 must begin with the date of first infringement as a matter of law, but now retreats from that
 18 position to avoid lost profits liability for the '647 patent. *See* Opp'n at 2-4. In *Apple I*, Samsung
 19 insisted that the proper design-around date is the first infringement date, not the notice date. *See*
 20 Samsung's Mot. to Strike at 3-4, *Apple I* (ECF No. 2386) ("When calculating lost profits, courts
 21 look to whether noninfringing design arounds are available *starting on the date of first*
 22 *infringement*—even if it is earlier than the notice date."); Oct. 10, 2013 Tr. of Proceedings at
 23 127:3-8, *Apple I* (ECF No. 2535) ("[F]or lost profits design around starts at the date of first
 24 infringement. It does not happen at the notice date."); Samsung's Resp. to Apple's Statement
 25 Regarding Design Around Dates at 2, *Apple I* (ECF No. 2598) ("Apple's Improper Methodology Is
 26 Contrary to Law"); Samsung's Statement Regarding the Court's Order, *Apple I* (ECF No. 2530).

1 Then, after obtaining a favorable ruling on this issue in *Apple I*, Samsung successfully
 2 moved in this case to exclude Dr. Vellturo's opinions in his Opening Report regarding off-the-
 3 market lost profits based on the notice dates for Apple's patents, without ever addressing a possible
 4 exception for the '647 patent. *See* Samsung's Mot. to Exclude Ops. at 13 (ECF No. 802-4) ("This
 5 is contrary to the law: when calculating lost profits, courts look to whether non-infringing design
 6 arounds are available *starting on the date of first infringement* – even if it is earlier than the notice
 7 date."); Samsung's Reply in Supp. of Mot. to Exclude Ops. at 9 (ECF No. 948-4) ("Apple's efforts
 8 . . . to justify Dr. Vellturo's design-around period for his lost profits calculation are contrary to the
 9 Court's recent ruling in NDCA I that, as a matter of law, the design-around period must commence
 10 on the date of the first infringement, not on the notice date.").

11 Neither party has timely raised this issue to the Court, for Apple did not supplement Dr.
 12 Vellturo's opinions for the '647 patent until February 17, 2014, more than three months after the
 13 *Apple I* Order. However, it is far too late for Samsung to reverse positions regarding design-around
 14 dates. Because Samsung has failed to provide a sufficient legal basis for excluding Dr. Vellturo's
 15 Supplemental Report in light of the *Apple I* Order, Samsung's motion to strike is DENIED with
 16 respect to opinions on off-the-market lost profits for the '647 patent.

17 **B. Reliance on Other Discovery**

18 In a footnote, Samsung also seeks to preclude Dr. Vellturo from relying on (1) new
 19 depositions of Google employees, (2) new data about certain accused Apple products, and (3)
 20 adjustments to reasonable royalty calculations for time periods based on new Samsung product
 21 data. *See* Mot. at 2 n.1. Samsung fails to demonstrate that any of these updates are impermissible.

22 The parties plainly agreed to supplement their experts' damages calculations based on
 23 updated sales information. *See* ECF No. 1235 at 2 ("The parties agree to exchange supplemental
 24 calculations of damages incorporating Updated Financial Data . . ."). Each of Dr. Vellturo's
 25 supplementations to which Samsung objects appears to fall within the scope of the parties'
 26 stipulation. Regarding depositions, Dr. Vellturo identifies two Google depositions that took place
 27 on August 16, 2013, shortly after his Opening Report, and reserves the ability to cite those

1 materials to “reinforce” his original opinions. *See* Vellturo Supp. Rpt. ¶ 28 & nn. 22, 23. Thus,
 2 Dr. Vellturo does not appear to introduce new opinions based on these materials, and the
 3 depositions that took place seven months ago cannot be a surprise to Samsung. As to new data
 4 about Apple products, Dr. Vellturo claims to update market share calculations “using methods
 5 previously disclosed” to account for new numbers, such as “exclud[ing] products for which I
 6 observe no unit sales by the end of 2013.” *Id.* ¶¶ 21-25. Dr. Vellturo also updates his reasonable
 7 royalty conclusions about customers repurchasing smartphones based on Samsung’s newly
 8 produced data. *See id.* ¶¶ 14-15. Samsung offers no explanation for why these updates would be
 9 impermissible uses of new data, particularly given Apple’s representation that these changes
 10 actually *reduce* Apple’s asserted damages. *See* Opp’n at 4 n.3. Accordingly, Samsung’s motion to
 11 strike these modifications to Dr. Vellturo’s Opening Report is DENIED.

12 IV. CONCLUSION

13 For the foregoing reasons, Samsung’s motion to strike portions of Dr. Vellturo’s
 14 Supplemental Report is DENIED.

15 **IT IS SO ORDERED.**

16 Dated: March 28, 2014

Lucy H. Koh

LUCY H. KOH
 United States District Judge

United States District Court
For the Northern District of California

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

APPLE, INC., a California corporation,) Case No.: 12-CV-00630-LHK
)
Plaintiff and Counterdefendant,) ORDER CONSTRUING '239 PATENT
) CLAIM 15
v.)
)
SAMSUNG ELECTRONICS CO., LTD., a)
Korean corporation; SAMSUNG)
ELECTRONICS AMERICA, INC., a New York)
corporation; and SAMSUNG)
TELECOMMUNICATIONS AMERICA, LLC,)
a Delaware limited liability company,)
)
Defendants and Counterclaimants.)
_____)

Samsung has requested that the Court construe an additional limitation in claim 15 of the '239 patent: "means for transmission of said captured video over a cellular frequency." Samsung also requests permission to amend its infringement contentions to include theories for means-plus-function equivalents and the doctrine of equivalents for claim 15. The parties have submitted briefs and expert declarations in support of their respective positions. The Court has reviewed the parties' submissions and, in the interest of resolving any potential dispute prior to trial (*cf. O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362-63 (Fed. Cir. 2008)), now construes the limitation at issue.

I. BACKGROUND

On April 10, 2013, the Court issued its Order Construing Disputed Claim Terms, following a claim construction hearing and full briefing from the parties. ECF No. 447 (“Order”). At the time, Samsung asserted claims 1 and 15 of the ’239 patent. Among the disputed terms, the Court construed certain means-plus-function limitations in claim 1 of the ’239 patent, but the parties did not request construction of any terms in claim 15 of the ’239 patent. *See* Order at 64; Joint Claim Construction Statement at 9-40 (ECF No. 300-1). Since the Court issued its Order, the parties have filed multiple rounds of motions seeking to exclude opposing expert opinions based on the Court’s existing claim construction rulings. *See* ECF Nos. 878-4, 877-4, 1202-3. Those disputes were resolved well before the March 5, 2014 pretrial conference. *See* ECF Nos. 1127, 1301.

On February 4, 2014, the parties filed case-narrowing statements pursuant to the Court’s case management orders, limiting their asserted patent claims to five claims per side. Samsung elected claims 1 and 15 of the ’239 patent among its five claims. *See* Samsung’s Feb. 4, 2014 Case Narrowing Statement at 2 (ECF No. 1236). However, at the March 5, 2014 pretrial conference, Samsung *sua sponte* indicated that it might voluntarily withdraw some asserted claims for trial and would do so by March 7. *See* ECF No. 1411 at 6:14-24.

On March 7, 2014, the parties *sua sponte* filed a stipulation in which Samsung agreed to withdraw several asserted patent claims, including claim 1 of the ’239 patent, leaving claim 15 as the only asserted claim of the ’239 patent. *See* ECF No. 1419. On March 13, 2014, Samsung filed an “administrative motion” for additional claim construction of “means for transmission of said captured video over a cellular frequency” as recited in claim 15, requesting briefing and a hearing prior to trial, which will begin on March 31, 2014. *See* ECF No. 1461. Apple responded by contending that additional claim construction was not necessary in light of the Court’s construction of claim 1, but requesting permission for a summary judgment motion and hearing regarding noninfringement of claim 15 should the Court construe the terms at issue. *See* ECF No. 1465. The parties agree that claim 15 presents a means-plus-function limitation and concur on the claimed function, but disagree about the scope of the corresponding structure. The parties also disagree

about whether Samsung previously waived its ability to assert equivalents (either means-plus-function or under the doctrine of equivalents) for claim 15.

The Court allowed the parties to submit short briefs regarding claim construction and Samsung's ability to amend its infringement contentions, but denied Apple's request for another round of summary judgment briefing on the eve of trial. *See* ECF No. 1470. Samsung filed its brief on March 19, 2014. *See* ECF No. 1484 ("Samsung Br."). Apple filed a response on March 21, 2014. *See* ECF No. 1491 ("Apple Br.").

II. LEGAL STANDARDS

As before, the Court construes patent claims as a matter of law based on the relevant intrinsic and extrinsic evidence. *See Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, No. 2012-1014 (Fed. Cir. Feb. 21, 2014) (en banc); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc); *see also* Order at 2. Claim construction of means-plus-function limitations pursuant to 35 U.S.C. § 112(f) requires identifying the claimed function and the corresponding structure for performing that function in the patent's disclosure. *See Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012); *see also* Order at 47.

"Amendment of the Infringement Contentions or the Invalidity Contentions may be made only by order of the Court upon a timely showing of good cause." Patent L.R. 3-6. This Court's rules have required the parties to give "early notice of their infringement and invalidity contentions, and to proceed with diligence in amending those contentions when new information comes to light in the course of discovery." *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1365-66 (Fed. Cir. 2006). Accordingly, determining whether "good cause" justifies amendment of contentions in a particular situation depends on the amending party's diligence and the degree of prejudice to other parties. *See* Order Re: Samsung's and Apple's Mots. for Leave at 2-4 (ECF No. 636) (collecting cases). "Only if the moving party is able to show diligence may the court consider the prejudice to the non-moving party." *Genentech, Inc. v. Trs. of the Univ. of Pa.*, No. 10-CV-02037, 2011 U.S. Dist. LEXIS 108127, at *4 (N.D. Cal. Sept. 16, 2011).

III. DISCUSSION

A. Claim Construction

The only limitation at issue is “means for transmission of said captured video over a cellular frequency,” recited in ’239 patent claim 15. Both claim 1, which the Court previously construed, and claim 15 are reproduced below for reference.

Claim 1	Claim 15
1. An apparatus for transmission of data, comprising: a mobile remote unit including: a.) means for capturing, digitizing, and compressing at least one composite signal; b.) means for storing said composite signal; c.) means for transmitting said composite signal; a host unit including: a.) means for receiving at least one composite signal transmitted by the remote unit; a playback unit including: a.) means for exchanging data with said host unit; b.) means for storing the composite signal received by the host unit; c.) means for decompressing said composite signal.	15. An apparatus for transmission of data, comprising: a computer including a video capture module to capture and compress video in real time; means for transmission of said captured video over a cellular frequency.

Samsung and Apple agree that the contested phrase (bolded above) is a means-plus-function limitation under § 112(f), and that the claimed function is “transmission of said captured video over a cellular frequency.” *See* Samsung Br. at 1; Apple Br. at 1. However, the parties identify different sets of corresponding structure:

Claim Language	Samsung’s Proposed Construction	Apple’s Proposed Construction
“means for transmission of said captured video over a cellular frequency”	structure: “one or more modems connected to one or more cellular telephones or cellular radio transmitters”	structure: “one or more modems connected to one or more cellular telephones, and software performing a software sequence of initializing one or more communications ports on the remote unit, obtaining the stored data file, and transmitting the stored data file”

Samsung Br. at 1. Both constructions include the structure of “one or more modems connected to one or more cellular telephones,” but otherwise diverge. There are two primary points of disagreement: (1) whether the claimed structure also includes “cellular radio transmitters” (Samsung’s proposal), and (2) whether software of any kind is claimed (Apple’s proposal).

The parties’ prior dispute regarding claim 1 of the ’239 patent provides some context for this claim construction. Previously, the Court construed the similar limitation in claim 1 of “means for transmitting said composite signal” to mean “one or more modems connected to one or more cellular telephones, telephone lines, and/or radio transmitters, and software performing a software sequence of initializing one or more communications ports on the remote unit, obtaining the stored data file, and transmitting the stored data file.” Order at 55-64. Thus, the Court has already determined that certain types of hardware *and* software from the specification correspond to “means for transmitting” a signal. *Id.*

1. “Cellular Radio Transmitters”

Samsung, citing expert opinion, argues that the claimed structure must include “cellular telephones or cellular radio transmitters” because a person of ordinary skill would have understood that a cellular radio transmitter performs the transmission in a cellular telephone. Samsung Br. at 1; Decl. of Prof. Dan Schonfeld (ECF No. 1484-1, “Schonfeld Decl.”) ¶ 3. Samsung also argues that the doctrine of claim differentiation favors its definition. Claim 16 depends from claim 15 and recites “a cellular telephone.”

Claim 15	Claim 16
15. An apparatus for transmission of data, comprising: a computer including a video capture module to capture and compress video in real time; means for transmission of said captured video over a cellular frequency.	16. The apparatus of claim 15 wherein the means for transmission of said captured video over a cellular frequency includes; at least two interfaces operating in conjunction with said computer; a cellular telephone connected to each said interface.

Generally, a dependent claim is construed to be narrower and distinct from its corresponding independent claim. *See InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, 690 F.3d 1318, 1324-25 (Fed. Cir. 2012). According to Samsung, claim 15’s structure cannot be limited to cellular

1 telephones because claim 16 also recites “a cellular telephone,” and claim differentiation requires
2 that the two claims be distinguishable. *See* Samsung Br. at 2.

3 Samsung’s positions are unpersuasive. First, the intrinsic evidence does not support
4 Samsung’s proposal. As Apple points out, the phrase “cellular radio transmitter” appears nowhere
5 in the entire patent. Also, if Samsung is correct that a cellular telephone necessarily comprises a
6 cellular radio transmitter, then Samsung’s proposed language of “cellular telephones or cellular
7 radio transmitters” is superfluous. Therefore, it would be incorrect to read the structure of “cellular
8 radio transmitters” into claim 15, for § 112(f) does not “permit incorporation of structure from the
9 written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v.*
10 *Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

11 Nor do principles of claim differentiation require Samsung’s construction. Claim 16
12 specifies additional limitations not found in claim 15: “at least two interfaces” and “a cellular
13 telephone *connected to each interface*” (emphasis added). These extra limitations differentiate
14 claim 16 from claim 15, and also require that a cellular telephone be connected to each interface,
15 which adds an additional restriction on cellular telephones that does not exist in claim 15.
16 Furthermore, this Court previously observed that “the presence of a dependent claim reciting a
17 structure does not override the requirements of § 112, ¶ 6.” Order at 48 (citing *Laitram Corp. v.*
18 *Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir. 1991)). Here, as explained above, the specification
19 provides no basis for reading “cellular radio transmitters” into the claimed structure.

20 Samsung’s unexplained delay also undermines its arguments. Samsung waited until less
21 than three weeks before trial and more than a year after claim construction briefing and the hearing
22 to take this new position. Indeed, Samsung did not propose “cellular radio transmitters” in its
23 construction of the similar “means for transmitting” limitation in claim 1. *See* Samsung’s Opening
24 Claim Construction Br. at 22 (ECF No. 335); *see generally* Feb. 21, 2013 Tr. of Proceedings (ECF
25 No. 429). Samsung’s late efforts to construe claim 15 appear to be a last-ditch attempt to seek
26 reconsideration of the Court’s construction of claim 1, which Samsung no longer asserts.

27 As to extrinsic evidence, the parties provide only brief expert declarations. These opinions
28 are conclusory and provide little guidance. Samsung’s expert opines that a person of ordinary skill

would know that a cellular radio transmitter “is the actual hardware enabling transmission of information” in a cellular telephone, but provides little support for this position. Schonfeld Decl. ¶ 3. As explained above, even if all cellular telephones have cellular radio transmitters, then Samsung’s proposed construction is superfluous. Apple’s expert repeats portions of the specification, noting for example the absence of “cellular radio transmitter” in the specification. *See* Decl. of James Storer, Ph.D. (ECF No. 1491-2, “Storer Decl.”) ¶¶ 10-11. In short, neither side’s expert provides a dispositive opinion that alters the conclusion supported by the specification that “cellular radio transmitters” is not part of the required structure for transmission of signals.

The parties appear to agree that claim 15’s structure also excludes conventional telephone lines and radio transmitters, which are structures that the Court included in its construction of the similar limitation of “means for transmitting said composite signal” in claim 1. The Court construed that limitation in claim 1 to encompass “one or more modems connected to one or more cellular telephones, telephone lines, and/or radio transmitters.” In doing so, the Court observed that claim 1 does not restrict the type of frequency used for transmitting a signal, and the ’239 patent’s specification also discloses the use of land lines and radio transmissions, in addition to cellular telephones. Order at 57-59; *see also* ’239 Patent col.2 ll.29-31 (“A further object is to provide an apparatus that will transmit audio/video files for immediate broadcast over radio frequencies, cellular telephone frequencies, or land telephone lines.”). By contrast, claim 15 limits “means for transmission” to “over a cellular frequency.” Accordingly, neither party contends that claim 15’s structure comprises conventional telephone lines and radio transmitters.

In light of the foregoing, the hardware structure corresponding to “means for transmission of said captured video over a cellular frequency” is properly construed as **“one or more modems connected to one or more cellular telephones.”**

2. Software as Part of the Corresponding Structure

Samsung argues that claim 15’s structure should not be restricted to software of any kind because software is not necessary for transmission of captured video. Samsung Br. 3. Although the Court construed claim 1’s “means for transmitting” to require software (Order at 64), Samsung

points out that claim 1 includes the terms “remote unit” and “host unit,” and the specification discusses transmission software only in the context of communication between a “remote unit” and “host unit.” *E.g.*, ’239 Patent col.8 ll.23-25 (“Transfer software sequence B enables the remote unit to communicate with the host unit to transmit a stored data file using the system hardware.”). Samsung contends that claim 15 is different because it “does not require transmitting from a remote unit to a host unit,” and therefore does not require software. Samsung Br. 3.

Apple proposes that claim 15 be construed to require “software performing a software sequence of initializing one or more communications ports on the remote unit, obtaining the stored data file, and transmitting the stored data file.” Apple asserts that the ’239 patent states that software is necessary for any transmission, and that the “computer” of claim 15 corresponds to the “remote unit” in the specification, such that the specification’s discussion of transmission software applies equally to claim 15. *See* Apple Br. at 2.

The Court agrees that claim 15’s means-plus-function structure requires software for the same reasons that applied to claim 1. As explained above, the Court previously determined that claim 1’s “means for transmitting” must include software because the specification teaches that a software sequence is necessary for transmitting a signal in the context of the invention. *See* Order at 61-63. Under the preferred embodiment, the ’239 patent discloses that software is required for transmission: “Transfer *software sequence B enables the remote unit* to communicate” and “contains all of the instructions *necessary*” for communication. ’239 Patent col.8 ll.23-30 (emphases added); *see also id.* col.8 l.45 col.10 l.2 (discussing “Transfer Software Sequence B”), col.2 l.24 col.3 l.14 (“Summary of the Invention”; “a computer program sequence . . . sends [data] to one or more computer interfaces which transmit the data file”). Samsung is correct that claim 15 does not recite a “remote unit” or “host unit,” which appear in both claim 1 and the specification. However, Samsung fails to demonstrate that this difference shows that software is unnecessary for “transmission” as recited in claim 15, or that the specification supplies any other structure for performing an alternate type of transmission that does not involve a “remote unit” and “host unit.” Indeed, the term “transmission” implies communication from one unit to another, and the specification explains that software is necessary to enable such communication. *E.g., id.* col.8

11.25-30. Samsung also suggests that “transmitting” (claim 1) and “transmission” (claim 15) require different constructions (ECF No. 1461 at 3), but fails to explain why “transmitting” involves software while “transmission” does not. *See, e.g., AIA Eng’g Ltd. v. Magotteaux Int’l S/A*, 657 F.3d 1264, 1275 (Fed. Cir. 2011) (construing “homogeneous solid solution” and “homogeneous ceramic composite” as “synonymous”).

Samsung next argues in the alternative that, if claim 15’s structure is construed to include software, the software “should be restricted solely to software to perform the claimed function,” which “does not include initializing a communications port or obtaining the stored data file.” Samsung Br. at 4. Accordingly, Samsung proposes the alternative construction of “software that transmits the file.” *Id.* Apple counters that the same software sequence for “initializing” and “obtaining” in claim 1 is also necessary for “transmission” in claim 15. *See* Apple Br. at 1. Apple also argues that claim 15’s software requires a sequence for “obtaining the stored data file” because the “captured video” recited in claim 15 must be a stored data file. *Id.* at 1-3. Apple points out that the ’239 patent applicants relied on creation of a data file to distinguish prior art. *Id.*

The Court agrees in part with Apple. Samsung provides no persuasive reasons why the software sequence that the Court identified for claim 1 is not also required for claim 15. The Court previously explained in detail why the software sequence in claim 1 is necessary, not optional, for transmitting a signal. *See* Order at 61-62 (“[T]he other steps performed by software sequence B initializing communication ports, obtaining the stored data file, and transmitting the stored data file all appear to be necessary for any transmission . . .”). Specifically, the written description lists five software algorithms in “transfer software sequence B”: “[1] initialize the communications ports on the remote, [2] obtain a cellular connection with each cellular telephone to the host unit, [3] obtain the stored data file, [4] initiate file splitting sequence C, and [5] transmit the split data file.” ’239 Patent col.8 ll.25-30. However, not all five algorithms are necessary for transmission the step of “file splitting” need not occur, or may occur prior to transmission. *E.g., id.* col.3 ll.22-23 (“In an alternate embodiment, a basic one, the signal is not divided before it is transmitted.”); *see* Order at 62. Moreover, claim 17 depends from claim 15 and includes “means for splitting the captured video into pieces for transmission,” which further confirms that claim 15 does not require

software for initiating file splitting. By contrast, the steps of initializing the communications ports and obtaining the data for transmission are required for the transmission process. *See id.* at 62-63.

However, as explained above, claim 15 is limited to transmission “over a cellular frequency,” while claim 1 is not. For claim 1, the Court previously concluded that the specification’s algorithm to “obtain a cellular connection with each cellular telephone to the host unit” (’239 Patent col.8 ll.27-28) was not necessary structure because claim 1 encompasses transmitting over telephone lines and radio transmitters, not just cellular telephones:

[T]he transmission may take place using a radio transmitter instead of a traditional phone or cell phone. Thus, the software algorithm of “obtain[ing] a cellular connection with each cellular telephone” relates only to a particular embodiment of the invention using cell phones, and is not necessary for the embodiments using a radio transmitter.

Order at 63. Here, because claim 15 is limited to cellular frequencies, this software algorithm for obtaining a cellular connection would be necessary for transmission “over a cellular frequency.” Therefore, the Court construes claim 15 to include this software algorithm.

The Court further disagrees with Apple’s proposed construction because it includes terms from claim 1 that do not appear in claim 15. Apple proposes “software performing a software sequence of initializing one or more communications ports on the remote unit, obtaining the stored data file, and transmitting the stored data file” (emphases added). However, neither “remote unit” nor “stored data file” (or “storing”) appears in claim 15:

Claim 1	Claim 15
1. An apparatus for transmission of data, comprising: a mobile remote unit including: a.) means for capturing, digitizing, and compressing at least one composite signal; b.) means for storing said composite signal; c.) means for transmitting said composite signal;	15. An apparatus for transmission of data , comprising: a computer including a video capture module to capture and compress video in real time; means for transmission of said captured video over a cellular frequency.

Therefore, claim 15 provides no antecedent basis for either “the remote unit” or “the stored data file.” *See Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 782 (Fed. Cir. 2010) (rejecting claim construction that ignored antecedent basis).

Where claim 1 states that the “means for transmitting” is included in a “mobile remote unit,” claim 15 recites that the “means for transmission” are included in “[a]n apparatus for transmission of data.” Therefore, the “one or more communications ports” in Apple’s proposed construction must refer to ports in the claimed apparatus for transmission.

Claim 1 also includes “means for storing said composite signal,” which does not appear in claim 15. Instead, claim 15 recites a computer with a video capture module “to capture and compress video,” with means for transmission of “said captured video.” Accordingly, the information that is obtained and transmitted in claim 15 must be “said captured video.”

Apple posits that “[t]he disclosed structure for ‘captured video’ is a stored data file.” Apple Br. at 2. Apple’s argument is that the ’239 patent applicants stated during prosecution that their invention requires a stored data file because they distinguished a prior art reference on that basis: “Thus, Gattis does not disclose the creation of a data file as required by Applicants’ claims.” ECF No. 1491-3 (Feb. 2, 1996 amendment, SAMNDCA630-00832606). However, the excerpted prosecution history also shows that the applicants were discussing then-pending claims 1 and 12, and claim 12 specifically recited “a data file.” *Id.* (SAMNDCA630-00832605). There is no indication that the applicants were addressing claim 15 as issued or the term “said captured video.” Accordingly, the Court rejects Apple’s prosecution history argument.

For the reasons above, the Court provides the following construction of the software structure: **“software performing a software sequence of initializing one or more communications ports on said apparatus, obtaining a cellular connection, obtaining said captured video, and transmitting said captured video.”**

B. Amendment of Samsung’s Infringement Contentions for Claim 15

In its motion requesting construction of claim 15, Samsung sought permission to argue infringement under the doctrine of equivalents, if the Court did not adopt Samsung’s proposed construction. *See* Samsung’s Admin. Mot. for Limited Additional Claim Construction at 4 n.1 (ECF No. 1461). In its claim construction brief, Samsung further clarifies that it wants to amend its infringement contentions to assert equivalents under § 112(f) in addition to the doctrine of equivalents. *See* Samsung Br. at 5. Apple responds that Samsung waived its right to amend when

Samsung previously withdrew equivalents contentions for claim 15 and failed to seek additional claim construction until the eve of trial. *See* Apple Br. at 4-5.

Based on the parties' litigation conduct regarding infringement contentions (discussed below), the Court concludes that Samsung had not preserved the right to assert equivalents (for means-plus-function structure or the doctrine of equivalents) prior to its present request for additional claim construction. The parties have repeatedly litigated the proper scope of Samsung's infringement contentions, and Samsung failed to assert its equivalents theories for claim 15 until now, after *sua sponte* dropping claim 1 voluntarily from the case.

After the Court issued its claim construction Order, the parties moved for leave to amend their respective infringement contentions. On June 26, 2013, Judge Grewal granted and denied in part Samsung's request to assert equivalents for the '239 patent. *See* ECF No. 636. Judge Grewal rejected Samsung's general attempt to include the doctrine of equivalents for all asserted patents and § 112(f) equivalents for all means-plus-function limitations not yet construed, finding that Samsung did not have "good cause to add DOE and Section 112(f) equivalents theories" at that time. *Id.* at 5, 8. Samsung concedes that it lost its attempt to assert equivalents for claim 15: "Judge Grewal denied Samsung's amendments for claim 15 because Samsung's request was 'premature.'" Samsung Br. at 5 & n.3. However, Judge Grewal advised: "If and when Samsung faces an adverse construction, it may seek leave to amend in light of that adverse construction." ECF No. 636 at 8.

Meanwhile, Judge Grewal partially granted Samsung's specific request to assert both § 112(f) equivalents and the doctrine of equivalents for the "means for transmitting" limitation in claim 1 of the '239 patent because "the claim construction order provides good cause for the proposed amendments," but did not permit Samsung to include the vague phrase "and/or other processes." *Id.* at 17-18. Samsung specifically identified this limitation and presented arguments as to why it should be allowed to adjust its contentions in response to the Court's claim construction. *Id.*

On November 5, 2013, both parties filed motions to strike certain infringement contentions. ECF Nos. 877-4, 878-4. On December 13, 2013, the parties submitted a joint chart of issues

disputed in their motions to strike, noting that Apple’s motion targeted Samsung’s equivalents arguments for claim 15. ECF No. 1056 at 3, 4. The chart also included the following agreement on equivalents theories in light of Judge Grewal’s June 26, 2013 Order:

Both Apple and Samsung agree to withdraw all doctrine of equivalents and structural equivalents arguments under Section 112(f) in their respective expert reports that are subject of the parties’ pending motions to strike. For clarity, Apple’s motion to strike did not include and this agreement does not extend to the “means for capturing” and “means for transmitting” limitations that were subject to Judge Grewal’s June 26, 2013 order. (Dkt. No. 636.) Subject to the resolution of Apple’s pending Daubert motion, Samsung can argue both doctrine of equivalents and structural equivalents under Section 112(f) for these terms. This agreement does not preclude the parties from seeking leave to amend their infringement contentions to include doctrine of equivalents or structural equivalents arguments under Section 112(f) if the Court construes terms adverse to a party in the future.

Id. at 3 n.4. Therefore, Samsung expressly withdrew all equivalents contentions including those for claim 15 other than the same two specific limitations in claim 1 of the ’239 patent permitted by Judge Grewal’s June 26, 2013 Order.

While the June 26, 2013 Order and the parties’ agreement allowed the parties to seek leave to amend contentions in response to later claim constructions, Samsung has failed to demonstrate that it exercised the necessary diligence to do so. To obtain leave to amend, the moving party must “proceed with diligence in amending those contentions.” *O2 Micro*, 467 F.3d at 1365-66; Patent L.R. 3-6. Here, Samsung has asserted claim 15 since before claim construction (*see* ECF No. 383 at 2-3 (Feb. 18, 2013)), but never requested construction of any terms until March 13, 2014 after rulings on summary judgment, *Daubert*, and in limine motions; almost a year after the claim construction Order; and less than three weeks before trial. Between Judge Grewal’s June 26, 2013 Order and Samsung’s March 13, 2014 motion for additional claim construction, Samsung did not seek claim construction for claim 15 or leave to assert equivalents theories. *See, e.g., Acer, Inc. v. Tech. Props. Ltd.*, No. 5:08-CV-877, 2010 U.S. Dist. LEXIS 142472, at *17 (N.D. Cal. Sept. 10, 2010) (denying leave to amend infringement contentions; “Because TPL has not demonstrated diligence, ‘the inquiry should end.’” (citation omitted)). Nor does Samsung identify any new evidence that would justify this late request. The fact that Samsung *sua sponte* voluntarily withdrew claim 1 of the ’239 patent does not permit Samsung to wholly revisit claim construction and pose new infringement theories.

Furthermore, Samsung's belated tactics would now unfairly prejudice Apple and tax the resources of the Court. Jury selection will begin on Monday, March 31, 2014. Instead of narrowing the issues for trial, Samsung now seeks to expand them by introducing new infringement theories. Samsung contends that Apple faces no prejudice because both parties' experts already opined on equivalents for claim 15. *See* Samsung Br. at 5 n.3. However, Apple responds that it would "need to re-consider its exhibit list, and submit new jury instructions," and that it relied on Samsung's withdrawal of its equivalents contentions for claim 15. Apple Br. at 5 & n.7. Samsung would almost certainly seek to revise its own proposed exhibits and jury instructions in response to any changes that Apple makes. Moreover, the Court has already ruled on summary judgment, *Daubert* motions, and motions in limine. With opening statements only days away, the Court will not entertain new rounds of motions for leave to amend infringement contentions, witness and exhibit lists, and jury instructions based on theories that Samsung could have raised long ago.

For the foregoing reasons, Samsung's request for leave to amend its infringement contentions to include equivalents theories for claim 15 is DENIED.

IV. CONCLUSION

In summary, and for the reasons stated herein, the Court construes the relevant limitation of '239 patent claim 15 as follows:

Patent	Disputed Term	Court's Construction
5,579,239	"means for transmission of said capture video over a cellular frequency"	"one or more modems connected to one or more cellular telephones, and software performing a software sequence of initializing one or more communications ports on said apparatus, obtaining a cellular connection, obtaining said captured video, and transmitting said captured video."

IT IS SO ORDERED.

Dated: March 28, 2014


 LUCY H. KOH
 United States District Judge

United States District Court
For the Northern District of California

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

APPLE, INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
)	
Plaintiff and Counterdefendant,	)	ORDER GRANTING-IN-PART AND
	)	DENYING-IN-PART APPLE'S MOTION
v.	)	FOR PARTIAL SUMMARY
	)	JUDGMENT AND DENYING
SAMSUNG ELECTRONICS CO., LTD., a	)	SAMSUNG'S MOTION FOR PARTIAL
Korean corporation; SAMSUNG	)	SUMMARY JUDGMENT
ELECTRONICS AMERICA, INC., a New York)	
corporation; and SAMSUNG	)	[UNDER SEAL]
TELECOMMUNICATIONS AMERICA, LLC,)	
a Delaware limited liability company,)	
)	
Defendants and Counterclaimants.)	
)	

The parties in this patent suit have cross moved for partial summary judgment on various issues. Plaintiff and Counterdefendant Apple, Inc. ("Apple") filed a motion for partial summary judgment against Defendants and Counterclaimants Samsung Electronics Co., Ltd.; Samsung Electronics America, Inc.; and Samsung Telecommunications America, LLC (collectively "Samsung") on October 10, 2013. *See* ECF No. 803-4 ("Apple MSJ"). Samsung filed a motion for partial summary judgment on the same date. *See* ECF No. 805-3 ("Samsung MSJ"). The parties filed corresponding oppositions on November 1, 2013, *see* ECF Nos. 854-3 ("Samsung Opp'n"), 853-3 ("Apple Opp'n"), and replies on November 14, 2013, *see* ECF Nos. 944-4 ("Apple Reply"),

946-3 (“Samsung Reply”). The Court heard oral arguments on these motions on December 12, 2013. After hearing oral argument on the matter, and reviewing the briefing by the parties, the evidence offered in support of the briefing, and the relevant case law, the Court GRANTS in part and DENIES in part Apple’s motion for summary judgment and DENIES Samsung’s motion for summary judgment.

I. BACKGROUND

At the center of the parties’ dispute in this lawsuit are some of Apple and Samsung’s latest smartphones, media players, tablets, and computers. The Court is also presiding over an earlier-filed case between the same parties that involves older devices. *See, e.g., Apple, Inc. v. Samsung Electronics Co.*, No. 11-CV-01846, 2013 WL 6225202 (Nov. 25, 2013). In the present case, each side’s claims include allegations that the other has infringed its utility patents by using, selling, offering to sell, and importing the accused devices in violation of 35 U.S.C. § 271. Apple moved to preliminarily enjoin Samsung’s allegedly infringing sales of one of the accused products, the Galaxy Nexus. This Court granted Apple’s preliminary injunction motion as to one of Apple’s patents-in-suit, U.S. Patent No. 8,086,604 (the “’604 Patent”), *see Apple, Inc. v. Samsung Electronics Co., Ltd.*, 877 F. Supp. 2d 838 (N.D. Cal. 2012), but the Federal Circuit reversed, in part because this Court erroneously construed a claim term from the ’604 patent, *see Apple Inc. v. Samsung Electronics Co.*, 695 F.3d 1370, 1378 (Fed. Cir. 2012).

In order to streamline the case for trial, the Court has required the parties to limit their infringement contentions to 5 patents, 10 asserted claims, and 15 accused products per side. *See* ECF No. 471 at 2.¹ The parties have accordingly limited their infringement contentions as follows. Apple currently asserts claim 18 of U.S. Patent No. 8,074,172 (the “’172 Patent”); claims 1, 4, 6, 8, and 9 of U.S. Patent No. 5,946,647 (the “’647 Patent”); claim 20 of U.S. Patent No. 7,761,414 (the “’414 Patent”); claims 24 and 25 of U.S. Patent No. 6,847,959 (the “’959 Patent”); and claim 8 of U.S. Patent No. 8,046,721 (the “’721 Patent”) against the following Samsung products: Admire, Conquer 4G, Dart, Exhibit II 4G, Galaxy Nexus, Galaxy Note, Galaxy Note II, Galaxy SII, Galaxy

¹ By February 6, 2014, the parties will be required to limit their asserted claims to 5 per side and limit their accused products to 10 per side. *See* ECF No. 471 at 2.

1 SII Epic 4G Touch, Galaxy SII Skyrocket, Galaxy S III, Galaxy Tab 2 10.1, Illusion, Stratosphere,
 2 and Transform Ultra. *See* ECF No. 786.² Samsung currently asserts claims 10 and 35 of U.S. Patent
 3 No. 7,756,087 (the “’087 Patent”); claim 13 of U.S. Patent No. 7,551,596 (the “’596 Patent”);
 4 claims 1, 14, and 15 of U.S. Patent No. 7,577,757 (the “’757 Patent”); claims 25 and 27 of U.S.
 5 Patent No. 6,226,449 (the “’449 Patent”); and claims 1 and 15 of U.S. Patent No. 5,579,239 (the
 6 “’239 Patent”) against the following Apple products: iPhone 4, iPhone 4S, iPhone 5, iPad 2, iPad 3,
 7 iPad 4, iPad Mini, iPod Touch (5th Generation), iPod Touch (4th Generation), MacBook Air,
 8 MacBook Pro, iMac, Mac Mini, iTunes (including iTunes Match), and iCloud. *See* ECF No. 787.
 9 In a prior order, the Court construed various terms in these claims. *See* ECF No. 447 (“Claim
 10 Construction Order”).

11 In its summary judgment motion, Apple asks this Court to rule that various accused
 12 products infringe claim 18 of the ’172 Patent, claim 1 of the ’647 Patent, and claim 20 of the ’414
 13 Patent; that two purported prior art systems fail to anticipate or render obvious claims 24 and 25 of
 14 the ’959 Patent; and that U.S. Patent No. 7,587,446 (the “’446 Patent”) anticipates claims 1, 14,
 15 and 15 of the ’757 Patent.

16 Samsung’s summary judgment motion seeks an order from this Court that certain accused
 17 products do not infringe claims 1, 4, 6, 8, and 9 of the ’647 Patent; that Microsoft’s Windows
 18 Mobile 5.0 platform anticipates claims 11 and 20 of the ’414 Patent; that claims 24 and 25 of the
 19 ’959 Patent are invalid as indefinite; and that claim 13 of the ’596 Patent enjoys a priority date that
 20 is one year earlier than the date the claim was first presented to the USPTO. Additional facts are
 21 discussed below, as necessary, in the Court’s analysis.

22 II. LEGAL STANDARD

23 The standard for evaluating motions for summary judgment is well settled and set forth
 24 below. In addition, because, “in ruling on a motion for summary judgment, the judge must view the
 25 evidence presented through the prism of the substantive evidentiary burden,” *Anderson v. Liberty*
 26

27 ² Apple maintains that at least some of these products are representative of other accused products
 28 for purposes of Apple’s infringement claims. The parties are still seeking to reach an agreement on
 Apple’s representative-products contentions.

1 *Lobby, Inc.*, 477 U.S. 242, 254 (1986), the Court sets forth the substantive evidentiary burdens for
2 literal infringement and anticipation—issues common to both parties’ motions.

3 **A. Summary Judgment**

4 Under Federal Rule of Civil Procedure 56(a), “[t]he court shall grant summary judgment if
5 the movant shows that there is no genuine dispute as to any material fact and the movant is entitled
6 to judgment as a matter of law.” Material facts are those that might affect the outcome of the case.
7 *See Liberty Lobby*, 477 U.S. at 248. A dispute as to a material fact is “genuine” if the evidence is
8 such that “a reasonable jury could return a verdict for the nonmoving party.” *Id.* The question is
9 “whether a jury could reasonably find either that the [moving party] proved his case by the quality
10 and quantity of evidence required by the governing law or that he did not.” *Id.* at 254 (emphasis
11 omitted). “[A]ll justifiable inferences are to be drawn in [the nonmovant’s] favor.” *United*
12 *Steelworkers of Am. v. Phelps Dodge Corp.*, 865 F.2d 1539, 1542 (9th Cir. 1989) (en banc)
13 (quoting *Liberty Lobby*, 477 U.S. at 255).

14 The moving party bears the initial responsibility for informing the district court of the basis
15 for its motion and identifying those portions of the pleadings, depositions, interrogatory answers,
16 admissions, and affidavits, if any, that it contends demonstrate the absence of a genuine issue of
17 material fact. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). A party opposing a properly
18 supported motion for summary judgment may not rest upon the mere allegations or denials of that
19 party’s pleading, but must “cit[e] to particular parts of materials in the record” showing that there is
20 a genuine issue for trial. Fed. R. Civ. P. 56(c)(1)(A); *see also Liberty Lobby*, 477 U.S. at 250. The
21 opposing party need not show the issue will be resolved conclusively in its favor. *See Liberty*
22 *Lobby*, 477 U.S. at 248-49. All that is necessary is submission of sufficient evidence to create a
23 material factual dispute, thereby requiring a jury or judge to resolve the parties’ differing versions
24 at trial. *See id.*

25 **B. Literal Infringement**

26 A party must prove patent infringement by a preponderance of the evidence. *See Siemens*
27 *Medical Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc.*, 637 F.3d 1269, 1279 (Fed.
28 Cir. 2011). At this stage, the parties’ infringement disputes center on whether certain Samsung

1 products literally infringe certain patents. "Literal infringement requires the patentee to prove that
 2 the accused device contains each limitation of the asserted claim(s)." *Bayer AG v. Elan Pharm.*
 3 *Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000). "If any claim limitation is absent from the
 4 accused device, there is no literal infringement as a matter of law." *Id.*

5 C. Anticipation

6 Patents are presumed valid. *See* 35 U.S.C. § 282(a). A party challenging the validity of a
 7 patent claim bears the burden of proving invalidity by clear and convincing evidence. *See*
 8 *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011). An accused infringer may show
 9 that a patent claim is invalid as anticipated under 35 U.S.C. § 102 and to do so "must show by clear
 10 and convincing evidence that a single prior art reference discloses each and every element of a
 11 claimed invention." *Krippelz v. Ford Motor Co.*, 667 F.3d 1261, 1265 (Fed. Cir. 2012).

12 III. DISCUSSION

13 A. Preliminary Matters

14 Before addressing the merits of the parties' summary judgment arguments, the Court
 15 addresses two threshold issues that arise at various points in the parties' briefs: (1) whether
 16 additional claim construction is necessary and (2) the weight the Court should give to its
 17 conclusions at the preliminary injunction stage.

18 1. Claim Construction

19 Many of the present issues rest on claim construction positions that the parties never raised
 20 during the claim construction phase of this case. For example, Samsung seeks to construe "DDI
 21 field" in the '596 Patent to mean a "logical identifier representing the first PDU." Samsung MSJ at
 22 23. The Court finds these arguments untimely. If the parties wanted to tee up summary judgment
 23 positions based on particular constructions, they "could (and should) have sought . . .
 24 construction[s] to [those] effect[s]." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 520 (Fed.
 25 Cir. 2012).

26 The Court recognizes its duty to resolve fundamental disputes regarding claim scope. *See*
 27 *O2 Micro Int'l v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (citing
 28 *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). The Court

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1 fulfilled that duty when it provided a thorough claim construction opinion earlier in these
 2 proceedings. Yet “district courts are not (and should not be) required to construe *every* limitation
 3 present in a patent’s asserted claims.” *Id.* at 1362 (emphasis in original). Nor are they obligated to
 4 rule on claim construction arguments presented for the first time in summary judgment briefs. *See*
 5 *Function Media, L.L.C. v. Google Inc.*, 708 F.3d 1310, 1325 (Fed. Cir. 2013) (“We hold that the
 6 denial of a pre-trial motion for summary judgment of noninfringement does not, by itself, show
 7 that the district court delegated claim construction to the jury.”). This is not a case like *O2 Micro*,
 8 where the district court erred when it declined to resolve a dispute over claim scope raised during
 9 claim construction. Indeed, *Function Media* distinguished *O2 Micro* in part because “the parties [in
 10 *O2 Micro*] disagreed [about the term in dispute] *during claim construction*.” *Id.* (emphasis added).
 11 Here, the Court resolved the parties’ disputes over claim scope at the claim construction stage.

12 The Federal Circuit has held that it can be error to engage in hypertechnical refinements of
 13 the meaning of claims following claim construction to support a grant of summary judgment. In
 14 *AFG Industries, Inc. v. Cardinal IG Co.*, 375 F.3d 1367 (Fed. Cir. 2004), the court, after previously
 15 construing the term “layer,” held that a district court erred in granting summary judgment of
 16 noninfringement under a supplemental definition of the term that excluded a certain class of
 17 accused devices. “This court’s remand did not invite further refinements in the meaning of the term
 18 ‘layer.’ Rather, this court requested the trial court to apply the established claim construction
 19 to the accused products.” *Id.* at 1372. Similarly, the Court here, based on the parties’ prior selection
 20 of terms in need of construction, has left many of the terms at issue to their plain and ordinary
 21 meaning. For the majority of terms the parties now address in their summary judgment briefs, the
 22 Court does not see the need for further refinement at the risk of taking factual issues away from the
 23 jury.

24 Sound practical reasons counsel against construing additional terms based on claim
 25 construction arguments raised for the first time in summary judgment briefs. The Northern District
 26 of California’s local rules require the parties to narrow the number of disputed terms to 10 as part
 27 of their joint claim construction statement. *See* Patent L.R. 4-3(c). In accordance with those rules,
 28 the parties made their selections at claim construction as to “the terms whose construction will be

1 most significant to the resolution of the case.” *Id.* This requirement forces parties to identify
2 potential case-dispositive terms at an early stage and also forces parties to help manage the scope
3 of patent cases. The Court painstakingly adjudged the parties’ claim construction disputes during
4 the claim construction phase based on their in-depth technology tutorials and voluminous
5 submissions of intrinsic and extrinsic evidence. The local rules and this Court did not set out a
6 particular process for resolving claim construction disputes only to let the parties make additional
7 arguments at the summary judgment phase untethered to those carefully structured rules.

8 Practical considerations specific to this case also counsel against engaging in additional
9 claim construction now. The Court warned the parties at their July 31, 2013 case management
10 conference that, given the fast-approaching Spring 2014 trial date, the Court would not treat the
11 summary judgment phase of this case as a chance for the parties to make additional claim
12 construction arguments. *See* Hr’g Tr. at 22:13-16, 24:22-25:7. The Court has learned through two
13 prior trials with these parties, both in Case No. 11-CV-1846, that, given the chance, each side will
14 continue to generate creative linguistic arguments about nearly every term in a claim in order to
15 accuse the other side of “ignoring the Court’s claim construction rulings” or “adding limitations to
16 the plain language of the claim.” Resolving those disputes has taken on a “whack-a-mole”
17 character, one for which the returns have quickly diminished.

18 All this is not to say that the Court refuses to consider the parties’ summary judgment
19 arguments merely because an apparent dispute has arisen about the scope of a term’s plain and
20 ordinary or construed meaning. The Court does carefully consider these disputes, but does so as
21 “part of the infringement analysis, not part of the claim construction.” *Thorner v. Sony Computer*
22 *Entertainment Am., LLC*, 669 F.3d 1362, 1369 (Fed. Cir. 2012). The Federal Circuit’s decision in
23 *Thorner* is instructive. There, the district court had construed the term “flexible” to mean “capable
24 of being noticeably flexed with ease.” *Id.* On appeal, the Federal Circuit concluded that the district
25 court’s construction was too rigid. The court highlighted, however, that even though the plain and
26 ordinary meaning of “flexible” controlled, that ruling did not preclude summary judgment of
27 noninfringement on remand. “The district court is of course free on summary judgment to decide
28

1 that there is no genuine issue of material fact that the accused products in this case do not meet the
2 plain and ordinary meaning of the term ‘flexible.’” *Id.*

3 With this guidance, the Court will view the parties’ disputes through the lens of whether a
4 reasonable jury, armed with the Court’s claim construction as to certain terms and an instruction
5 that the plain and ordinary meaning controls as to others, could or would necessarily conclude that
6 the asserted claim reads on an accused device (or that a prior art reference reads on an asserted
7 claim). Similar to claim construction, in determining whether an infringement or anticipation
8 argument fits within the plain and ordinary meaning of a term the Court reviews “[t]he written
9 description and other parts of the specification,” as those tools “may shed contextual light on the
10 plain and ordinary meaning.” *Aventis Pharms. Inc. v. Amino Chemicals Ltd.*, 715 F.3d 1363, 1373
11 (Fed. Cir. 2013). But the goal at this stage is not to complete the Sisyphean task of providing
12 definitive guidance as to a term’s plain and ordinary meaning. Instead, the Court must determine
13 whether a jury, “free to rely on the plain and ordinary meaning of the term[s],” *ePlus, Inc.*, 700
14 F.3d at 520, may or must conclude that the accused devices (or prior art references) infringe (or
15 anticipate) the asserted claims.

16 2. The Court’s Preliminary Injunction Ruling

17 The parties dispute whether the Court should here apply various factual conclusions made
18 in the likelihood-of-success portion of the Court’s preliminary injunction ruling. For example,
19 Apple argues that, in ruling on Apple’s motion for summary judgment of infringement of the ’172
20 Patent, the Court should consider that “[t]his Court has already found that Samsung devices with
21 the Google Keyboard likely infringe the ’172 Patent in its preliminary injunction order.” Apple
22 MSJ at 1. This and similar arguments are without merit. The Court’s conclusion that Apple was
23 likely to prevail on certain points “at trial,” 877 F. Supp. 2d at 877, does not entitle Apple, or even
24 suggest Apple is entitled, to a summary judgment victory. “The limited purpose of a preliminary
25 injunction is to preserve the status quo and prevent irreparable injury, not to provide an evidentiary
26 basis for granting summary judgment.” *eMachines, Inc. v. Ready Access Memory, Inc.*, No.
27 EDCV00-00374-VAPEEX, 2001 WL 456404, *4 (C.D. Cal. Mar. 5, 2001) (citing *Univ. of Texas v.*

1 *Camenisch*, 451 U.S. 390, 394 (1981)). To hold otherwise would improperly transform the Court's
2 preliminary injunction ruling into a self-fulfilling prophecy.

3 Since the Court's ruling on Apple's motion for a preliminary injunction, the parties have
4 engaged in extensive fact and expert discovery. Neither the parties nor the Court had the benefit of
5 this discovery at the preliminary injunction phase, and the parties have used that discovery to refine
6 and develop previously presented and additional theories of the case. Accordingly, in reaching its
7 conclusions on summary judgment, the Court focuses on the parties' evidentiary submissions in
8 their summary judgment briefs to determine whether genuine disputes of material fact exist as to
9 the various issues raised by the parties, not on the evidentiary arguments raised during the
10 preliminary injunction phase.

11 **B. Apple's Motion for Summary Judgment of Infringement on the '172 Patent**
12 **(Word Recommendations)**

13 Apple's '172 Patent, entitled "Method, System, and Graphical User Interface for Providing
14 Word Recommendations," was filed on January 5, 2007, and issued on December 6, 2011. The
15 '172 Patent discloses a method, system, and interface for providing word recommendations to
16 users inputting text into a portable communication device and for allowing the user to select the
17 recommended words. *See generally* '172 Patent Abstract. Although not characterized by the parties
18 as such, the features disclosed in the '172 Patent appear to be a form of what is known colloquially
19 as "auto correct."

20 Apple contends that it is entitled to summary judgment that the following devices infringe
21 Claim 18 of the '172 Patent: Admire, Captivate, Glide, Conquer 4G, Exhibit II 4G, Galaxy Nexus,
22 Galaxy Note (excluding one release), Galaxy SII (excluding one release), Galaxy SII Epic 4G
23 Touch (excluding one release), Stratosphere, and Transform Ultra (the "'172 Accused Products").
24 Apple MSJ at 1 n.1. Claim 18 is recited below, with the relevant portion for purposes of Apple's
25 summary judgment motion emphasized:

18. A graphical user interface on a portable electronic device with a keyboard and a touch screen display, comprising:

- a first area of the touch screen display that displays a current character string being input by a user with the keyboard; and
- a second area of the touch screen display separate from the first area that displays the current character string or a portion thereof and a suggested replacement character string for the current character string;

wherein;

- the current character string in the first area is replaced with the suggested replacement character string if the user activates a key on the keyboard associated with a delimiter;
- the current character string in the first area is replaced with the suggested replacement character string if the user performs a gesture on the suggested replacement character string in the second area; and
- the current character string in the first area is kept if the user performs a gesture in the second area on the current character string or the portion thereof displayed in the second area.

As part of its summary judgment motion, Apple includes the infringement analysis of its expert, Professor Andrew Cockburn. Professor Cockburn's analysis provides sufficient evidence to conclude that every '172 Accused Product contains all the elements of claim 18. For example, Professor Cockburn demonstrates that the Galaxy Nexus is a portable electronic device with a keyboard and a touch screen display that includes the following graphical user interface:



Expert Report of Professor Andrew Cockburn ¶ 394 (ECF No. 1087-6) ("Cockburn Report").

Professor Cockburn includes a thorough infringement analysis in his report, demonstrating why in

his opinion the '172 Accused Products all infringe claim 18 of the '172 Patent in the same way. *See id.* ¶¶ 17-22, 376-435, Exs. 2 (ECF No. 1087-7), 3 (ECF No. 1087-8).³

Of this analysis, Samsung disputes only whether the '172 Accused Products include the claimed "keyboard." Although Samsung concedes that all the '172 Accused Products have a virtual keyboard—meaning that the keyboard appears on the display of the device through software running on the device—Samsung contends that the claim requires a physical keyboard, which the '172 Accused Products indisputably lack. *See* Rebuttal Expert Report of Dr. Daniel Wigdor Concerning Non-Infringement of U.S. Patent No. 8,074,172 ¶ 130 (ECF No. 1087) ("Wigdor Rebuttal Report"); Deposition of Daniel Wigdor ("Wigdor Tr."), 107:17-108:14 (ECF No. 1087-1); *see also* Cockburn Report ¶ 386. Neither party sought a construction of the term "keyboard" to address this issue in their claim construction briefs. The Court therefore applies "the full range" of the term's plain and ordinary meaning, "unless compelled to do otherwise." *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). For the following reasons, the Court

³ For example, Professor Cockburn includes the following general description of the '172 Accused Products in his report:

For example, if the user types "messaf" (the current character string) in the Messaging application found on each of these devices, "messaf" appears in the portion of display showing the entirety of the text message the user is composing (the "first area"). All of the accused devices also display the current character string in a suggestion bar, which is located between the first area and the keyboard (the "second area"). The suggestion bar contains both the current character string and suggested replacement words for the current character string. Using our example, if the user typed "messaf", the second area would display "messaf", as well as suggestions for replacements for "messaf", such as "message" or "messages". Next, in every accused device, when the user selects a delimiter, the current character string in the first area is replaced by one of the suggestions in the second area. Continuing the example, if the user selects spacebar after typing "messaf", "message", one of the suggestions displayed in the second area, would replace "messaf" displayed in the first area. Alternatively, if the user instead taps on "message" displayed in the second area, "message" would replace "messaf" in the first area. Finally, in all of the accused devices, if the user taps on "messaf" displayed in the second area, "messaf" is kept in the first area.

Cockburn Report ¶ 19.

1 concludes that no reasonable jury could understand the plain and ordinary meaning of the term
2 “keyboard” as used in claim 18 to exclude virtual keyboards.

3 Other independent claims of the ’172 Patent clearly encompass both virtual and physical
4 keyboards. The scope of “keyboard” in those other claims is crucial to understanding the term’s
5 scope in claim 18. “[A] claim term should be construed consistently with its appearance in other
6 places in the same claim or in other claims of the same patent.” *Rexnord Corp.*, 274 F.3d at 1342.
7 In particular, independent claim 28 recites “[a] portable electronic device, comprising . . . a display
8 . . . [and] a keyboard” (among other things), and claim 29 recites “[t]he portable electronic device
9 of claim 28, wherein the display is a touch screen display, and wherein the keyboard is a virtual
10 keyboard displayed on the touch screen display.” Similarly, independent claim 2 recites, among
11 other things, a “portable electronic device with a touch screen display” and a “keyboard,” and
12 subsequent dependent claims alternatively limit the keyboard of claim 2 to “a soft keyboard that is
13 part of the touch screen display” (claim 6) and “a physical keyboard that is not a part of the touch
14 screen display” (claim 7). Because a dependent claim necessarily sets out a “further limitation” of
15 the subject matter of the independent claim, 35 U.S.C. § 112(d), the scope of the unmodified term
16 “keyboard” in independent claims 2 and 28 is necessarily broad enough to include a virtual or soft
17 keyboard.

18 This broad understanding of the term “keyboard” is fully consistent with the ’172 Patent’s
19 specification. All but one of the disclosed embodiments include a virtual or soft keyboard. *See* 7:6-
20 32, 7:50-65, 8:59-10:59 (discussing “virtual or soft keyboard 210”). The one time the inventors
21 described an embodiment with a physical keyboard, they did so expressly as an “alternative[]” and
22 explicitly stated that “[t]he physical keyboard is not a part of the touch screen display.” ’172 Patent
23 at 7:33-39.⁴ In addition, every figure in the ’172 Patent that shows a portable electronic device
24 includes a virtual keyboard. *See* Figs. 2, 4A-4I, 5A-5B. This evidence leads inescapably to the
25

26
27 ⁴ In full, the ’172 Patent describes this “alternative[]” physical keyboard embodiment as follows:
28 “Alternatively, in some other embodiments, the keyboard may be a physical keyboard that includes
a set of push buttons, a keypad, or the like. The physical keyboard is not a part of the touch screen
display.” 7:33-39.

1 conclusion that claim 18's reference to a "portable electronic device with a keyboard and a touch
2 screen display" naturally includes a virtual keyboard.

3 Samsung acknowledges that the other claims in the '172 Patent cover a virtual keyboard,
4 but contends that the scope of asserted claim 18—which does not have any dependent claims—is
5 different and cannot include a virtual keyboard because of how the term "keyboard" appears in the
6 claim. Samsung emphasizes that the preamble of claim 18 recites "a portable electronic device with
7 a keyboard *and* a touch screen display." Relying on the principle that "[w]here a claim lists
8 elements separately, the clear implication of the claim language is that those elements are distinct
9 component[s] of the patented invention," *Becton, Dickinson & Co. v. Tyco Healthcare Group, LP*,
10 616 F.3d 1249, 1254 (Fed. Cir. 2010) (internal quotation marks omitted), Samsung contends the
11 claim's listing of a keyboard "and" a touch screen display requires the two parts of the portable
12 electronic device to be separate, Samsung Opp'n at 12. The Court concludes that the "distinct
13 component" principle stated in *Becton, Dickinson* is not applicable here and does not alter the plain
14 and ordinary meaning of "keyboard," for two reasons.

15 *First*, applying the "distinct component" principle as Samsung proposes proves too much.
16 Under Samsung's reading, even claims 2 and 28—which also conjunctively list a "keyboard" and a
17 "display"—would exclude a virtual keyboard. As explained above, that reading cannot be squared
18 with dependent claims 6 and 29, both of which require the keyboard from their respective
19 independent claims to be a virtual or soft keyboard that is part of the touch screen display.

20 Although Samsung separately contends that "every claim need not cover every embodiment," and
21 therefore that claim 18 should be read to have a different scope than the other sets of claims in the
22 '172 Patent, the Court concludes that nothing in claim 18 or the rest of the specification suggests a
23 departure from the default reading that counsels "against interpreting a claim term in a way that
24 excludes disclosed embodiments." *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379,
25 1383 (Fed. Cir. 2008).

26 *Second*, the two cases Samsung cites for support did not apply the "distinct components"
27 principle in isolation, but instead relied on additional indications of distinctness in the claims and
28 specification that are missing from this case. In *Becton, Dickinson*, the claims recited a "hinged

1 arm . . . and spring means *connected to* said hinged arm.” 616 F.3d at 1254 (emphasis added). The
 2 Federal Circuit relied on the “connected to” language—as well as the fact that the only
 3 embodiments in the specification had spring means separate from the hinged arm—to construe the
 4 two elements as separate. *Id.* No such “connecting to” language is present in claim 18, and, unlike
 5 in *Becton, Dickinson*, the specification of the ’172 Patent, as described above, overwhelmingly
 6 supports a virtual or soft keyboard.

7 The ’172 Patent’s specification distinguishes this case also from *Gaus v. Conair Corp.*, 363
 8 F.3d 1284 (Fed. Cir. 2004), the other case on which Samsung heavily relies. *See* Samsung Opp’n at
 9 13. In *Gaus*, the claim at issue included the language “an electrical operating unit *and* a pair of
 10 spaced-apart electrically exposed conductive probe networks.” The Federal Circuit construed the
 11 term as a whole to require an electrical operating unit separate from the pair of spaced-apart
 12 electrically exposed conductive probe networks, relying in part on the fact that “the specification
 13 plainly describes the two components as separate” and the “structural separation . . . [was] essential
 14 to the operation of the device in the prescribed manner.” *Id.* at 1288-89. The ’172 Patent, in
 15 contrast, explicitly contemplates combining the keyboard with the touch screen display and
 16 nowhere suggests that separating them is essential to the invention. While the plain and ordinary
 17 meaning of keyboard as used in claim 18 therefore encompasses a physical keyboard separate from
 18 the touch screen display, it is by no means limited to that structure.

19 Accordingly, the Court holds that no reasonable jury could conclude that the virtual
 20 keyboards of the ’172 Accused Products fall outside of the plain and ordinary meaning of the term
 21 “keyboard” in claim 18. Because Samsung does not otherwise dispute Apple’s satisfactory
 22 showing of infringement as to that claim, the Court GRANTS Apple’s motion for summary
 23 judgment that the ’172 Accused Products infringe claim 18 of the ’172 Patent.

24 **C. The ’647 Patent (Links for Structures)**

25 The ’647 Patent, entitled “System and Method for Performing an Action on a Structure in
 26 Computer-Generated Data,” was filed on February 1, 1996, and issued on August 31, 1999. The
 27 ’647 Patent is directed to a computer-based system and method for detecting structures, such as
 28 phone numbers, post-office addresses, or dates, and performing actions on the detected structures.

1 See '647 Patent Abstract, 1:8-16. The '647 Patent sought to overcome certain deficiencies in the
2 prior art that inhibited a user's ability to easily perform different desired actions on information
3 encountered in a given software application. According to the '647 Patent, conventional systems
4 existed to help search a file or document for information using pattern analysis, but upon
5 identifying such information, the user would have to "cut[]" and "past[e]" that information into
6 another field or software application in order to use the information. *Id.* 1:42-50.

7 The '647 Patent discloses a system and method for recognizing when certain patterns—
8 called "structures"—are present in a data set and for automatically providing optional actions for a
9 user to perform that are linked to the structures. *See id.* at 2:21-54. For example, the disclosed
10 system may scan and recognize when phone numbers or email addresses appear in a Microsoft
11 Word document. *See id.* at 1:24-35; *see also id.* at 2:42-53. Then, the disclosed system links actions
12 to these structures and allow the user to select an action. *See id.* at 2:42-53. So when an email
13 address is detected in a Word document, the disclosed system allows the user to select the email
14 address and then choose from a list of options, such as send an email to the identified address or
15 store the email address in an electronic address book. *Id.* at 5:5-18.

16 As described in the claims and the specification, the '647 Patent achieves the described
17 functionality principally through the use of three "program routines": (1) an analyzer server; (2) a
18 user interface; and (3) an action processor. *Id.* claim 1. Client applications described in the '647
19 Patent (e.g., word processors) submit documents to the analyzer server to "detect[]" structures in the
20 data" and "link[]" actions to the detected structures." *Id.* The disclosed analyzer server then returns
21 any detected structures and links to the client application. The user interface "enable[s] the
22 selection of a detected structure and a linked action." *Id.* Finally, the action processor "perform[s]
23 the selected action linked to the selected structure." *Id.* at 7:20-21.

24 The parties' motions implicate claim 1 of the '647 Patent, which is reproduced below with
25 the relevant limitations emphasized:

1. A computer-based system for detecting structures in data and performing actions on detected structures, comprising:
 - an input device for receiving data;
 - an output device for presenting the data;
 - a memory storing information including program routines including
 - an *analyzer server* for detecting structures in the data, and for linking actions to the detected structures;
 - a user interface *enabling the selection of a detected structure* and a linked action; and
 - an action processor for performing the selected action linked to the selected structure; and
 - a processing unit coupled to the input device, the output device, and the memory for controlling the execution of the program routines.

1. Apple's Motion for Summary Judgment of Infringement

Apple contends that it is entitled to summary judgment that the following products each infringe claim 1 of the '647 Patent: Admire, Captivate Glide, Conquer 4G, Dart, Exhibit II 4G, Galaxy Nexus, Galaxy Note, Galaxy Note II, Galaxy Rugby Pro, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, Galaxy S III, Illusion, Stratosphere, and Transform Ultra. Apple MSJ at 4 n. 5. Apple's motion is based on the allegedly undisputed operation of the web browser included with four different versions of the Android operating system: Froyo, Gingerbread, Ice Cream Sandwich, and Jelly Bean. *See* Initial Expert Report of Dr. Todd C. Mowry Regarding Infringement of U.S. Patent No. 5,946,647 ("Mowry Rep.") ¶ 101, nn.12-13 (ECF No. 1108-1); Rebuttal Expert Report of Dr. Kevin Jeffay Concerning Noninfringement of U.S. Patent No. 5,946,647 ("Jeffay Rebuttal Rep.") ¶¶ 154 n.2, 178 n.7 (ECF No. 1074-8). As part of its infringement claim, Apple also accuses the short messaging service software included with these four operating systems, but its summary judgment motion is limited to the web browser.

a. Claim Construction

Apple's arguments in support of summary judgment on the '647 Patent implicates the construction of "analyzer server," a term that was construed by Judge Richard A. Posner in *Apple, Inc. v. Motorola, Inc.*, No. 1:11-cv-08540 (N.D. Ill. March 19, 2012), *appeal pending* No. 12-1548 (Fed. Cir. Oral Arg. Held Sep. 11, 2013) ("Motorola Order"); *see* ECF No. 118-11.⁵ Judge Posner construed "analyzer server" to mean "a server routine separate from a client that receives data

⁵ Judge Posner is sitting by designation in *Apple v. Motorola* from the U.S. Court of Appeals for the Seventh Circuit.

1 having structures from the client.” Motorola Order at 10. In its order granting Apple’s motion for a
2 preliminary injunction, this Court applied Judge Posner’s construction, noting that it did so only for
3 purposes of the preliminary injunction motion because Apple maintained that the Galaxy Nexus
4 infringed even under that construction. *See* 877 F. Supp. 2d at 875.

5 The Court will also apply Judge Posner’s construction of “analyzer server” for purposes of
6 Apple’s summary judgment motion. Although Apple now maintains Judge Posner’s construction is
7 wrong (and has challenged the constructions on appeal in the *Apple v. Motorola* case), its challenge
8 in its summary judgment motion consists of no more than a sentence in the body of its brief and a
9 footnote cite to 16 paragraphs in its infringement expert’s report for the ’647 Patent. *See* Apple
10 MSJ at 5, n.6. Apple’s attempt to argue for a new claim construction at this stage is doubly
11 improper, both because it did not raise its arguments at the claim construction stage and because
12 Apple is trying to sidestep the summary judgment page limitations by incorporating legal
13 arguments in a separate declaration.

14 Apple contends that this Court already rejected Samsung’s “*precise* arguments in claim
15 construction, when Samsung tried to add the ‘separate from a client’ limitation to the ‘analyzer
16 server’ element.” Apple MSJ at 6 (citing Claim Construction Order at 16-18) (emphasis added).
17 Apple is incorrect. This Court was not asked to construe “analyzer server.” Rather, the Court
18 construed only one term from the ’647 Patent, the term “action processor.” Although the Court
19 adopted Apple’s proposed construction for that term over Samsung’s objection, it never addressed
20 the “precise” argument Samsung is raising now.

21 Further, in describing the Court’s claim construction order, Apple’s motion altered the
22 Court’s description of claim 1 so as to suggest that the Court applied its ruling to the analyzer
23 server term. *Compare* Claim Construction Order at 16 (“The claims strongly suggest that an *action*
24 *processor* is not necessarily separate from the application containing the data.”) (emphasis added)
25 *with* Apple MSJ at 6 (“The Court also explained that ‘[t]he claims strongly suggest that [*the*
26 *claimed program routines are*] not necessarily separate from the application containing the data.’”)
27 (Apple’s alterations; emphasis added). Although Apple is correct that claim 1 of the ’647 Patent
28 describes both the action processor and the analyzer server as “program routines,” the Court did not

1 say that its ruling applied to the analyzer server. To the contrary, the Court explicitly noted that
 2 Samsung's arguments related to "action processor" seemed to ignore the difference between the
 3 plain language of a "processor" and a "server." *See* Claim Construction Order at 18. If anything,
 4 that discussion suggests that the Court might have resolved the construction of "analyzer server"
 5 differently if the question had been presented.

6 Apple tries to recover from its dubious characterization of the Court's opinion in its reply
 7 by contending that it was merely trying to "point[] out [that] the Court's *logic*" applies equally to
 8 the analyzer server term. Apple Reply at 4 (emphasis added). But that explanation merely
 9 exemplifies Apple's earlier misstatement. Asking the Court to apply logic from an earlier ruling to
 10 a different controversy is one thing; telling the Court that it already rejected the "precise
 11 argument[]" currently before the Court is quite another. In any matter before the Court—but even
 12 more so in a matter such as this, with nearly 4,000 docket entries across the two *Apple v. Samsung*
 13 cases—parties are expected to describe the Court's prior rulings accurately and forthrightly. Failure
 14 to do so carries consequences. To the extent Apple wants this Court to construe "analyzer server"
 15 using the same arguments Apple raised with respect to "action processor," the Court rejects this
 16 argument as untimely and improperly raised.

17 In any event, Apple contends that it is entitled to summary judgment of infringement even
 18 under Judge Posner's construction of "analyzer server." The Court now addresses that contention
 19 and finds that it, too, is without merit.

20 **b. Analyzer Server**

21 As noted above, claim 1 requires "an analyzer server for detecting structures in data, and
 22 for linking actions to the detected structures," and the Court has now adopted Judge Posner's
 23 construction of an "analyzer server" to be "a server routine *separate from a client that receives*
 24 *data* having structures from a client." Motorola Order at 10 (emphases added).

25 Through its expert Dr. Todd Mowry, Apple contends that a set of shared library subroutines
 26 in the Android operating systems function as the "analyzer server" element of claim 1. Mowry
 27 Rep. ¶¶ 132-143. [REDACTED]

28 [REDACTED] According to

Dr. Mowry, [REDACTED] these shared libraries are
“separate from” the “client” (e.g., the browser application).

Samsung contends that the shared libraries identified by Apple do not meet the “analyzer server” limitation as construed by Judge Posner because they are not “separate from” the browser application and do not “receive[] data having structures from” that application. In support of its position, Samsung has submitted a declaration from its noninfringement expert for the ’647 Patent, Dr. Kevin Jeffay. Dr. Jeffay sets forth a thorough analysis of the shared library routines identified by Dr. Mowry and explains why in his opinion they are part of, rather than “separate from,” the browser applications and therefore are not the required “server.” See Declaration of Dr. Kevin Jeffay In Support of Samsung’s Opposition to Apple’s Motion for Summary Judgment Concerning U.S. Patent No. 5,946,647 (“Jeffay Decl.”) ¶¶ 19-24, 35-39, 60-71, 103-109, 126-132, 176-182 (ECF No. 855-1). Dr. Jeffay also explains that his analysis of the source code leads him to believe that the accused libraries do not “receive data from a client” as required by Judge Posner’s construction. *Id.* ¶¶ 100-101, 112-113, 120, 135-136, 173-147, 185-186.

This disagreement between the parties’ experts constitutes a genuine dispute as to the application of Judge Posner’s claim construction of “analyzer server” to the accused products, one that this Court cannot resolve at summary judgment. Accordingly, Apple has failed to show that it is entitled to summary judgment of infringement, and its motion as to the ’647 Patent is DENIED.

2. Samsung’s Motion for Non-Infringement of Jelly Bean Operating System

Samsung contends that it is entitled to summary judgment that the operation of the Browser on the accused products running the Jelly Bean operating system does not infringe the asserted claims of the ’647 Patent.

The Jelly Bean operating system, which Samsung introduced in the summer of 2012 after Apple’s preliminary injunction motion was fully briefed, is the newest operating system at issue in this case. The parties agree that the Jelly Bean Browser operates differently than the browser on the other accused Android operating systems. [REDACTED]

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1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 Samsung contends that Apple's concession that the Jelly Bean Browser detects structures
6 only after a user touches an area on a screen entitles Samsung to summary judgment of
7 noninfringement. The parties agree that the plain and ordinary meaning of the claim limitation "a
8 user interface enabling the selection of a *detected* structure" requires "the user interface to enable
9 selection of a structure, by the user, *after* the structure has already been detected," Reply
10 Declaration of Dr. Todd C. Mowry Concerning U.S. Patent No. 5,946,647 at ¶ 217 (ECF No. 805-
11 14) (emphasis in original). According to Samsung, [REDACTED]
12 [REDACTED] the Accused Jelly Bean Browser Products do not infringe claim 1 of the '647
13 Patent or any of its dependents because they do not provide a 'user interface enabling the selection
14 of a *detected* structure and a linked action.'" Samsung MSJ at 3 (emphases in original).

15 Apple disagrees with Samsung's analysis. As Apple's expert explains, [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED] Mowry Rep. ¶ 251 (alteration added).
19 According to Apple, [REDACTED]
20 [REDACTED], the user makes another "selection" through a long press, [REDACTED]
21 [REDACTED] See Mowry Rep.
22 ¶¶ 250-51. Apple analogizes the long-press to a double tap, where the first tap triggers the detection
23 of a structure and the second tap allows the user to select the detected structure and launch the
24 menu of linked actions. Apple Opp. at 5. The second touch, Apple continues, "would indisputably
25 be a 'selection of a detected structure,'" and the long-press is no different.

26 The Court is satisfied that Apple's "long-press" argument establishes a genuinely disputed
27 issue of material fact for the jury. In light of the evidence Apple has presented—namely, its
28 expert's description of the long-press functionality and analysis of the source code for that

1 functionality, *see* Mowry Rep. ¶¶ 157-58, 250-51—a jury could conclude that the Jelly Bean
 2 Browser has the claimed “user interface enabling the selection of a detected structure.” Samsung
 3 contends that Apple’s “dual selection” theory is faulty because Apple fails to identify at what point
 4 during the long press the second selection occurs. Samsung Reply at 2. Whether this and other
 5 criticisms are sufficient to dispel Apple’s long-press theory is a question for the jury, not this
 6 Court, to decide. Accordingly, the Court DENIES Samsung’s motion for summary judgment as to
 7 the ’647 Patent.

8 **D. The ’414 Patent (Synchronization)**

9 The ’414 Patent, entitled “Asynchronous Data Synchronization Amongst Devices,” was
 10 filed on January 7, 2007 and issued on July 20, 2010. The ’414 Patent discloses “[s]ystems [and]
 11 methods . . . for synchronization tasks and non-synchronization tasks [to] be[] executed
 12 concurrently.” ’414 Patent Abstract. The system allows, for example, “a user [to] manipulate or
 13 view a calendar while a synchronization operation, which synchronizes structured data from, for
 14 example, the calendar or other databases such as a contact database, is being performed.” *Id.* at
 15 2:37-40. In this way, the ’414 Patent teaches a system that allows data on two devices, such as a
 16 handheld computer connected to a desktop computer, to be synchronized while allowing user
 17 applications “to run concurrently with the synchronization process.” *Id.* at 1:65; *see id.* at 24:42-68.
 18 The patent explains that “non-synchronization” software, such as a calendar application, and
 19 “synchronization” software run concurrently in different “threads or processes” on one or both of
 20 the devices. *Id.* at 25:1-5.

21 Claim 20 of the ’414 Patent is at issue. Claim 20 depends from claim 11, which reads as
 22 follows (emphasis added):

23 11. A computer readable storage medium containing executable program
 24 instructions which when executed cause a data processing system to perform a
 method comprising:

25 executing at least one user-level non-synchronization processing thread,
 26 wherein the at least one user-level nonsynchronization processing
 thread is provided by a user application which provides a user
 27 interface to allow a user to access and edit structured data in a first
 store associated with a first database; and

executing at least one synchronization processing thread concurrently with the executing of the at least one user-level non-synchronization processing thread, *wherein the at least one synchronization processing thread is provided by a synchronization software component* which is configured to synchronize the structured data from the first database with the structured data from a second database.

Asserted claim 20 requires (with emphasis)

20. The storage medium as in claim 11 wherein *the synchronization software component is configured to synchronize structured data of a first data class and other synchronization software components are configured to synchronize structured data of other corresponding data classes.*

1. Apple's Motion for Summary Judgment of Infringement

Apple claims it is entitled to summary judgment that the following products infringe claim 20 of the '414 Patent: the Samsung Admire, Conquer 4G, Dart, Exhibit II 4G, Galaxy Nexus, Galaxy Note, Galaxy Note II, Galaxy SII, Galaxy SII Epic 4G Touch, Galaxy SII Skyrocket, Galaxy S III, Galaxy Tab 2 10.1, Illusion, Stratosphere, and Transform Ultra. Apple MSJ at 10 n.7; *see* Expert Report of Dr. Alex C. Snoeren Concerning U.S. Patent Nos. 6,847,959 and 7,761,414 ("Snoeren Rep.") at ¶ 409 n.86 (ECF No. 1099-3).

The parties disagree as to whether any of these accused products are representative for purposes of the '414 Patent. *See* Declaration of Jeffrey S. Chase, Ph.D., in Support of Samsung's Opposition to Apple's Motion for Summary Judgment ("Chase Opp'n Decl.") at ¶ 18 (ECF No. 1069-1). This disagreement, if genuine, creates a first problem for Apple's summary judgment motion, because Apple would need to show the absence of a genuinely disputed issue of material fact for each product in order to prevail fully on Apple's motion. But the Court does not need to address whether Apple has established a representative product, because even for the product that Apple claims is representative (the Galaxy S III), the Court concludes that a genuine dispute as to infringement precludes summary judgment.

As set out above, claim 20 requires that "the synchronization software component [of claim 11] is configured to synchronize structured data of a first data class and other synchronization software components are configured to synchronize structured data of other corresponding data classes." The parties appear to agree that, based on its plain language, claim 20 requires at least

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three “synchronization software components.” *See* Chase Opp’n Decl. at ¶ 105; Apple Reply at 6. The first is the claimed synchronization software component “configured to synchronize structured data of a first data class” and the other two are the “other synchronization software components” configured “to synchronize structured data of other corresponding data classes.”

Apple targets six so-called “Sync Adapters” in the Galaxy S III as the claimed synchronization software components, each of which Apple claims is configured to synchronize structured data corresponding to a particular data class: Google Calendar, Google Contacts, Gmail, Exchange Mail, Exchange Calendar, and Exchange Contacts. *See* Snoren Rep. at ¶ 471. Samsung, however, contends through its expert Dr. Chase that four of the six accused Sync Adapters—the Gmail Sync Adapter, Exchange Contacts Sync Adapter, Exchange Calendar Sync Adapter, and Exchange Mail Sync Adapter—perform no synchronization operations at all, and are therefore not “configured to synchronize structured data,” as claim 20 requires. *See* Chase Opp’n Decl. at ¶¶ 76-103, 106. According to Samsung, the four erroneously accused Sync Adapters merely

Id. at ¶¶ 24-53, 82-103. Accordingly, Samsung’s argument concludes, Apple can establish only that the accused products have at most two, not three, “synchronization software components.”

The parties did not seek a construction of “configured to synchronize structured data,” and therefore the plain and ordinary meaning applies. Apple contends that a reasonable jury would necessarily conclude that a synchronization software component is “configured to synchronize structured data” even if it merely “direct[s] other parts of the software” to synchronize structured data. Apple Reply at 6 (emphasis omitted).

Apple has pointed to nothing that would require a jury to read the plain and ordinary meaning of the claim so broadly. In support of its position, Apple highlights only a preferred embodiment in the ’414 Patent that includes a “Sync Agent,” which, Apple argues, does not itself perform synchronization operations on structured data. But even the Sync Agent on which Apple relies “determin[es] the order of synchronization of the various data classes.” ’414 Patent at 11:60-12:10. Apple does not contend that the accused Sync Adapters in the Galaxy S III perform that

function. Therefore, a jury finding of noninfringement would not, as Apple contends, amount to an exclusion of a preferred embodiment. Based on the summary judgment record, a jury could reasonably conclude that the accused Sync Adapters merely direct other components to perform synchronization operations and are not themselves “configured to synchronize structured data” as required by the claim. Apple’s motion for summary judgment of infringement as to the ’414 Patent is therefore DENIED.

2. Samsung’s Motion for Summary Judgment of Anticipation

Samsung asserts that a platform called Windows Mobile 5.0, developed by Microsoft and on sale no later than October 2005, mandates summary judgment that claim 20 of the ’414 patent is invalid as anticipated under either 35 U.S.C. § 102(b) or (g)(2) (2006).⁶ Microsoft’s mobile platform allowed Windows-based handheld devices to synchronize certain data—such as e-mail, contacts, and calendar information—with a Microsoft Exchange Server. *See* Fazio Decl. Ex. 22 (ECF No. 809-1); Rebuttal Expert Report of Dr. Alex C. Snoren Concerning U.S. Patent Nos. 6,847,959 and 7,761,414 (“Snoren Reb. Rep.”) ¶¶ 540-543 (ECF No. 1073-9).

According to Samsung, Windows Mobile 5.0 includes multiple synchronization software components configured to synchronize structured data of a different class, [REDACTED]. *See* Declaration of Jeffrey S. Chase, Ph.D., in Support of Samsung’s Motion for Summary Judgment (“Chase SJ Decl.”) at ¶¶ 106-107 (ECF No. 1066-12).⁷ Apple acknowledges the presence of these components in Windows Mobile 5.0, but contends that Samsung cannot establish that any “provid[e]” a synchronization processing thread, as required by independent claim 11 of the ’414 Patent. *See* ’414 Patent, claim 11 (“at least one synchronization processing thread *is provided by* a synchronization software component.”) (emphasis added).⁸ Apple highlights that its expert for the

⁶ Samsung’s summary judgment motion also challenges the validity of claim 11 of the ’414 Patent. At the summary judgment hearing, however, Apple agreed to withdraw its reliance on claim 11 for any purpose. *See* ECF No. 1057 at 2. The Court therefore DENIES without prejudice Samsung’s motion for summary judgment as to claim 11 of the ’414 Patent.

⁷ Apple initially challenged the timeliness of Samsung’s reliance on these discrete components of Windows Mobile 5.0, *see* Apple Opp’n at 8-10, but subsequently dropped this timeliness objection, *see* ECF No. 1056, Exhibit A at 1.

⁸ The parties agree that a “thread” is “a series of steps that a computer process needs to complete.” *See* ECF No. 333 at 19; Samsung’s Reply at 7; *see also* ECF No. 333 at 19, n.6 (noting that the

'414 Patent, Dr. Alex Snoren, testified at deposition that his understanding of "providing a thread" is to "cause[] the generation of the thread," ECF No. 1082-6 at 300, yet Samsung's expert conceded that the synchronization components in Windows Mobile 5.0 do not "'create[] or instantiate[] a thread,'" Apple's Opp. at 11 (quoting deposition of Jeffrey Chase at 239 (ECF No. 1073-11)).

Whether any of the Windows Mobile 5.0 synchronization components identified by Samsung provide the claimed synchronization processing thread as required by claim 20 (as per claim 11) is a question of fact for the jury. Samsung contends that those components necessarily "provid[e]" a synchronization processing thread because they indisputably [REDACTED] Samsung MSJ at 15 (citing Chase SJ Decl. ¶¶ 85-91, 97-98), and [REDACTED] Samsung Reply at 7 (citing Chase Decl. ¶¶ 97-98). Once again, the parties did not seek a construction of the term at issue, leaving the jury to apply the plain and ordinary meaning of that term to the accused devices. Samsung has not established that a reasonable jury would necessarily find that a synchronization software component that [REDACTED] discloses the claim limitation that the component "provide[]" the thread itself. Accordingly, Samsung's motion for summary judgment of invalidity of claim 20 of the '414 Patent is DENIED.⁹

E. The '959 Patent (Unified Search)

The '959 Patent, entitled "Universal Interface for Retrieval of Information in a Computer System," was filed on January 5, 2000, and issued on January 25, 2005. It is the predecessor patent to the '604 Patent that was at issue at the preliminary injunction phase of this case. The '959 Patent

1996 edition of the IEEE Standard Dictionary of Electrical and Electronics Terms defines a "thread" as "'a single flow of control in a process' or program.").

⁹ In its opposition brief, Apple contends that, not only should Samsung's motion be denied, but summary judgment that Windows Mobile 5.0 does not anticipate should be granted in Apple's favor. Apple Opp'n at 7. Under Rule 56(f)(1), a Court may grant summary judgment for a nonmovant after giving notice and a reasonable time to respond. Grants of summary judgment to a nonmoving party, however, are "generally disfavored, because they risk depriving a losing party of adequate notice and opportunity to oppose summary judgment." *Mikkelsen Graphic Engineering, Inc. v. Zund Am., Inc.*, -- Fed. Appx. --, 2013 WL 4269406, at *7 (Fed. Cir. Aug. 16, 2013). Apple could have moved for summary judgment on this ground, but chose not to, despite moving on a host of other grounds. The Court declines to consider Apple's attempt to supplement its summary judgment motion through its opposition to Samsung's motion.

1 is directed to a unitary search interface that can access information in a variety of locations—such
2 as a local hard disk, a local network server, and the Internet—and that can use different search
3 algorithms to list the most relevant candidate results. More specifically, the '959 Patent is directed
4 to “a universal interface which uses a plurality of heuristic algorithms to identify an item of
5 information (e.g., document, application or Internet web page) in response to at least one
6 information descriptor.” '959 Patent, 1:10-14.

7 The inventors of the '959 Patent contended that they overcame two different problems in
8 the prior art relating to a computer user's need to search quickly through vast amounts of
9 information for relevant results. First, the inventors contended that the prior art did not provide “a
10 single interface . . . to allow a computer user to find a needed or desired item of information from
11 among all different types of information storage systems.” *Id.* at 2:5-8. For example, some
12 computers had one interface for searching for files stored locally on a computer, *see id.* at 1:23-34,
13 and a different interface to access worldwide websites and interact with search engines provided
14 by the website, *see id.* at 1:46-53. But the inventors contended that there had been “no combination
15 of desktop find routines . . . and Internet browsing routines.” *Id.* at 2:4-9. Thus, according to the
16 '959 Patent, a user had to access a different interface to search for different types of information
17 depending on that information's stored location.

18 Second, the patent states that the prior art lacked sufficient ability to effectively filter
19 search results, “fail[ing] to significantly reduce the time and effort a user expends to identify and
20 retrieve useful information.” *Id.* at 1:37-39. The inventors of the '959 Patent identified a need for
21 technology that “allows the computer to help the user determine . . . additional criteria or to
22 automatically provide additional criteria, so that search results have a higher percentage of items
23 that are of interest to the user.” *Id.* at 1:61-65.

24 Figure 2 of the '959 Patent discloses a “retrieval manager” component that receives search
25 terms from the user, either in the form of text or speech, and dispatches that input to a plurality of
26 “plug-in modules.” *Id.* at 3:63-4:7. Each of these modules has an “associated heuristic which it
27 employs to locate information that corresponds to the user input.” *Id.* at 4:8-10. For instance, one
28 module may be configured to search the titles of local documents that match the user input;

another may be configured to index and search the contents of locally stored files; a third may search a list of most recently accessed files, applications, and web sites for a match; and a fourth may employ a search engine to locate Internet web pages that match the user input. *See id.* at 4:6-19. The patent teaches that the results from the modules are returned to the retrieval manager, which in turn presents the results to the user, potentially after employing “additional heuristics to determine which results are most relevant.” *Id.* at 4:23-26.

Claims 24 and 25 are at issue. Claim 24 reads as follows:

24. A computer readable medium for locating information from a plurality of locations containing program instructions to:

- receive an information identifier;
- provide said information identifier to a plurality of heuristics to locate information in the plurality of locations which include the Internet and local storage media;
- determine at least one candidate item of information based upon the plurality of heuristics; and
- display a representation of said candidate item of information.

Claim 25 reads,

25. The computer readable medium of claim 24, wherein the information identifier is applied separately to each heuristic.

1. Apple’s Motion for Summary Judgment of No Invalidity

Samsung contends that asserted independent claim 24 and dependent claim 25 of the ’959 Patent are invalid as anticipated or obvious based on two different products that Samsung asserts were “known or used by others in this country” before the invention claimed in the ’959 Patent, *see* 35 U.S.C. § 102(a) (2006), or “in public use or on sale in this country” a year before the filing date of the ’959 Patent, *see id.* § 102(b). *See* Declaration of Martin Rinard, Ph.D. in Support of Samsung’s Opposition to Apple’s Motion for Summary Judgment Concerning U.S. Patent No. 6,847,959 (“Rinard Decl.”) at ¶¶ 112-124, Exs. 1-2 (ECF Nos. 1104-3, 855-7). In particular, Samsung relies on AppleSearch, which, according to Samsung’s expert for the ’959 Patent, Dr. Martin Rinard, was “a commercial product sold by Apple [that] allowed users to search for information stored on both their local computer and a remote WAIS [Wide Area Information

1 Server] server across the Internet, and return results in a single unified interface.” *Id.* Ex. 1 at 1.
 2 Samsung also relies on the WAIS system itself, which, according to Dr. Rinard, “was a universal
 3 search system available throughout the 1990s.” *Id.* Ex. 2 at 2; *see* Expert Report of Martin Rinard,
 4 Ph.D. Regarding the Validity of Claims 24 and 25 of U.S. Patent No. 6,847,959 (“Rinard Rep.”)
 5 ¶¶ 300-39 (ECF No. 1108-9). To support Samsung’s invalidity claim, Dr. Rinard built and
 6 configured systems using the AppleSearch and WAIS products.

7 Apple contends that it is entitled to summary judgment that neither AppleSearch nor WAIS
 8 anticipate or render obvious claims 24 and 25 of the ’959 Patent because Samsung cannot meet its
 9 burden of demonstrating that Dr. Rinard’s configured AppleSearch and WAIS systems were ever
 10 known or used prior to 2000. Among other things, Apple points to Dr. Rinard’s deposition
 11 testimony, in which he was unable to provide a particular example of such prior use, despite
 12 building a demonstration system that he asserts shows an example of what the public used during
 13 the critical time. *See* Deposition of Martin Rinard, Ph.D. (“Rinard Tr.”), 177:10-188:23, 203:17-
 14 205:10, 211:3-216:6, 223:14-226:16 (ECF No. 1087-2).

15 Samsung responds that it has provided sufficient evidence for a jury to conclude that these
 16 systems were on sale and in public use prior to the critical date. The Court agrees. Even the
 17 deposition testimony on which Apple relies provides support for Samsung’s position. For example,
 18 Dr. Rinard testified that “[w]hen you purchased AppleSearch 1.5, the box came with
 19 documentation that showed how to connect to WAIS servers,” *id.* at 179, and that “[i]f you look at
 20 the documentation I cite in my report, if you look at the contents of the free-WAIS-sf-2.0.65
 21 distribution, if you look at all the evidence that shows people using these systems, if you look at
 22 the documentation that comes with the system, you’ll see instructions for building and configuring
 23 systems to include the ability to access local databases efficiently in combination with remote
 24 databases on the Internet to satisfy the limitations of the asserted claims,” *id.* at 214-15.

25 Apple’s argument that “Samsung has absolutely no evidence that anyone at any relevant
 26 time *actually knew of or used* either system configured to have the claimed functionality,” Apple
 27 Reply at 9 (emphasis in original), simply ignores the circumstantial evidence Samsung has
 28 provided through Dr. Rinard’s testimony and the documentation on which Dr. Rinard relies.

1 Circumstantial evidence can be just as probative as direct evidence, if not more so. *See Desert*
 2 *Palace, Inc. v. Costa*, 539 U.S. 90, 100 (2003) (“The reason for treating circumstantial and direct
 3 evidence alike is both clear and deep rooted: ‘circumstantial evidence is not only sufficient, but
 4 may also be more certain, satisfying and persuasive than direct evidence.’”) (quoting *Rogers v.*
 5 *Missouri Pacific R. Co.*, 352 U.S. 500, 508, n.17 (1957)). Drawing all reasonable inferences in
 6 Samsung’s favor, a jury could rely on Dr. Rinard’s testimony, as well as the documentation he
 7 references, to conclude that his demonstration systems accurately represent systems that were
 8 actually known to and used by the public prior to the critical date. *See also* Rinard Tr. at 177-88,
 9 204, 212-13. Accordingly, Apple’s motion for summary judgment that the AppleSearch and WAIS
 10 systems do not invalidate claims 24 and 25 of the ’959 Patent is DENIED.¹⁰

11 2. Samsung’s Motion for Summary Judgment of Indefiniteness

12 Samsung contends that it is entitled to summary judgment that claims 24 and 25 are invalid
 13 as indefinite based on those claims’ use of the term “heuristic.” Under 35 U.S.C. § 112(b), claims
 14 must “particularly point[] out and distinctly claim[] the subject matter which the inventor . . .
 15 regards as the invention.” A claim that fails to meet this requirement, called the “definiteness”
 16 requirement, is invalid. *See, e.g., Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1356
 17 (Fed. Cir. 2005) (affirming summary judgment of invalidity based on claims’ use of the term
 18 “aesthetically pleasing”). The purpose of the definiteness requirement is “to ensure that the claims
 19 delineate the scope of the invention using language that adequately notifies the public of the
 20 patentee’s right to exclude.” *Id.* at 1347. “The statutory requirement of particularity and
 21 distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what
 22 went before in the art and clearly circumscribe what is foreclosed from future enterprise.” *Id.*
 23 (quoting *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942) (alteration in
 24 original)).

25
 26
 27 ¹⁰ Apple initially contended that Samsung should be precluded from relying on the AppleSearch
 28 and WAIS systems as obviousness references because Samsung failed to properly disclose its
 reliance on those systems. *See* Apple MSJ at 18-19. The parties apparently have resolved that
 dispute. *See* ECF No. 1056, Exhibit A at 1.

1 The definiteness requirement does not compel absolute clarity. *See Star Scientific, Inc. v.*
 2 *R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1373 (Fed. Cir. 2011). Instead, “[a] claim is indefinite
 3 only when it is not amenable to construction or insolubly ambiguous.” *Biosig Instruments, Inc. v.*
 4 *Nautilus, Inc.*, 715 F.3d 891, 898 (Fed. Cir. 2013) (internal quotation marks omitted). To prevail
 5 on its indefiniteness argument, Samsung must show that “one of ordinary skill in the relevant art
 6 could not discern the boundaries of the claim based on the claim language, the specification, the
 7 prosecution history, and the knowledge in the relevant art.” *Haemonetics Corp. v. Baxter*
 8 *Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010).

9 Types of terms that typically trigger indefiniteness concerns include means-plus-function
 10 elements that may lack “corresponding structure in the specification,” numeric limitations that fail
 11 to identify “which of multiple methods of measuring that number should be used,” terms that lack
 12 a proper antecedent basis, or terms that may be “completely dependent on a person’s subjective
 13 opinion.” *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008).
 14 Additional terms that sometimes trigger scrutiny, although not necessarily a separate category
 15 from the preceding list, include “word[s] of degree” or limitations defined in “purely functional
 16 terms.” *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332-33 (Fed. Cir. 2010).

17 Definiteness is a question of law, *see Kinetic Concepts, Inc. v. Blue Sky Medical Group,*
 18 *Inc.*, 554 F.3d 1010, 1022 (Fed. Cir. 2009), and the accused infringer bears the burden of
 19 demonstrating indefiniteness by “clear and convincing evidence,” *Haemonetics*, 607 F.3d at 783.
 20 In this context, the “clear and convincing evidence” standard is not “a rigid evidentiary test,” but
 21 “a useful reminder to courts” that, where substantial doubt exists about whether a term is
 22 indefinite, the general presumption of patent validity controls. *Block v. Community Nutrition*
 23 *Institute*, 467 U.S. 340, 351 (1984); *see id.* (explaining the meaning of the “clear and convincing
 24 evidence” standard in a different legal context); *Exxon Research & Eng’g Co. v. United States*, 265
 25 F.3d 1371, 1375 (Fed. Cir. 2001) (“[W]e accord respect to the statutory presumption of patent
 26 validity.”).

a. Claim Construction

“General principles of claim construction apply when determining indefiniteness.” *Biosig Instruments*, 715 F.3d at 898. Significantly, the Court has already construed the term “heuristic algorithm” in the context of Apple’s preliminary injunction motion, which concerned a related patent with a virtually identical specification. *See Apple*, 877 F. Supp. 2d at 863-66. In ruling on that motion, the Court noted that Apple was “less than clear as to how, exactly, it defines ‘heuristic’” and that “[t]he specification is not particularly illuminating in this regard” either. *Id.* at 863-64. Nonetheless, the Court construed the term “heuristic algorithm” as “a search algorithm that employs some ‘rule of thumb’ and does not consist solely of constraint satisfaction parameters.” *Id.* at 866. Neither party contends that the Court should construe “heuristic” differently in any substantive respect. Accordingly, the Court draws from its prior construction and construes “heuristic” in the ’959 Patent to mean “some ‘rule of thumb’ that does not consist solely of constraint satisfaction parameters.”

b. Is the Court’s Construction Insolubly Ambiguous?

Having settled on a construction, the Court has taken an important first step in the indefiniteness analysis. “If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.” *Halliburton*, 514 F.3d at 1249 (internal quotation marks and alterations omitted). Nevertheless, the Federal Circuit has made clear that a term can be indefinite even if it is susceptible to a construction. “[I]f reasonable efforts at claim construction result in a definition that does not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim, the claim is insolubly ambiguous and invalid for indefiniteness.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1371 (Fed. Cir. 2008). The Court must therefore determine whether its construction of “heuristic” is insolubly ambiguous.

The Court is satisfied that its construction “provide[s] sufficient clarity delineating the bounds of the claim to one skilled in the art.” *Biosig Instruments*, 715 F.3d at 899. According to the Court’s construction, the accused computer instructions must allow searching using a “rule of

thumb” that is “not . . . solely [through] constraint satisfaction parameters.” Under this construction, a search that, for example, returns results based solely on whether the author of a document matches a user-provided input (e.g., family name “JOBS” and given name beginning with “STE”) would not be a heuristic because it uses “solely constraint satisfaction parameters.” *See Apple*, 877 F. Supp. 2d at 866 (discussing U.S. Patent No. 7,020,670 (the “’670 Patent”), prior art to the ’604 Patent); ’670 Patent at 15:15-24. That distinction provides sufficient clarity to avoid an indefiniteness problem.

Samsung does not appear to dispute that searches such as the one just described would fail to qualify as the claimed heuristic. *See Samsung Reply* at 10. Nevertheless, Samsung, relying heavily on the Federal Circuit’s decision in *Halliburton*, contends that the term is indefinite because the precise boundary between what is and what is not a heuristic is insufficiently discernible. The Court concludes that Samsung’s reliance on *Halliburton* is misplaced for two reasons.

First, *Halliburton* involved a “word of degree,” namely, “fragile gel,” which the patentee proposed should be construed to require, among other things, a gel that “*easily* transitions to a liquid state upon the introduction of force.” 514 F.3d at 1250 (emphasis added); *see Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d at 1332 (“When a ‘word of degree’ is used, the court must determine whether the patent provides some standard for measuring that degree.”) (internal quotation marks omitted). Here, neither the term “heuristic” nor the Court’s construction of it involves a word of degree, pure functional language, or other danger sign that typically triggers indefiniteness concerns. Although not conclusive, the Court looks to this categorization as an important threshold indicator as to the level of definiteness the term must provide.

Second, and more crucial, in *Halliburton*, the term at issue (“fragile gel”) was the only element distinguishing the claimed invention from the prior art. *See* 514 F.3d at 1253 (“[I]ndependent claims 1-3 and 5 are distinguishable from the prior art only because they are ‘fragile gels.’”). The Federal Circuit found this point “important” to its decision because “in attempting to define a claim term, a person of ordinary skill is likely to conclude that the definition does not encompass that which is expressly distinguished as prior art.” *Id.* at 1252. The patentee in

1 *Halliburton*, however, failed to “distinguish how the ‘fragile gels’ claimed in the . . . patent
2 performed differently than the disclosed prior art,” *id.* at 1253, a failure the Federal Circuit found
3 to be “fatal” to the claims’ validity. *Id.*

4 Here, in contrast, the precise boundary of the term “heuristic” is less important because
5 Apple relies on other elements of the claim to distinguish it from the prior art. During prosecution,
6 Apple relied heavily on the primary prior art’s failure to search both the Internet and local storage
7 media. *See* ECF No. 1062 at APLNDC630-0000041332 (“[T]he Blumenfeld et al. publication
8 contains no disclosure of locating information in any other location than the Internet.”). Apple also
9 highlighted the prior art’s failure to provide a single search query to multiple types of searches. *Id.*
10 (“[T]he search information (i.e., a search string) input to [sic] via the interface in Blumenfeld et al.
11 is not provided to more than one of the types of searches identified in the Action (i.e., Author,
12 Title, Subject, Keyword, ISBN and Boolean keyword . . .).”) (emphasis in original). To be sure,
13 Apple did rely on the “heuristic algorithm” limitation in distinguishing the related ’604 Patent
14 from the prior art. However, Apple filed the application for the ’604 Patent four years after it filed
15 for the ’959 Patent, and Apple made its “heuristic algorithm” arguments in prosecuting the ’604
16 Patent after the ’959 Patent issued. *See Apple*, 877 F. Supp. 2d at 864-65 (discussing statements
17 Apple made to the PTO while prosecuting the ’604 Patent in 2007 and 2008). The Court is not
18 aware of any case issuing an indefiniteness ruling in an ancestor patent based on statements made
19 in a *subsequent* application. *See Trading Technologies Int’l, Inc. v. Open E Cry, LLC*, 728 F.3d
20 1309, 1323 (Fed. Cir. 2013) (noting that prosecution history estoppel and disclaimer “can extend
21 *from a parent application to subsequent patents*”) (emphases added). As for the earlier, ’959 Patent,
22 Samsung has failed to show that a stricter definition of “heuristic” is necessary to distinguish the
23 asserted claims over the prior art or otherwise allow a person of ordinary skill to appreciate their
24 bounds.¹¹

25 Finally, Samsung points to various witnesses having difficulty discerning what is and is not
26 a heuristic. *See Samsung MSJ* at 19-21. Samsung, however, did not ask the witnesses to define or

27 ¹¹ Samsung remains free to raise the issue of indefiniteness again should the term “heuristic”
28 become central to Apple’s attempts to distinguish the ’959 Patent from any prior art Samsung
asserts at trial.

1 apply the term in the context of the claims. Whether a person of ordinary skill can provide a
 2 definition of “heuristic” in the abstract has little relevance to whether a person of ordinary skill can
 3 apply the Court’s construction of “heuristic” in the context of the claims in light of the
 4 specification. “[D]efining a word is often more difficult than grasping its meaning in a specific
 5 context.” *Apple Inc. v. Motorola, Inc.*, No. 11-CV-8540, D.I. 526 (N.D. Ill. Jan. 16, 2012); *see id.*
 6 (rejecting indefiniteness challenge to term “heuristic” as used in a different Apple patent that
 7 claimed a “heuristic” to translate imprecise finger gestures into actions desired by the user); *In the*
 8 *Matter of Certain Electronic Digital Media Devices & Components Thereof*, Inv. No. 337-TA-796,
 9 Order No. 16, 2012 WL 754088 at *11 (U.S.I.T.C. Mar. 6, 2012) (same). To establish
 10 indefiniteness here, Samsung must show that “the claims, read in the light of the specification[],
 11 [do not] reasonably apprise those skilled in the art both of the utilization and scope of the
 12 invention.” *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624 (Fed. Cir.
 13 1985). Samsung has failed to provide clear and convincing evidence that the asserted claims
 14 violate this context-specific inquiry.¹²

15 Accordingly, the Court DENIES Samsung’s motion for summary judgment of
 16 indefiniteness as to the ’959 Patent.

17 **F. Apple’s Motion for Summary Judgment of Invalidity of the ’757 Patent**
 18 **(Multimedia Synchronization)**

19 The ’757 Patent, entitled “Multimedia Synchronization Method and Device,” discloses “[a]
 20 system . . . for synchronizing a multiplicity of devices in a multimedia environment” so that users
 21 can access their multimedia collection (e.g., movies and music) in different locations. ’757 Patent
 22 Abstract. The application for the ’757 Patent was filed on October 19, 2006 (as a continuation of
 23 an application filed on June 19, 2001) and issued on August 18, 2009.

24 ¹² The Federal Circuit faced the word “heuristic” in its preliminary injunction opinion in this case.
 25 *See, e.g., Apple*, 695 F.3d at 1380 (“Apple . . . has distinguished [prior art] Andreolli not just
 26 because the [claimed] apparatus uses heuristics, but also because it employs different heuristic
 27 algorithms in different search areas.”). Yet the Federal Circuit nowhere suggested that the ’604
 28 patent’s repeated use of the word “heuristic” created an indefiniteness problem. Although Samsung
 did not raise an indefiniteness challenge in that appeal, this Court notes that, if the term were
 insolubly ambiguous, the Federal Circuit very likely would have had more difficulty concluding
 that this Court’s construction of “each” with respect to “plurality of heuristic modules” . . .
 contravenes the *plain terms* of the claim.” *Id.* at 1378 (emphasis added).

1 Claims 1, 14, and 15 are at issue. Of the three, claim 1 is independent and reads as follows:

2 1. A system for synchronizing devices in a multimedia environmental
3 [sic], the system comprising:

4 at least one central storage and interface device, wherein audio, video, or
5 photographic data, including content information and content
6 management information, relating to at least one user, are stored in
7 digital form; and

8 at least one zone, each zone having at least one zone specific storage and
9 interface device capable of storing or interfacing with information
10 stored in the central storage and interface device, wherein audio,
11 video, or photographic information, relating to at least one user,
12 contained within the zone specific storage and interface device and the
13 central storage and interface device, *are updated in relation to the zone
14 specific storage and interface devices and the central storage and
15 interface device*, whereby the at least one user can be situated in any
16 one of the zones and access the audio, video, or photographic
17 information related to the at least one user.

18 '757 Patent, claim 1 (emphasis added).¹³

19 Apple asserts that it is entitled to summary judgment that claims 1, 14, and 15 of the '757
20 Patent are anticipated by the '446 Patent, which was filed in November 2000, 7 months before the
21 claimed priority date of the '757 Patent. *See* 35 U.S.C. § 102(e) (2006). The '446 Patent, entitled
22 "Acquisition and Synchronization of Digital Media to a Personal Information Space," is directed to
23 the problem that arises when "a user . . . acquire[s] and store[s] digital media on one network-
24 coupled device, such as a personal computer . . . [at work], but . . . desire[s] to transfer that
25 information and maintain a library of this digital media on other network-coupled devices, such as
26 a personal computer at the user's home, a notebook computer which travels with the user, or even
27 a palm-top computer." '446 Patent at 1:35-41. As a solution, the '446 Patent teaches synchronizing
28 "an individual's user-defined set of information" (which the patent refers to as the individual's
"personal information space") to "any one or all of the devices coupled within the user's space,
including personal computers, PDA's, automotive PC's, and the like." *Id.* at 5:4-16, 9:14-23. The
'446 Patent "cross-reference[s] and incorporate[s] by reference . . . in their entirety" three

¹³ The Court has construed the term "zone specific storage and interface device" to mean "a storage and interface device that resides in an area, such as a room or similar location." Claim Construction Order at 45.

documents, *id.* at 1:10-11, one of which—U.S. Patent No. 6,671,757 entitled “Data Transfer and Synchronization System” (the “Multer Patent”)—is relevant to Apple’s motion. The Multer Patent discloses a system that “allows the replication of information across all systems coupled to the system,” Multer Patent at 8:54-56, with a focus on synchronizing “personal contact information” and e-mail, *id.* at 5:41.

1. Incorporation by Reference

Apple’s invalidation-by-anticipation challenge rests heavily on the assumption that the ’446 Patent incorporates the Multer Patent by reference. Although “invalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention,” material not explicitly contained in the single, prior art document “may still be considered for purposes of anticipation if that material is incorporated by reference into the document.” *Advanced Display Systems, Inc. v. Kent State University*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Whether material is incorporated by reference into a host document is a question of law that this Court must resolve before it determines whether a genuinely disputed material issue exists as to anticipation. *See Zenon Environmental, Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1379 (Fed. Cir. 2007).

To incorporate matter by reference, “a host document must contain language ‘clearly identifying the subject matter which is incorporated and where it is to be found’; a ‘mere reference to another application, or patent, or publication is not an *incorporation* of anything therein’” *Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1346 (Fed. Cir. 2009) (quoting *In re De Seversky*, 474 F.2d 671, 674 (C.C.P.A. 1973)) (emphasis in original). In determining whether material is incorporated by reference into a host document with sufficient particularity, the Court should use “the standard of one reasonably skilled in the art.” *Advanced Display Systems*, 212 F.3d at 1283.

In light of these guidelines, the Court has little trouble concluding that the ’446 Patent incorporates the Multer Patent in its entirety. The ’446 Patent references the Multer Patent eight times. The beginning of the patent’s written description includes a section entitled “CROSS-REFERENCE TO RELATED APPLICATIONS,” in which it lists the Multer Patent along with

1 two other documents (the "'336 Patent" and the "'675 Application") as "cross-referenced and
 2 incorporated by reference herein in their entirety" and then repeats at the end of the list that
 3 "[e]ach of these [three] related Patents/Applications are incorporated herein by reference." Next, in
 4 a section entitled "Description of the Related Art," the specification references the Multer Patent
 5 three times in the context of synchronizing a personal information space, the very subject central to
 6 the '446 Patent itself:

7 [The '336 Patent, the '675 Application, and the Multer Patent] disclose a novel
 8 method and system for synchronization of personal information including that
 9 which is conventionally found in desktop applications, personal digital assistants,
 10 palm computers, and website calendar and address services, as well as any content
 11 in the personal information space including file systems, contact information
 12 and/or calendaring information. In one aspect, the system disclosed in [the '336
 13 Patent, the '675 Application, and the Multer Patent] comprises a series of device
 14 engines which can be utilized on or in conjunction with any personal information
 15 manager application or device, on servers, or both, which can connect via a
 16 communications network, such as the Internet, to transfer information in the form
 of differenced data between respective applications and respective devices. In
 essence, the system of [the '336 Patent, the '675 Application, and the Multer
 Patent] creates a personal information space or personal information store that is
 comprised of a set of transactions which defines the movement of information
 between one device, the intermediate storage server, and other devices, and which
 is unique to an individual user or identifier.

17 '446 Patent at 2:44-3:2. The "Detailed Description" section of the specification references the
 18 Multer Patent four additional times, reasserting that "the transactional based extraction, transfer,
 19 broadcast, storage and synchronization systems for [sic] forth in [the '336 Patent, the '675
 20 Application, and the Multer Patent]" is an example of a personal information space and is "hereby
 21 specifically incorporated by reference." *Id.* at 5:34-41; *see id.* at 6:24-29 ("Once inserted into the
 22 private information space, the data can be synchronized to any number of different devices as
 23 described in [the '336 Patent, the '675 Application, and the Multer Patent.]); *id.* at 8:50-56
 24 ("[S]ync server 130 can provide the information set forth above directly to a server device engine
 25 140 which can then transfer the information to the personal information space stored in a database
 26 200 as described in [the '336 Patent, the '675 Application, and the Multer Patent.]); *id.* at 9:65-
 27 10:3 ("The specific structure and operation of the server and client based device engines are
 28

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1 described generally with respect to FIG. 5 and are disclosed in further detail in [the '336 Patent,
2 the '675 Application, and the Multer Patent.”).

3 The above-quoted language from the '446 Patent is sufficient to incorporate the Multer
4 Patent. The language “identifies with specificity both what material is being incorporated by
5 reference” (a system for synchronization of personal information) “and where it may be found”
6 (the Multer Patent). *Callaway Golf Co.*, 576 F.3d at 1346. The Federal Circuit has called language
7 similar to that found at the beginning of the '446 Patent “broad and unequivocal” and sufficient to
8 incorporate an entire document by reference. *Harari v. Lee*, 656 F.3d 1331, 1335 (Fed. Cir. 2011);
9 *see id.* (“We . . . conclude that the entire '579 application disclosure was incorporated by the broad
10 and unequivocal language: ‘The disclosures of the two applications are hereby incorporate[d] by
11 reference.’”). The '446 Patent goes even further, reinforcing its incorporation of the Multer Patent
12 by repeatedly referencing the synchronization system—which is the exclusive subject of the
13 Multer Patent—both as a whole and with reference to particular aspects of the system. *See id.*
14 (“While it may seem redundant, nothing prevents a patent drafter from later incorporating again
15 certain ‘relevant portions’ of an application so as to direct the reader to the exact portion of the
16 incorporated document the drafter believes relevant.”). The Court concludes that a person
17 reasonably skilled in the art would understand this language from the '446 Patent to incorporate
18 the Multer Patent in its entirety.

19 Samsung contends that *Harari* is inapposite because that case “addresses the sufficiency of
20 a written description in an interference, not the clear and convincing standard for anticipation.”
21 Samsung Opp. at 21 n.29. The Court is not persuaded. The Federal Circuit has not created different
22 rules for different applications of its incorporation-by-reference doctrine. *See Northrop Grumman*
23 *Info. Tech., Inc. v. United States*, 535 F.3d 1339, 1344 (Fed. Cir. 2008) (referring generally to the
24 court’s incorporation-by-reference doctrine “in the patent context”). Instead, the Federal Circuit
25 treats incorporation by reference as a question of law and a “separate inquir[y]” from the fact issue
26 of anticipation. *Zenon Environmental*, 506 F.3d at 1379. The “clear and convincing” standard
27 therefore does not apply to whether a prior art document incorporates another by reference. *See*
28 *Microsoft Corp. v. i4i Ltd. P’ship*, -- U.S. --, 131 S. Ct. 2238, 2253 (2011) (Breyer, J., concurring)

1 (“By preventing the ‘clear and convincing’ standard from roaming outside its fact-related
 2 reservation, courts can increase the likelihood that discoveries or inventions will not receive legal
 3 protection where none is due.”). In any event, Samsung has not pointed the Court to a more
 4 analogous Federal Circuit holding in the anticipation context. To the contrary, the Federal Circuit
 5 has found that even less specific language (“[r]eference is made to”) “can be sufficient to indicate
 6 to one of skill in the art that the referenced material is fully incorporated in the host document,”
 7 even for anticipation purposes. *Callaway Golf*, 576 F.3d at 1346.

8 Samsung also points to a statement by its expert for the '757 Patent, Professor Dan
 9 Schonfeld, that the '446 Patent “does not clearly identify the subject matter that is incorporated nor
 10 where it is to be found such that one of ordinary skill in the art could find the general incorporation
 11 by reference to be sufficiently particular.” Declaration of Professor Dan Schonfeld in Support of
 12 Samsung’s Opposition to Apple’s Motions for Summary Judgment and to Exclude Expert
 13 Testimony (“Schonfeld Decl.”) ¶ 50 (ECF No. 1070). This statement is of no help to Samsung. As
 14 noted, incorporation by reference is a question of law. “The opinion of an expert does not convert
 15 a question of law into a question of fact.” *Van Der Salm Bulb Farms, Inc. v. Hapag Lloyd, AG*,
 16 818 F.2d 699, 701 (9th Cir. 1987). Although expert testimony may in some circumstances help a
 17 court determine whether a host document incorporates another document by reference, the Court in
 18 this instance concludes that Dr. Schonfeld’s conclusory statement cannot overcome the broad and
 19 unequivocal language in the specification of the '446 Patent incorporating the entire Multer Patent.

20 2. Anticipation

21 Having determined the '446 Patent includes the Multer Patent in its entirety, the Court next
 22 analyzes whether Apple is entitled to summary judgment that the '446 Patent anticipates the
 23 asserted claims of the '757 Patent. Viewing the evidence most favorable to Samsung, the Court
 24 concludes that Apple has established the absence of a genuine issue of fact that the '446 Patent
 25 discloses each and every limitation of independent claim 1 and dependent claims 14 and 15 of the
 26 '757 Patent.

1 **a. Claim 1**

2 Independent claim 1 of the '757 Patent contains a preamble and two limitations, of which
 3 only the second limitation is in dispute. Samsung does not dispute that the '446 Patent discloses
 4 the preamble and the first limitation of claim 1. In particular, Samsung does not contest that the
 5 '446 Patent discloses the preamble of claim 1 (a "system for synchronizing devices in a
 6 multimedia environmental [sic environment]") by describing a system that synchronizes "media
 7 information" found in a user's "personal information space" to "any one or all of the devices
 8 coupled within the user's space, including personal computers, PDA's, automotive PC's, and the
 9 like." '446 Patent, 9:9-20. Also undisputed, the '446 Patent discloses the first limitation of claim 1
 10 ("at least one central storage and interface device, wherein audio, video, or photographic data,
 11 including content information and content management information, related to at least one user,
 12 are stored in digital form") by disclosing "storage server(s) 200," *id.* Fig. 3, that can "house[]" a
 13 user's personal information space, *id.* 5:26-29.¹⁴

14 Samsung does dispute whether the '446 Patent discloses the emphasized portion of the
 15 final limitation of claim 1 of the '757 Patent, which is reproduced below:

16 at least one zone, each zone having at least one zone specific storage and interface
 17 device capable of storing or interfacing with information stored in the central
 18 storage and interface device, wherein audio, video, or photographic information,
 19 relating to at least one user, contained within the zone specific storage and
 20 interface device and the central storage and interface device, *are updated in*
 21 *relation to the zone specific storage and interface devices and the central storage*
 22 *and interface device*, whereby the at least one user can be situated in any of the
 23 zones and access the audio, video, or photographic information related to the at
 24 least one user.¹⁵

22 ¹⁴ Samsung also does not dispute that the incorporated Multer Patent discloses media files stored on
 23 the storage server that have "content information" (e.g., photo data) and "content management
 24 information" (e.g., information that allows for "grouping of classes of information into appropriate
 25 representations"). Multer Patent at 28:45-50.

25 ¹⁵ Samsung does not dispute that the '446 Patent discloses the other elements of this limitation. In
 26 particular, Samsung does not dispute that the '446 Patent discloses multiple "devices" identified by
 27 the specific "zone" in which each device resides, *see* '446 Patent, Figs 3 & 4 (depicting "Home
 28 PC" and "Office PC"), each device having an "interface" capable of interacting with the storage
 29 server and "storage" capable of storing media data, *see id.* 9:20-39 (discussing devices' storage of
 30 "media data" received from "the personal information space provided in storage server 200"). Nor
 31 does Samsung dispute that the '446 Patent discloses a system where a user "can be situated in any
 32 one of the zones and access the audio, video, or photographic information related" to that user. *See*
 33 '446 Patent, 9:40-64 ("In accordance with the present invention, digital media files of varying

1 In particular, Samsung contends that the emphasized portion of claim 1 of the '757 Patent ("*are*
2 *updated in relation to the zone specific storage and interface devices and the central storage and*
3 *interface device*") implicitly requires "*automatic* synchronization," Samsung Opp'n at 21
4 (emphasis in original), but the prior art '446 Patent discloses only "*manual* synchronization," *id.* at
5 22 (emphasis in original).¹⁶ The Court concludes that claim 1 of the '757 Patent does not require
6 automatic synchronization, and thus Samsung's claim that automatic synchronization is required
7 does not create a genuine material factual dispute.

8 No reasonable jury could find an "automatic synchronization" requirement in the plain
9 language of claim 1 of the '757 Patent sufficient to avoid potentially invalidating prior art, the '446
10 Patent.¹⁷ The specification of the '757 Patent discloses an array of "synchronizing schemes," only
11 one of which is "automatic." See '757 Patent, 9:4-6 ("Different synchronizing schemes are
12 possible (automatic, daily, weekly, etc)." The claim itself does not explicitly require any one of
13 those synchronization schemes.

14 Samsung argues that claim 1 requires "automatic" synchronization because it requires
15 media information on each device to be "updated in relation to" the information on the other
16 devices. According to Samsung's expert Dr. Schonfeld, applying the plain and ordinary meaning
17 of the term "updated" means that "a change in one device is automatically reflected as a change in
18 another device." Schonfeld Decl. ¶ 29. As set forth below, this opinion is unsupported and
19 therefore insufficient to create a triable issue. See *Regents of University of Minnesota v. AGA*

20
21
22 formats, and other data, may be synchronized or transferred (uni-directionally) to any network
coupled appliance 400 utilizing the system of the present invention.").

23 ¹⁶ Samsung also contends that, without the Multer Patent, the '446 Patent does not disclose a
24 system that meets two requirements that Samsung contends are part of claim 1: bidirectional
synchronization and automatic synchronization of all devices connected to the system. See
25 Samsung Opp'n at 22-25. Because the Court has concluded that the '446 Patent incorporates the
Multer Patent by reference, see *supra* Part III.F.1, and because Samsung does not dispute that the
26 Multer Patent discloses bidirectional synchronization, see Multer Patent, 6:36-38 ("[T]he
synchronizer will allow difference information Δ to be both transmitted and received"), and multi-
27 device synchronization, see *id.* 10:65-11:6 ("In one embodiment, each device engine implements
all processing required to keep all the systems fully synchronized."), the Court does not address
these arguments.

28 ¹⁷ Neither party sought a construction of claim 1 that would have imposed an "automatic
synchronization" requirement.

1 *Medical Corp.*, 717 F.3d 929, 941 (Fed. Cir. 2013) (“Conclusory expert assertions cannot raise
2 triable issues of material fact on summary judgment.”) (internal quotation marks omitted).

3 Dr. Schonfeld claims that three considerations support his understanding of the plain and
4 ordinary meaning of “updated,” but all of them entirely fail to provide a basis on which a
5 reasonable jury could side with Samsung. First, Dr. Schonfeld points to an “important” dictionary
6 definition that states “update” means “to bring up to date.” Schonfeld Decl. ¶ 30 (quoting
7 Merriam-Webster Dictionary, <http://www.merriam-webster.com/dictionary/update>). That
8 definition, however, simply begs the question whether something must be brought up to date
9 automatically.

10 Second, Dr. Schonfeld contends that the claim’s “passive” use of the term “updated”
11 implies “a perpetual state of the information.” *Id.* Again, the Court does not see how this
12 consideration could bring a reasonable jury to read an “automatic” requirement into claim 1. The
13 use of passive voice generally creates ambiguity rather than resolves it. *See, e.g.,* Bryan A. Garner,
14 *The Oxford Dictionary of American Usage & Style* 246 (2000) (calling the passive voice “a prime
15 source of unclarity”). Dr. Schonfeld does not cogently explain how the use of passive voice here
16 could even possibly impose a narrow and precise use of the term “updated.”

17 Finally, Dr. Schonfeld unavailingly points to three excerpts from the specification. *See*
18 Schonfeld Decl. ¶ 32 (citing ’757 Patent, 3:1-7 (“Therefore it is desirous to have . . . the entire
19 collection synchronized automatically . . .”), 6:33-39 (“The digital multimedia device 104 allows
20 the user, . . . to synchronize and update the user’s audio/video files automatically . . .”), 6:55-59
21 (“[A]n alternative embodiment of the present invention [shows] . . . the digital multimedia player
22 104 automatically performs the synchronization . . .”). Those excerpts’ references to a “desirous”
23 automatic synchronization feature, an embodiment that “update[s] . . . automatically,” and a
24 similar “alternative embodiment” all suggest that, at most, the plain meaning of the term “updated”
25 encompasses automatic synchronization as Dr. Schonfeld describes, not that its plain meaning is
26 limited to that type of automatic synchronization, as Samsung’s theory requires. Indeed, that the
27 specification describes (in active voice) an embodiment that “update[s] the user’s audio/video files
28

1 *automatically*” shows that the plain meaning of the claim itself—which uses the term “updated”
2 without the adjective “automatically”—is broader.

3 In addition to Dr. Schonfeld’s opinion, Samsung contends that even Apple’s expert agrees
4 that claim 1 requires automatic synchronization. Samsung Opp’n at 21 (citing Deposition of
5 Richard Taylor (“Taylor Dep.”) at 44:15-46:11 (ECF No. 854-19)). Apple’s expert Dr. Taylor
6 testified that, under claim 1, “if I identify the set of media that is mine, then the synchronization of
7 that media goes on automatically *after that synchronization process is initiated*.” Taylor Dep. at 46
8 (emphasis added). But this testimony, even viewed in a light most favorable to Samsung, does not
9 create an issue of material fact. To survive summary judgment Samsung needs “updated” to
10 convey a narrower understanding of “automatic,” namely, that “a change in one device is
11 automatically reflected as a change in another device.” Schonfeld Decl. ¶ 29. Dr. Taylor did not
12 testify that the claim requires synchronization to be automatically initiated whenever the content
13 on one device is changed. In fact, Dr. Taylor explicitly clarified that “the synchronization activity
14 [of claim 1] . . . may be started at multiple times or different frequencies,” and only then (“after
15 that synchronization process is initiated”) does the synchronization occur automatically. Taylor
16 Dep. at 45; *see id.* (“[O]nce it’s started [the system] does all the work . . . without manual
17 intervention.”).

18 One final point demonstrates why no reasonable jury could conclude that the plain meaning
19 of claim 1 includes an automatic synchronization requirement. Dependent claim 6 of the ’757
20 Patent requires that the “audio, video, and photographic information” stored on “a server” be
21 “updated *at a predetermined time* in relation with other zone specific storage and interface
22 devices.” Limiting claim 1—which requires that the audio, video, or photographic information in
23 “each zone” be “updated in relation to the zone specific storage and interface devices”—to
24 automatic updates of the type Samsung envisions would conflict with the “predetermined time”
25 update that claim 6 allows with respect to one zone. In this way, Samsung makes the same mistake
26 it does with respect to its attempt to limit the ’172 Patent to physical keyboards: it seeks to impose
27 a requirement in an independent claim that directly conflicts with the plain meaning of a dependent
28 claim. *See* 35 U.S.C. § 112(d); *supra* Part III.B.

1 Samsung acknowledges that the '446 Patent discloses a system that allows a user to trigger
 2 the synchronization of media files across devices. *See* Samsung Opp. at 22; Multer Patent, 35:12-
 3 22 (describing various “triggering mechanisms for initiating synchronization,” including a
 4 ““sync”” button, “time-based triggers,” or “sync on a log-out of the user”). Because a reasonable
 5 jury could not find a more stringent synchronization requirement in the plain and ordinary meaning
 6 of claim 1, no genuine dispute exists for trial as to this limitation.

7 Having concluded that no genuine dispute exists as to whether the '446 Patent discloses
 8 each and every limitation of claim 1 of the '757 Patent, the Court GRANTS Apple's motion for
 9 summary judgment that claim 1 is invalid as anticipated.

10 **b. Claims 14 and 15**

11 Claims 14 and 15 require “[t]he system of claim 1 wherein the central storage and interface
 12 device is disposed to be coupled to a wireless mobile device via LAN [Local Area Network]” and
 13 “via WAN [Wide Area Network],” respectively. The '446 Patent discloses the use of devices such
 14 as “notebook computers, palm-top computers, [and] hand-held computers” capable of receiving or
 15 processing digital media via a network connection” such as “a LAN, WAN or open source global
 16 network.” '446 Patent, 4:51-57; *see id.* 9:14-19 (describing synchronization with “PDA's”).
 17 Samsung does not dispute that these disclosures meet the additional limitations of claims 14 and
 18 15. Because the '446 Patent discloses each and every limitation of independent claim 1 and of
 19 dependent claims 14 and 15, the Court GRANTS Apple's motion for summary judgment that the
 20 '446 Patent anticipates claims 14 and 15.

21 **G. Samsung's Motion for Summary Judgment that the '596 Patent (Control**
 22 **Signals) Has a Priority Date of November 9, 2004**

23 Samsung accuses Apple of infringing claim 13 of the '596 Patent. The '596 Patent, entitled
 24 “Method and Apparatus for Signaling Control Information of Uplink Packet Data Service in
 25 Mobile Communication System,” was filed on November 9, 2005, but it claims priority to a
 26 Korean patent application filed on November 9, 2004 in the Korean Intellectual Property Office.
 27 *See* '596 Patent, 1:5-13. The parties dispute whether Samsung is entitled to the Korean filing date
 28 for purposes of evaluating the validity of claim 13.

Under 35 U.S.C. § 119, a patent can benefit from an earlier-filed foreign application so long as, among other conditions not in dispute here, the earlier-filed application provides a “written description” of the later-filed claims under 35 U.S.C. § 112(a). *See In re Wertheim*, 541 F.2d 257, 261 (CCPA 1976).¹⁸ A patent meets this written description requirement if a person of ordinary skill in the art reading the earlier-filed application would conclude that the invention includes that which the applicant later claimed. *See id.* at 265. A patentee may not add “new matter” in a later application and still enjoy an earlier filing date. *Id.*

Whether a disclosure meets the written description requirement is a question of fact. *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1355 (Fed. Cir. 2010) (en banc). Samsung, however, contends that there is no genuine dispute that the Korean application sufficiently discloses the invention recited in claim 13 and therefore that it is entitled to the earlier effective filing date as a matter of law. A brief discussion of the technology behind the ’596 Patent is necessary to understand the nature of Samsung’s summary judgment argument.

As the ’596 Patent explains in the “Background of the Invention” section of the specification, certain mobile communication systems dedicate communication channels between mobile devices and intermediate network equipment in order to ensure superior data transmission from the devices to the network. These channels are called enhanced uplink dedicated channels or “E-DCH.” ’596 Patent, 1:23-31. To maintain these channels effectively, the intermediate network equipment (which the ’596 Patent calls “Node B” stations) must receive certain information about the mobile devices seeking to transmit data (which the ’596 Patent calls “user equipment” or “UEs”). *Id.* at 1:31-52. This preliminary information includes the strength of the various communication channels, the data rate requested by the various UEs, and the transmission capabilities of the UEs. *Id.* at 2:23-39. Based on this information, the Node B will police the UEs’

¹⁸ Samsung’s motion relies on 35 U.S.C. § 120 for priority. *See* Samsung MSJ at 22. Section 120 allows a later-filed application to enjoy the benefit of “an application previously filed in the United States.” 35 U.S.C. § 120 (emphasis added). Because Samsung claims the benefit of a foreign-filed application, Section 119 applies. *See id.* § 119 (providing conditions whereby “[a]n application for patent for an invention filed in this country by any person who has . . . previously regularly filed an application for a patent for the same invention in a foreign country” may claim an earlier filing date) (emphasis added).

1 data transmissions, such that a plurality of UEs may not simultaneously transmit packet data at
2 high data rates. *Id.* at 2:14-21.

3 Typically, in establishing these dedicated communication channels, a Node B and UE will
4 transmit and receive preliminary messages through a dedicated transport channel, including
5 estimates as to required transmission resources and scheduling information. The patent refers to
6 this initial information as “MAC-e control information.” *Id.* at 3:34-38; *see* 2:63-3:40. “MAC-e”
7 stands for “Medium Access Control for E-DCH.” *Id.* at 3:35-38. The Node B will use this
8 information to allocate transmission resources. Once transmission resources are allocated, the UE
9 can begin transmitting data through an E-DCH. The ultimately transmitted data is called a “MAC-
10 e PDU,” or a “Media Access Control-enhanced Protocol Data Unit.” *Id.* at 3:28-30.

11 The ’596 Patent relates to a method and system for “more efficiently signaling the MAC-e
12 control information” by piggybacking the MAC-e control information onto the MAC-e PDUs. *Id.*
13 at 3:38-40. More particularly, a MAC-e PDU can be logically divided into two segments, a MAC-e
14 header and a MAC-e payload. *Id.* at 7:55-60. Using a crude analogy, the MAC-e header is like a
15 table of contents for the MAC-e payload. When a Node B receives a MAC-e PDU, it will look to
16 the MAC-e header to figure out the contents of the MAC-e payload, including the source of the
17 different parts of the payload and the relationship of those parts to other information within the
18 same and other MAC-e PDUs. *Id.* at 8:7-21. These different parts of the MAC-e payload are also
19 called PDUs, but they are different (and smaller) than the MAC-e PDUs containing them.

20 As relevant to the current dispute, the MAC-e header is itself divided into multiple parts,
21 with each part corresponding to a PDU in the MAC-e payload. In one embodiment discussed in the
22 ’596 Patent, each MAC-e header part contains three sub-parts: a “multiplexing identifier,” a
23 variable that represents the number of data units in each part of the payload, and a flag that
24 represents whether additional header parts follow the current header part. *Id.* at 8:35-9:10. The
25 ’596 Patent teaches how to generate and decipher MAC-e header information so that the Node B
26 will be able to recognize and use the MAC-e control information in the MAC-e payload.

27 Claim 13 of the ’596 Patent reads as follows:
28

1 13. A user equipment (UE) for transmitting control information for an
 2 uplink packet data service in a mobile communication system, the UE
 3 comprising:
 4 at least one block for forming a first protocol data unit (PDU) including
 5 uplink packet data;
 6 a control unit for forming a control service data unit (SDU) including
 7 control information for an uplink packet data service; and
 8 a multiplexing and transmission sequence number (TSN) setting unit for
 9 forming at least one first header part corresponding to the first PDU by
 10 using a data description indicator (DDI) field representing the first
 11 PDU and an N field representing the number of uplink packet data
 12 included in the first PDU, forming a second header part corresponding
 13 to the control SDU by using a DDI field set as a predetermined
 14 specific value representing that the control SDU is transmitted, and
 15 forming a second data packet unit (PDU) by concatenating a header
 16 and a payload, the header including the header parts, the payload
 17 including the first PDU and the control SDU, wherein the second PDU
 18 is transmitted to a Node B.

19 Although the term “DDI” appears in the specification of the ’596 Patent, it does not appear
 20 in the original Korean patent application. *See* ECF No. 811-4 (priority application). Nevertheless,
 21 Samsung contends claim 13 is entitled to the filing date of the Korean patent application because
 22 “the ’596 Patent and the priority application use different words to describe the same thing (*i.e.*, a
 23 logical identifier).” Samsung MSJ at 25. Samsung asks the Court to construe “DDI field” to mean
 24 a “logical identifier representing the first PDU.” Under that construction, Samsung contends, claim
 25 13 is entitled to the filing date of the Korean application.

26 Samsung has failed to establish the absence of a genuine dispute as to this issue. Samsung
 27 did not seek a construction of “DDI field” during the claim construction proceedings, and therefore
 28 the jury will consider the plain and ordinary meaning of the claim term “data description indicator
 (DDI) field.” Because the Korean application did not use that term, a reasonable jury could
 conclude that a person of ordinary skill would not have perceived the inventors to have invented a
 UE capable of forming a header using a DDI field.

Samsung argues that “[t]he fact that Samsung used certain words in its priority application,
 and then used the words ‘DDI field’ in its later application, does not mean that new matter was
 added.” Samsung Reply at 14. Samsung is correct that the new-matter conclusion does not
 necessarily follow from the different-word premise. But that proves only that Samsung is entitled

1 to a trial on this issue, not summary judgment. Indeed, the case Samsung cites in support, *Martek*
 2 *Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363 (Fed. Cir. 2009), affirmed a jury verdict.

3 Summary judgment is not appropriate.

4 Accordingly, Samsung's motion for summary judgment that the '596 Patent is entitled to a
 5 November 9, 2004 priority date is DENIED.

6 **IV. SEALING**

7 Both parties have requested that the Court seal portions of the briefs and exhibits for their
 8 summary judgment motions. After reviewing the parties' original filings and concluding the
 9 requests were overbroad, the Court denied the parties' administrative motions without prejudice
 10 and instructed them to file narrower sealing requests in renewed motions to seal. *See* ECF No.
 11 1057. The parties complied. *See* ECF Nos. 1066-71, 1073-74, 1079, 1093, 1097-1100. The parties,
 12 Google, and Microsoft filed declarations in support of these renewed motions. *See, e.g.*, ECF Nos.
 13 1094, 1096. After reviewing the parties' renewed sealing requests and the declarations in support
 14 thereof, the Court is satisfied that the material the parties now seek to seal—which consists largely
 15 of party and third-party source code, product-release, strategy, and financial information—may
 16 remain confidential, save one exception. That one exception is certain material that discloses
 17 Apple's expert Dr. Snoren's opinion on what constitutes a "heuristic," which is based solely on
 18 purely public, non-proprietary information. *See* Samsung MSJ at 20:16-19; ECF No. 1073-13
 19 ¶¶ 105-07. This material relates to Samsung's indefiniteness argument, a dispositive issue, and no
 20 one has articulated "compelling reasons" to keep this information secret. *See Kamakana v. City &*
 21 *Cnty. Of Honolulu*, 447 F.3d 1172, 1178 (9th Cir. 2006). Accordingly, the parties' administrative
 22 motions to seal are GRANTED in part but DENIED with respect to Samsung's motion for
 23 summary judgment at 20:16-19 and ECF No. 1073-13 at paragraphs 105-07.

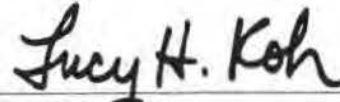
24 **V. CONCLUSION**

25 Apple's motion for summary judgment of infringement of the '172 Patent and invalidity of
 26 the '757 Patent is GRANTED. Apple's motion for summary judgment of infringement of the '647
 27 Patent, infringement of the '414 Patent, and no invalidity of the '959 Patent is DENIED.

1 Samsung's motion for summary judgment is DENIED. The parties' administrative motions to seal
2 documents related to their cross motions are GRANTED in part and DENIED in part.

3 IT IS SO ORDERED.

4 Dated: January 21, 2014



LUCY H. KOH
United States District Judge

United States District Court
For the Northern District of California

UNITED STATES DISTRICT COURT
 NORTHERN DISTRICT OF CALIFORNIA
 SAN JOSE DIVISION

APPLE INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
)	
Plaintiff and Counterdefendant,)	
v.	)	ORDER CONSTRUING DISPUTED
	)	CLAIM TERMS OF U.S. PATENT NOS.
SAMSUNG ELECTRONICS CO., LTD., a	)	5,579,239; 5,666,502; 5,946,647;
Korean corporation; SAMSUNG	)	7,577,757; 7,756,087; 7,761,414;
ELECTRONICS AMERICA, INC., a New York	)	8,014,760
corporation; SAMSUNG)	
TELECOMMUNICATIONS AMERICA, LLC,)	
a Delaware limited liability company,)	
)	
Defendants and Counterclaimants.)	

Plaintiff Apple Inc. (“Apple”) brings this suit against Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, “Samsung”). Apple asserts, among other things, that several of Samsung’s products infringe Apple’s patents. Samsung counterclaims that several of Apple’s products infringe Samsung’s patents. The parties now seek construction of nine disputed terms used in the claims of the following patents-in-suit: U.S. Patent Numbers 5,579,239 (“the ’239 Patent”); 5,666,502 (“the ’502 Patent”); 5,946,647 (“the ’647 Patent”); 7,577,757 (“the ’757 Patent”); 7,756,087 (“the ’087 Patent”); 7,761,414 (“the ’414 Patent”); and 8,014,760 (“the ’760 Patent”). The Court held a technology tutorial on February 14, 2013, and a claim construction hearing on February 21, 2013. The Court has reviewed the claims, specifications, and other relevant evidence, and has considered the briefing and arguments of the parties. The Court now construes the terms at issue.

I. LEGAL STANDARD

Claim construction is a question of law to be determined by the court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). “Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (internal quotation marks and citation omitted). Accordingly, a claim should be construed in a manner that “stays true to the claim language and most naturally aligns with the patent’s description of the invention.” *Id.*

In construing disputed terms, a court looks first to the claims themselves, for “[i]t is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Generally, the words of a claim should be given their “ordinary and customary meaning,” which is “the meaning that the term[s] would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1312-13. In some instances, the ordinary meaning to a person of skill in the art is clear, and claim construction may involve “little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.

In many cases, however, the meaning of a term to a person skilled in the art will not be readily apparent, and a court must look to other sources to determine the term’s meaning. *See Phillips*, 415 F.3d at 1314. Under these circumstances, a court should consider the context in which the term is used in an asserted claim or in related claims, bearing in mind that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* at 1313. Indeed, the specification “‘is always highly relevant’” and “[u]sually . . . dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Where the specification reveals that the patentee has given a special definition to a claim term that differs from the meaning it would ordinarily possess, “the inventor’s lexicography governs.” *Id.* at 1316.

Likewise, where the specification reveals an intentional disclaimer or disavowal of claim scope by the inventor, the inventor’s intention as revealed through the specification is dispositive. *Id.*

A court may also consider the patent’s prosecution history, which consists of the complete record of proceedings before the United States Patent and Trademark Office (“PTO”) and includes the cited prior art references. The court may consider prosecution history where it is in evidence, for the prosecution history “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it otherwise would be.” *Phillips*, 415 F.3d at 1317.

Finally, a court also is authorized to consider extrinsic evidence in construing claims, such as “expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980. Expert testimony may be particularly useful in “[providing] background on the technology at issue, . . . explain[ing] how an invention works, . . . ensur[ing] that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or . . . establish[ing] that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Phillips*, 415 F.3d at 1318. Although a court may consider evidence extrinsic to the patent and prosecution history, such evidence is considered “less significant than the intrinsic record” and “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.* at 1317-18 (internal quotation marks and citations omitted). Thus, while extrinsic evidence may be useful in claim construction, ultimately “it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1319. Any expert testimony “that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history” will be significantly discounted. *Id.* at 1318 (internal quotation marks and citation omitted). Finally, while the specification may describe a preferred embodiment, the claims are not necessarily limited only to that embodiment. *Phillips*, 415 F.3d at 1323; *see also Prima Tek II, L.L.C. v. Polypap, S.A.R.L.*, 318 F.3d 1143, 1151 (Fed. Cir. 2003) (“The general rule, of course, is that claims of a patent are not limited to the preferred embodiment, unless by their own language.”).

II. DISCUSSION REGARDING APPLE’S PATENTS

Apple and Samsung first request that the Court construe five disputed terms contained within four of Apple’s patents. Specifically, the parties dispute the meaning of: (1) “history list” and “field class” contained within the ’502 Patent; (2) “action processor” contained within the ’647 Patent; (3) “concurrently with” contained within the ’414 Patent; and (4) “completely substitute[e/ing] display of the list [of interactive items] with display of contact information” contained within the ’760 Patent.

A. The ’502 Patent

The disputed terms “history list” and “field class” appear in Apple’s ’502 Patent. The ’502 Patent, entitled “Graphical User Interface Using Historical Lists With Field Classes,” aims to provide solutions to improve the speed and efficiency of data entry into user interface fields.

Recognizing that a user is often asked to enter data into a particular field that he or she has entered previously, the ’502 Patent discloses “[a] data input technique for a computer that provides the user with a historical list of potential choices for the data input” ’502 Patent Abstract. The system allows “[t]he user [to] input[] data for a field of [a] form by selecting an item from the displayed historical list which corresponds to the particular field.” ’502 Patent, col. 2:25-28. This enables a user to simply select an entry in the list, rather than to re-type the data into the field. As the ’502 Patent explains, this improved data entry technique is particularly useful for small, hand-held computer devices, such as computerized personal organizers and tablets, where input errors during data entry are common. *See id.* at col. 1:8-25; col. 1:63-col. 2:13. The application for the ’502 Patent was filed on August 7, 1995, and the ’502 Patent issued on September 9, 1997.

1. “history list”

Samsung’s Proposed Construction	Apple’s Proposed Construction
“A list of choices based on historical information that is shared between different applications”	No construction necessary. Should the Court find construction necessary: “a list of previously used entries”

The term “history list” appears in independent claims 8, 11, 16, and 26 of the ’502 Patent. In addition, Apple contends that this term is covered by dependent claims 13-15, 17, 20, and 22-24. For example, independent Claim 11 of the ’502 Patent recites:

A method for inputting data into a computer system having a display screen associated therewith, said method comprising:

- (a) displaying a form on the display screen of the computer system, the form having at least one field associated with a field class and requiring data entry by a user;
- (b) displaying a **history list** associated with the field class on the display screen on the computer system;
- (c) determining whether the user has selected an item from the displayed **history list**;
- (d) assigning a data value for the field to that of a data value associated with the selected item when said determining (c) determines that the user has selected an item; and
- (e) updating the **history list** in accordance with the selected item when said determining (c) determines that the user has selected an item.

’502 Patent, col. 18:7-25 (emphasis added).

Apple does not believe that any construction of “history list” is necessary, though contends that, should the Court require a construction, a “history list” should simply be construed as “a list of previously used entries.” *See* Apple Op. Claim Constr. Br. (“Apple Br.”), ECF No. 356, at 4-5. Samsung does not dispute that a “history list” is comprised of “a list of previously used entries.” *See* Feb. 21, 2013 Claim Construction Hr’g Tr. (“Tr.”) at 20:6-22. Rather, the parties’ principle dispute centers around whether a history list *can* be shared between different applications, as Apple contends, *see* Apple Br. at 4-5, or whether a history list *must* be shared between different applications, as Samsung contends, *see* Samsung’s Resp. Claim Constr. Br. (“Samsung Resp.”), ECF No. 352, at 5. As discussed below, the Court is not persuaded by Samsung’s proposed construction as it is not supported by the claim language and reads out an embodiment. Therefore, the Court construes “history list” as simply “a list of previously used entries.”

a. Claim Language/Specification

The Court agrees with Apple that the term “history list” should be construed to mean “a list of previously used entries,” as this construction captures the plain meaning of the term as expressed in the claim language and is further supported by the specification.

The language of independent Claims 8, 11, 16, and 26, as well as the context in which the term “history list” appears, makes it clear that a “history list” is comprised of a list of previously used entries. *See* ’502 Patent, col. 18:7-25 (“updating the *history list* in accordance with the [user selected] item”) (Claim 11) (emphasis added); *see generally Phillips*, 415 F.3d at 1313 (noting that the words of the claims themselves are the objective starting point for claim interpretation). For example, Claim 11 describes that, when a user selects an item to fill in a field, the “history list” is updated to reflect that selection. *See* ’502 Patent, col. 18:7-25. Thus, the claim language itself makes clear that, at a minimum, a “history list” is a list of entries selected previously by the user.

The specification of the ’502 Patent also supports construing the term “history list” to mean “a list of previously used entries.” As stated in the specification, “[t]he history list is a list of data values most recently and/or most frequently used for the associated field.” *Id.* at col. 10:3-5. Other portions of the specification also refer consistently to the “history list” as comprising entries used “recently” or “frequently.” *See id.* at col. 2:30-33 (stating that the invention provides “the historical list of the most recently and/or frequently used data values”); *id.* at col. 2:66-col. 3:1 (“Preferably, the history list for each of the field classes is a menu list of most recently and frequently used data values for the field classes.”). In order to list data used “recently” or “frequently,” a user must have entered data in the same field previously. Thus, the specification clearly contemplates that a “history list” is “a list of previously used entries.”

Samsung does not contend that there is a meaningful difference between defining “history list” as “a list of choices based on historical information,” which is the first part of Samsung’s proposed construction, and Apple’s proposed construction, “a list of previously used entries.” *See* Tr. at 20:6-22. Rather, Samsung contends that the construction of “history list” should *also* include a limitation that the information included in the history list is “shared between different applications.” Samsung Resp. at 4-5.

The Court is not persuaded that the intrinsic evidence supports Samsung’s proposed construction. First, the claims themselves do not discuss the concept of sharing data between multiple applications. While Samsung contends that the term “field class” itself inherently requires sharing across different applications, there is no support for this contention within the words of the claims themselves.

Second, nothing in the specification requires sharing data between different applications. While Samsung does identify portions of the specification which indicate that the invention *may* share information between different applications, *see* Samsung Resp. at 4 (citing the ’502 Patent at col. 2:35-37), other portions of the specification make clear that the historical information does not have to be shared between applications, it is merely an option. *See, e.g.*, ’502 Patent Abstract (“The historical [sic] *can* also be shared between different applications . . .”) (emphasis added); *id.* at col. 4:20-23 (“The historical list *can* also be shared between different applications that execute on the computer system . . .”) (emphasis added).

Further, although Samsung cites to several embodiments of the invention that involve sharing data between different applications, the specification also includes embodiments that do not share any information between applications. For instance, in support of its contention that a “history list” must be shared between applications, Samsung points to Figures 13A and 13B, which illustrate the use of the invention disclosed in the ’502 Patent sharing historical entries between a fax program and a phone messaging program. However, the specification of the ’502 Patent also includes other simpler embodiments of the invention, such as Figure 4, which do not mention or include multiple applications. *See id.* at col. 9:40-col. 10:14; *id.* at FIG. 4. As noted by the Federal Circuit, a patentee is not to be limited to the embodiments depicted in the drawings, as these are often merely exemplary applications of the claimed technology. *See, e.g., Prima Tek II, L.L.C.*, 318 F.3d at 1148 (“[T]he mere fact that the patent drawings depict a particular embodiment of the patent does not operate to limit the claims to that specific configuration.”). Moreover, limiting the claim to the embodiments described in Figures 13A and 13B, which include multiple applications, would impermissibly exclude the simpler embodiment disclosed in the description of Figure 4. *See*

Vitronics, 90 F.3d at 1583 (holding that excluding a preferred embodiment is “rarely, if ever, correct.”).¹

Finally, the Court is not persuaded by Samsung’s claim that the construction should be limited to the so-called novel part of the “invention” described in the specification. *See Samsung Resp.* at 4-5; *see also id.* at 6 (citing *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011), for the proposition that, “[i]n reviewing the intrinsic record to construe the claims, [courts] strive to capture the scope of the actual invention, rather than . . . allow the claim language to become divorced from what the specification conveys is the invention.”). According to Samsung, the actual “‘invention’ is the patent’s allegedly key improvement over the prior art,” which Samsung construes as the sharing of history information across different applications. *Samsung Resp.* at 5. In support of this position, Samsung relies heavily on Figures 13A and 13B, which “illustrat[e] usage of the invention across different programming applications.” ’502 Patent, at col. 16:23-24. However, unlike in *Retractable Technologies, Inc.*, the specification of the ’502 Patent does not expressly limit the claims to Figure 13A and 13B, the sharing embodiments. In fact, the specification also describes a simpler embodiment depicted in Figure 4 as “the invention.” *See id.* at col. 9:40-41 (“FIG. 4 is a basic block diagram of list processing 164 associated with a basic embodiment of *the invention*.”) (emphasis added). Yet, as already discussed, nothing in the description of Figure 4 requires that a “history list” be shared between the proffered applications. *Id.* at col. 9:40-64. Thus, while some of the embodiments of the invention described in the ’502 Patent involve sharing a “history list” between multiple applications, the specification does not support limiting the claims to only these embodiments.

Therefore, the Court is not persuaded that the claims or the specification support Samsung’s proposed construction. Rather, the Court finds that Apple’s proposed construction is more plausible.

¹ Samsung also argued during the claim construction hearing that the algorithm in Figure 4 required sharing between multiple applications. *See Tr.* at 14:1-10. As described above, the Court disagrees with Samsung that either Figure 4 or the accompanying description *requires* sharing between applications.

b. Prosecution History

Samsung also argues that the prosecution history supports its position that the term “history list,” as it is used in the ’502 Patent, must be shared between multiple applications. *See* Samsung Resp. at 4-5. “The court must always consult the prosecution history, when offered in evidence, to determine if the inventor surrendered disputed claim coverage.” *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1286 (Fed. Cir. 2005). When a patentee amends the language of the claims in order to overcome a rejection because of prior art, the patentee disclaims what was eliminated from the patent. *See Omega Eng’g, Inc., v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003). Thus, “[w]hile there are times that the prosecution history ‘lacks the clarity’ of other intrinsic sources, the prosecution history may be given substantial weight in construing a term where that term was added by amendment.” *Bd. of Regents of the Univ. of Texas Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1369 (Fed. Cir. 2008) (internal citations omitted). Nevertheless, “[a] disclaimer must be ‘clear and unmistakable,’ and unclear prosecution history cannot be used to limit claims.” *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009) (citing *Free Motion Fitness, Inc. v. Cybex Int’l, Inc.*, 423 F.3d 1343, 1353 (Fed. Cir. 2005)).

Samsung argues that, during prosecution, the U.S. Patent and Trademark Office Examiner (“Examiner”) only allowed the asserted claims to survive the examination due to the sharing of a history list among different applications for a particular “field class.” *See* Samsung Resp. at 3. Samsung’s argument is not, however, supported by the record.

During the prosecution of the ’502 Patent, the Examiner indicated that various claims of the ’502 Patent were obvious in light of various references and screenshots of the Borland Turbo C++ software (“Turbo”). *See* Decl. of Victoria Maroulis in Supp. Samsung Resp. Br. (“Maroulis Decl.”), ECF No. 352, Ex. 2, at APLNDC630-0000056178-APLNDC630-0000056180 (“Office Action Summ.”). The Examiner rejected Claims 5-7, 11-13, 15, and 26 because the Examiner believed that, among other things, Turbo taught “the use of a history list to expedite the entry of information of previously used data.” Office Action Summ. at 5.

In response to an interview, however, the Examiner amended the claims by adding a “field class” limitation and allowed the claims. *See* Maroulis Decl., Ex. 2 at APLNDC630-0000056183-

APLNDC630-0000056189 (“Notice of Allowability”). As an example, Claim 11 was rewritten to state “displaying a form on the display screen of the computer system, the form having at least one field *associated with a field class and* requiring data entry by a user; displaying a history list associated with the field *class* on the display screen. . . .” Notice of Allowability at 2 (emphasis in original). As a basis for allowance, the Examiner stated that Turbo “does not teach updating the history list associated with the field class. In contrast, [Turbo] seems to limit updating to a specific entry field instance.” Notice of Allowability at 4. Therefore, the Examiner concluded that the prior art “does not render obvious nor anticipate the combination of claim elements in light of the specification.” *Id.*

Notably, during the prosecution, the Examiner made no reference to multiple applications. Instead, the Examiner appears to have allowed the claims on the ground that Turbo did not teach: (1) associating several different *fields* with the same “field class,” and then (2) associating a history list with that “field class.” Rather, Turbo only associated one field with each history list and did not group multiple fields into the same “class.” Notice of Allowability at 4. Therefore, the prosecution history does not support Samsung’s contention that the history list must be shared between multiple applications.

c. Extrinsic Evidence

Finally, in support of its proposed construction, Samsung cites to the extrinsic evidence, which is generally not dispositive of claim construction. Specifically Samsung cites to the deposition of Stephen Capps, the patents’ inventor. *See* Samsung Resp. at 4. Samsung maintains that Mr. Capps’s interpretation of the novel elements of the ’502 Patent support Samsung’s contention that a “history list” must be shared between applications. Mr. Capps identified the sharing of information between applications as the key difference between the prior art and the ’502 Patent. *Id.* at 3-4 (citing Maroulis Decl., Ex. 3, Dep. Tr. of Mr. Capps from Dec. 7, 2012). However, as discussed above, the specification and prosecution history do not support reading this limitation into the claim language. Thus, the Court gives this source little or no weight. *See Bell & Howell DMP Co. v. Altek Systems*, 132 F.3d 701, 706 (Fed. Cir. 1997) (“The testimony of an inventor . . . concerning claim construction is . . . entitled to little or no consideration. The

testimony of an inventor often is a self-serving, after-the-fact attempt to state what should have been part of his or her patent application”) (quoting *Markman*, 52 F.3d at 983).

Accordingly, the Court construes “history list” to mean “**a list of previously used entries.**”

2. “field class”

Samsung’s Proposed Construction	Apple’s Proposed Construction
“a data element that identifies a category of information”	No construction necessary. Should the Court find construction necessary: “a category of information associated with a field”

The term “field class” appears in Claims 1-2, 4-5, 8, 11, 13-17, 20, 22-24, and 26 of the ’502 Patent. For example, independent Claim 11 of the ’502 Patent recites:

A method for inputting data into a computer system having a display screen associated therewith, said method comprising:

- (a) displaying a form on the display screen of the computer system, the form having at least one field associated with a **field class** and requiring data entry by a user;
- (b) displaying a history list associated with the **field class** on the display screen on the computer system;
- (c) determining whether the user has selected an item from the displayed history list;
- (d) assigning a data value for the field to that of a data value associated with the selected item when said determining (c) determines that the user has selected an item; and
- (e) updating the history list in accordance with the selected item when said determining (c) determines that the user has selected an item.

’502 Patent at col. 18:7-25 (emphasis added).

Apple maintains that the term “field class” does not need construction or that, if it does, it should be understood as “a class or category of information with which a field is associated.”

Apple Br. at 7. Samsung contends that “field class” should be construed not only to mean a category of information, but also an actual data element in software that identifies a category of information. *See* Samsung Resp. at 8. For the reasons stated below, the Court concludes that Samsung’s proposed construction is not supported by the claim language or specification and

adopts Apple’s construction of field class as “a category of information with which a field is associated.”

The claims of the ’502 Patent do not define “field class” and only reference a “field class” as something that may be associated with at least one field (such as on a form) and with at least one history list or table. *See* ’502 Patent at col. 18:7-25. Thus, the Court turns to the specification for further guidance.

The invention disclosed by the ’502 Patent allows for a user to easily fill out electronic forms by suggesting historical entries to the user when the same or similar fields on different forms are encountered. *See* ’502 Patent Abstract. The specification describes a “field class” as a category of information corresponding to a history list or history table that can also be associated with a particular field on a form. *See* ’502 Patent at col. 2:45-66. The “field class” describes the particular category of historical information that should be associated with a particular field. For example, as described in the ’502 Patent, the form fields “name,” “caller,” and “to” may all be associated with the same field class of “full names.” *See* ’502 Patent at col.10:45-67; *id.* at col. 16:23-49. As such, if a user selected the field “name” or “caller” depending on the form, the same history list containing “full names” would be referenced to offer suggestions to the user. As described in the specification, “each history list is associated with a field class . . . [and] [t]he input fields of a form then designate the field class associated therewith.” ’502 Patent at col. 10:64-66. Thus, the specification makes clear that a “field class” should at least be understood to be a particular category of information that is associated with a particular field on a document.

The remaining dispute centers on whether a “field class” is merely a category of information or if it is an actual “data element” as proposed by Samsung. Samsung states that, because the concept of a “field class” “must exist in software, and not simply a user’s mental impression,” it must exist as a “data element.” *See* Samsung Resp. at 10. According to Samsung, to not tie the “field class” to a concrete data element in a software program would “render the limitation essentially meaningless.” *Id.* (“If the ‘field class’ in the ’502 Patent was nothing more than an *abstract* association between a field and a category of information, and not a tangible data

element in the software, the claims would be unpatentable, and thus would not have been allowed.”) (emphasis in original).

While the invention of the ’502 Patent is related to software and computer systems, this fact alone does not require that each claim term be explicitly defined as a particular software element to become meaningful. Apple’s proposed construction will not relegate “field class” to a “user’s mental impression” or “abstract idea,” as Samsung contends, *see* Samsung Resp. at 10, because it is not just an amorphous concept left to the user’s mind. It is a discrete association that is actually carried out on a “computer system.” *See* ’502 Patent at col. 18:7-25 (claiming a “method for inputting data into a computer system” wherein the “display screen” and associated computer “display[] a history list associated with the field class on the display screen.”).

Moreover, the term “data element” does not appear anywhere in either the intrinsic record or the extrinsic evidence submitted by Samsung, and would thus interject a new and undefined term into the claim language. The goal of claim construction is to remove ambiguity from the claim terms. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Because the specification does not make reference to a “data element” or any equivalent limitation, the addition of that term would add unnecessary ambiguity and confusion to the claims.

Accordingly, the Court construes the term “field class” to mean “**a category of information associated with a field.**”

B. The ’647 Patent

The disputed term “action processor” appears in Apple’s ’647 Patent. The ’647 Patent, entitled “System and Method for Performing an Action on a Structure in Computer-Generated Data,” discloses “a system and a method [that] causes a computer to detect and perform actions on structures identified in computer data.” ’647 Patent Abstract. Generally speaking, the system “identifies structures, associates . . . actions to the structures, enables selection of an action and automatically performs the selected action on the structure.” *Id.* at col. 1:66-col. 2:2. The application for the ’647 Patent was filed on February 1, 1996, and the ’647 Patent issued on August 31, 1999.

1. “action processor”

Samsung’s Proposed Construction	Apple’s Proposed Construction
“a program routine separate from a client that performs the selected action on the detected structure”	No construction necessary. Should the Court find construction necessary: “program routine(s) that perform the selected action on the detected structure”

The term “action processor” appears in Claim 1 of the ’647 Patent. Independent Claim 1 of the ’647 Patent recites:

A computer-based system for detecting structures in data and performing actions on detected structures, comprising:

an input device for receiving data;

an output device for presenting the data;

a memory storing information including program routines including

an analyzer server for detecting structures in the data, and for linking actions to the detected structures;

a user interface enabling the selection of a detected structure and a linked action; and

an **action processor** for performing the selected action linked to the selected structure; and

a processing unit coupled to the input device, the output device, and the memory for controlling the execution of the program routines.

’647 Patent at col. 7:9-24 (emphasis added).

The ’647 Patent discloses a system and method for recognizing when certain patterns or “data structures” are present in a data set, and automatically providing optional actions for a user to perform on the data structures. *See id.* at col. 2:21-54. For example, the system may scan a Microsoft Word document and recognize when phone numbers or email addresses appear in the document. *See id.* at col. 1:24-35; *see also id.* at col. 2:42-53. Then, the system may link actions to these structures and allow the user to select an action. *Id.* As an example, when an email address is detected in a document, the system may automatically give the user the options to send an email to the identified address or to store the email address in an electronic address book. *Id.* at col. 5:5-18. As another example, when a phone number is detected in a document, the system may

1 give the user the option to place a call to that phone number or to place the number in an electronic
2 telephone book. *Id.*

3 As described in the claims and the specification, the invention of the '647 Patent achieves
4 this functionality principally through the use of three program routines: (1) an analyzer server; (2) a
5 user interface; and (3) an action processor. Collectively, the specification refers to these routines
6 as the "program." *See id.* at col. 7:9-24 (Claim 1); *id.* at col. 2:25-27 ("the program includes
7 program subroutines that include an analyzer server, an application program interface, a user
8 interface and an action processor."); *id.* at Fig. 2 (depicting a "Program," 165, made up of
9 subroutines including the action processor). The analyzer server "detect[s] structures [(patterns)]
10 in the data," and "link[s] actions to the detected structures." *Id.* at col. 7:16-17. The user interface
11 "enable[s] the selection of a detected structure and a linked action." *Id.* at col. 7:18-19. Finally,
12 the action processor "perform[s] the selected action linked to the selected structure." *Id.* at col. 7:
13 20-21. The action processor operates by "retriev[ing] the sequence of operations that constitute the
14 selected action, and perform[ing] the sequence using the selected structure as the object of the
15 selected action." *Id.* at col. 4:54-57. In the above example involving the Word document, if the
16 user elected to save the recognized phone number to an electronic telephone book, the action
17 processor would "locate[] and open[] the electronic telephone book, [and] place[] the telephone
18 number in the appropriate field and allow[] the user to input any additional information into the
19 file." *Id.* at col. 5:47-50.

20 The parties agree in principle that the "action processor" is "a program routine that
21 performs the selected action on the detected structure." *See* Apple Br. at 10; Samsung Resp. at 11.
22 However, Samsung seeks to add a limitation that this action processor must be "separate from a
23 client [or application]."² *Compare* Apple Br. at 11, *with* Samsung Resp. at 12. Apple maintains
24 that reading "separate from a client" into the claim language would both introduce ambiguity and
25 improperly import a limitation into the claim based on a particular embodiment of the invention.
26 *See* Apple Br. at 11-13. The Court finds that, while the specification discloses several

27 ² Samsung stated that there is no difference in this context between the term "Client," which is not
28 found in the patent, and the term "Application," which is found in the patent. *See* Samsung Resp.
at 13.

embodiments which utilize sharing between applications, sharing is not a requirement. Therefore, the Court adopts Apple’s construction.

a. Claim Language/Specification

The claims themselves neither mention a “client” nor make reference to the location of the action processor, apart from it being located in the memory storage of a computer-based system (which it would be whether integrated into, or separate from, any client or application). *See* ’647 Patent at col. 7:9-24. The claims do, however, provide some guidance. Specifically, the doctrine of claim differentiation suggests that the action processor is not necessarily separate from the application supplying the data.

The presence of a dependent claim with an additional limitation indicates that the limitation is not found in the independent claim it references. *See Phillips*, 415 F.3d at 1314-15. Here, independent Claim 15 recites:

In a computer having a memory storing actions, a method for causing the computer to perform an action on a structure identified in computer data, comprising the steps of:

- receiving computer data;
- detecting a structure in the data;
- linking at least one action to the detected structure;
- enabling selection of the structure and a linked action; and
- executing the selected action linked to the selected structure.

’647 Patent at col. 8: 23-34. Dependent Claim 16 includes an additional limitation not found in Claim 15:

The method recited in claim 15, wherein the computer data is received from the application running concurrently.

Id. at col. 8:34-35.

The claims strongly suggest that an action processor is not necessarily separate from the application containing the data. While Claim 16 includes the requirement that the data be received from a separate application, this limitation requiring separateness is *not* found in Claim 15. Under the doctrine of claim differentiation, it appears that Claim 15 may be satisfied by a program that is *not* separate. Though Claim 15 does not actually use the term “action processor,” it does refer to “executing the selected action linked to the selected

structure,” which is precisely the language used in Claim 1 to describe the function of the action processor. *See* ’647 Patent at col. 7:20-21. A very similar argument arises with respect to Claim 1, which claims the action processor, and Claim 3, which claims “the system recited in claim 1, wherein the input device receives the data from an application running concurrently. . . .” *Id.* at col. 7:27-30.

Samsung’s arguments for requiring separateness based on the embodiments disclosed in the specification are insufficient to overcome the clear indication from the claims that no such separateness is required. As Samsung points out, the specification of the ’647 Patent consistently describes the claimed invention interacting with an “application.” *See, e.g., id.* at col. 3:36-44 (“Application 167 is a program, such as a word-processor or email program. . . . The [claimed invention] identif[ies] structures in the data presented by application 167, [and acts] to associate actions with the structures identified in the data, to enable the user to select a structure and an action, and to automatically perform the selected action on the identified structure.”). In addition, as noted by Samsung, the preferred embodiment of the ’647 Patent clearly contemplates the claimed program routines interacting with a separate application. Specifically, Figure 1 of the specification shows a box (element 165, identified as “Program”) containing the program routines of the claimed invention (including the action processor). This Program is adjacent to a separate box (element 167), identified as the “Application,” on which the Program acts. *See id.* at Fig. 1. Similarly, Figures 8 and 9 show the claimed invention operating during the runtime of an apparently separate application. *Id.* at col. 5:50-55 (“FIGS. 8 and 9 display a flowchart illustrating preferred method 800 for recognizing patterns in documents and performing actions. This method is carried out during the run-time of application 167.”).

However, the fact that the specification depicts the program acting on a separate application does not ultimately support Samsung’s proposed limitation. First, the language of the claims should not be limited to only the preferred embodiment. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004). Second, the figures of the specification are often idealized or simplified renditions of the claimed invention, and the claims should not be limited to those renditions. *Prima Tek II, L.L.C.*, 318 F.3d at 1148. Finally, nothing in the specification clearly

states that the patentee intended the invention only to operate in conjunction with a separate application. In fact, the summary of the invention states that “the program *may* be executed during the run-time of another program, i.e. the application which presents the document, such as Microsoft Word.” ’647 Patent at col. 2:42-46 (emphasis added). The invention summary does not say that it “must” or “shall” operate during the run-time of another program.

In addition, Samsung argues that the action processor must be separate because “the detected structure and selected action are ‘transmitted’ to the action processor.” Samsung Resp. at 12 (citing ’647 Patent at col. 4:52-54). Presumably, Samsung is arguing that information cannot be “transmitted” from the application to the action processor if the action processor is integrated into the application. However, the language Samsung cites, when read in context, specifies that, as depicted in Figure 2, it is the user interface that transmits the information to the action processor. *See* ’647 Patent at col. 4:52-54. In Figure 2, the “user interface” and the “action processor” are both part of the larger “Program,” indicated by Box 165. Thus, the “transmission” that the Patent is describing occurs internally within the Program, regardless of whether that Program is integrated into the application or completely separate from it. This language thus does not support Samsung’s construction.

Samsung also claims that one of skill in the art would understand the word “processor” to imply a separate software component that executes actions on behalf of client applications. *See* Samsung Resp. at 14. However, Samsung provides no legal or factual support for this proposition. Indeed, Samsung’s argument appears to be premised on the generally understood meaning of a different word entirely: “server.”

Therefore, the claim language and specification do not support Samsung’s contention that the action processor must be “separate from a client.”

b. Prosecution History

Samsung also argues that the prosecution history supports Samsung’s position that the term “action processor,” as it is used in the ’647 Patent, refers to a program routine that is “separate from a client” because the applicant referred to the invention as a “system-wide service.” *See*

Samsung Resp. at 14. This argument is of limited relevance given the clear indication in the claims. However, for the sake of thoroughness, the Court will address the prosecution history.

During the prosecution of the '647 Patent, the PTO Examiner indicated that the claims of the '647 Patent were anticipated by U.S. Patent No. 5,574,843 ("*Gerlach*"). Decl. of Jennifer Rho in Supp. Apple Br. ("Rho Decl."), ECF No. 333, Ex. E, at 2. *Gerlach* disclosed "[a] computer-based system for detecting structures in data and performing actions on detected structures" *Gerlach* Abstract. The Examiner rejected independent Claims 1-3, 11-14, and 20 of the '647 Patent because the Examiner believed that, among other things, "an action processor" was disclosed by *Gerlach*. *Id.* at 2-3.

Notably, the prosecution history indicates that the disagreement between the Patentee and the Examiner about the meaning of "action processor" was over the definition of "structures," not over the location of the action processor. Specifically, in response to the rejection, the Patentee argued that *Gerlach* did not teach an "action processor" because it did not describe "selecting a pre-existing structure detected from within externally generated data." Rho Decl. Ex. F, at 5. The Patentee argued that *Gerlach* relied on internally generated structures, such as unique computer code, as opposed to using pre-existing structures having "semantic significance such as phone numbers, e-mail addresses, post-office addresses, zip codes and dates." *Id.* at 4 (quoting the '647 Patent). The Patentee distinguished *Gerlach* on the grounds that the data structures in the '647 Patent were "generated *externally* to [Patentee's] system" (e.g., the outside world defines that a 7- or 10-digit string with appropriate dashes represents a telephone number). *Id.* (emphasis in original). Thus, the patentee made clear that the action processor, unlike the invention in *Gerlach*, does not define the structures. However, this clarification says nothing about whether the action processor must be separate from the application on which it operates.

Samsung also argues that the Patentee's explanations for how the invention is different from the *Gerlach* invention require that the invention of the '647 Patent be considered "separate from a client." Samsung Resp. at 12, 14. In support of its argument, Samsung states that, because the applicant referenced the invention as a "system-wide service" that can "enable cooperating systems to detect recognizable structures," the "action processor" must be "separate from a client."

Id. at 12. Otherwise, presumably, it would not need to be system-wide, as it could be confined to a single program. However, even if the mention of a “system-wide service” does indicate that the invention served to *enable* cooperation across different applications, that does not mean that such cooperation is *required* to satisfy the claims. Thus, the prosecution history of the ’647 Patent does not support Samsung’s contention that the action processor must be “separate from a client.”

Accordingly, Apple’s construction, which mirrors the claim language, is supported by both the specification and the prosecution history, and the Court construes “action processor” to mean **“program routine(s) that perform the selected action on the detected structure.”**

C. The ’414 Patent

The disputed term “concurrently with” appears in Apple’s ’414 Patent. The ’414 Patent, entitled “Asynchronous Data Synchronization Amongst Devices” discloses “[s]ystems [and] methods . . . for synchronization tasks and non-synchronization tasks being executed concurrently.” ’414 Patent Abstract. The system allows, for example, “a user [to] manipulate or view a calendar while a synchronization operation, which synchronizes structured data from, for example, the calendar or other databases such as a contact database, is being performed.” ’414 Patent at col. 2:37-40. The application for the ’414 Patent was filed on January 7, 2007, and the ’414 Patent issued on July 20, 2010.

1. “concurrently with”

Samsung’s Proposed Construction	Apple’s Proposed Construction
“At the same time as”	No construction necessary. Should the Court find construction necessary: “The synchronization thread and the non-synchronization thread are both active during an overlapping time interval.”

The term “concurrently with” appears in Claims 1, 11, 21, 23, 27, and 31 of the ’414 Patent. For example, independent Claim 1 of the ’414 Patent recites:

A machine implemented method comprising:

executing at least one user-level non-synchronization processing thread,
wherein the at least one user-level non-synchronization processing thread is
provided by a user application which provides a user interface to allow a

user to access and edit structured data in a first store associated with a first database; and

executing at least one synchronization processing thread **concurrently with** the executing of the at least one user-level non-synchronization processing thread, wherein the at least one synchronization processing thread is provided by a synchronization software component which is configured to synchronize the structured data from the first database with the structured data from a second database.

'414 Patent at col. 32:56-col. 33:3 (emphasis added).

The '414 Patent describes systems and methods that allow for both “synchronization tasks and non-synchronization tasks to be executed concurrently.” '414 Patent at col. 2:18-20. With the advent of mobile computing devices, many databases contained on those devices such as contact information, “to-do” lists, or calendar information often need to be shared between multiple computers. *See id.* at col. 1:13-35. It is desirable that these databases synchronize with each other such that, for example, when a user makes changes to his or her calendar on a mobile phone, that change is reflected on the calendar on his or her home computer. *Id.* For this to be accomplished, the two computing devices need to synchronize with each other. *Id.* Traditional synchronization software required that the program being synchronized be locked or inaccessible during the synchronization operation. *Id.* at col. 1:35-66. The invention embodied in the '414 Patent overcomes the limitations of these prior systems and allows for the synchronization operation to run currently with the user performing non-synchronization operations. *Id.* at col. 2:18-27. For example, in certain embodiments a user may view or manipulate a calendar “while a synchronization operation, which synchronizes structured data from, for example, the calendar or other databases such as the contact database, is being performed [at the same time].” '414 Patent at col. 2:37-40.

The parties disagree as to what it means for the synchronization operation to be executed “concurrently with” the non-synchronization operation. The parties’ proposed constructions differ as to whether “concurrently with” means that both the synchronization and non-synchronization threads are being executed by a processor at precisely the same instant, as Samsung proposes, or merely within an overlapping time frame as with rapid switching back and forth between the processes as Apple proposes. The Court concludes that, while the claims and specification are

unclear as to the meaning of “concurrently with,” the extrinsic evidence supports Apple’s proposed construction that the threads need only be active “during an overlapping time interval.”

a. Claim Language/Specification

The claims themselves do not define “concurrently with” other than to state that the “processing thread[s]” associated with the synchronization and non-synchronization routines are executed “concurrently.” *See* ’414 Patent at col. 32:56-col. 33:3. Thus, the Court turns to the specification for further guidance.

The specification provides some limited guidance as to the meaning of “concurrently with.” Samsung’s proposed construction “at the same time” is found in the specification’s description of Figures 13A and 13B, but it does not provide any clearer guidance as to whether both processing threads are being executed at the exact same instant, or if they are merely being completed during an overlapping time frame. *See id.* at col. 24:53-67 (“[A] user on [a] device may be viewing a calendar . . . while *at the same time* a synchronization service is synchronizing the calendar. . . .”) (emphasis added).

The specification does, however, make clear that the invention can operate either on a single processor or on multiple processors. Specifically, the description for Figures 13A and 13B states that “[the] non-synchronization processes and synchronization processes occur[] concurrently in that they are both being executed by one or more processing systems.” *See id.* at col. 24:45-47. Thus, the specification contemplates that the synchronization and non-synchronization processing threads may be executed “concurrently” either by a single processor or by multiple processors. The description of Figure 3 also describes embodiments of the invention containing either one or multiple processors. *See id.* at col. 6:15-17 (“The data processing system 60 shown in FIG. 3 includes a processing system, which may be one or more microprocessors”); *see also id.* at 5:23-24 (“The processing system 47 may include one or more microprocessors”).

Thus, while the meaning of “concurrently with” is not apparent from the words of the claims or of the specification, the specification does make clear that the processing threads for both the synchronization and non-synchronization processes may be executed “concurrently” by a

device with only one processor. Therefore, an appropriate construction for “concurrently with” must be one that can be implemented on a single processor. As the specification provides no further guidance, and the parties have submitted no prosecution history, the Court turns to extrinsic evidence.

b. Extrinsic Evidence

When interpreting a claim, a court should first look to the intrinsic evidence such as the claim language, specification, and prosecution history. *Vitronics*, 90 F.3d at 1582. If ambiguity remains as to the meaning of a claim term after considering the intrinsic evidence, the court may turn to extrinsic evidence. *Id.* at 1584.

In this dispute, the claims, specification, and prosecution history do not provide an adequate definition of “concurrently with.” The specification repeatedly makes reference to a one-processor embodiment of the invention that may execute the processing threads for both the synchronization and non-synchronization operations “concurrently,” but the specification does not describe *how* this one-processor embodiment accomplishes this feat. The Court thus considers extrinsic evidence as to what it means for a “single processor” to execute two threads “concurrently.”

In support of its construction that the two threads need only be “active during an overlapping time interval,” rather than at precisely the same instant, Apple argues that a single processor can only execute one single programming instruction at a time. *See* Apple Br. at 17. Thus, Apple maintains, it was commonly understood in the computing and software field at the time of the invention that “concurrently,” when referencing a single processor with multiple program threads, meant that the processor would rapidly switch back and forth between the multiple threads, thereby giving the illusion of simultaneous processing. *Id.* Apple submitted excerpts from several technical dictionaries and an operating system textbook in support of its argument. *See* Rho Decl., Exs. I, J, K. The 2004 *Wiley Electrical and Electronics Dictionary* states that, because “microprocessors can work so quickly, [concurrent execution] seems simultaneous, even though each operation is usually executed in sequence.” *See* Rho Decl., Ex. I, Kaplan, *Wiley Electrical and Electronics Dictionary* (2004) at 138. Additionally, the 1992 textbook *Modern Operating Systems* states that, “strictly speaking, at any instant of time, the

[single processor] is running only one program, in the course of 1 second, it may work on several programs, thus giving users the illusion of parallelism.” *See* Rho Decl. Ex. J, Tanenbaum, *Modern Operating Systems* (1992) at 27. Thus, Apple argues that its construction, “[both] thread[s] are both active during an overlapping time interval,” accurately describes this rapid-swapping operation of a single processor that was included in the common understanding of “concurrently.” This definition does not require true simultaneous processing of the multiple threads (which would require more than one processor or a multi-core processor).

Samsung argues that it is “factually incorrect” to state that a “single microprocessor is . . . incapable of executing two threads ‘at the same time.’” Samsung Resp. at 17. Samsung states that, at the time of the ’414 Patent, multi-core processors existed that were capable of being configured to execute multiple threads at the same time. *Id.* at n.8. Thus, according to Samsung, a single processor *could* execute two threads simultaneously, without the rapid switching contemplated by Apple, as long as it was a multi-core processor, and thus Samsung’s construction could be correct even for single-processor embodiments.

Apple, however, has presented convincing evidence in the form of an IBM technical paper that, even if multi-core processors were available at the time of the invention, they were not considered to be single processors. Rather, they would be considered “two physical processors on one chip.” *See* Decl. of Jennifer Rho in Supp. Apple Reply (“Rho Reply Decl.”), ECF No. 362, Ex. 3, at 4. Thus, the single processor embodiments contemplated by the specification do not seem to include multi-core processors, which would be considered multi-processor systems.

Moreover, as Apple points out, the specification also discloses implementation on a “cellular telephone with PDA-like functionality.” ’414 Patent at col. 6:46. Apple has presented evidence that the first cellular phone with a multi-core processor was not released until December of 2010, *see* Rho Reply Decl. Ex. 4, while the ’414 Patent Application was filed in July of 2010. Thus, at the time of the ’414 Patent’s application, any embodiment on a cellular phone most likely was intended to work on only a single processor, without multi-core functionality. As the parties appear to agree that one basic (non-SMT, non-dual core) single processor cannot execute two threads in precisely the same instant, the specification’s indication that the invention can be

implemented on a single processor makes clear that “concurrently with” cannot be given a meaning that could not be implemented in one single processor.

While Samsung criticizes Apple’s extrinsic evidence as “cherry picked” and “out of date,” Samsung does not provide any reliable extrinsic evidence for its claim that persons of ordinary skill in the art would have understood a single “processor” to reference only multi-core processors at the time of the ’414 Patent. *See* Samsung Resp. at 19-20. Nor does Samsung provide any evidence to contradict Apple’s evidence that Samsung claims is an inaccurate representation of the state of the available evidence at the time of the invention.

Thus, the extrinsic evidence indicates that a person of ordinary skill in the art at the time of the invention would have understood “concurrently” to include the kind of rapid switching contemplated by Apple’s proposed construction, which would permit the invention to be implemented on a single processor. Accordingly, Apple’s construction is supported by both the intrinsic and extrinsic evidence, and the Court construes “concurrently with” to mean **“the synchronization thread and the non-synchronization thread are both active during an overlapping time interval.”**

D. The ’760 Patent

The disputed term “completely substitute[e/ing] display of the list [of interactive items] with display of contact information” appears in Apple’s ’760 Patent. The ’760 Patent, entitled “Missed Telephone Call Management for a Portable Multifunction Device” discloses “a computer-implemented method [for managing missed calls] . . . for use in conjunction with a portable electronic device with a touch screen display.” ’760 Patent Abstract. The method allows, for example, “[displaying] a list of items comprising missed telephone calls . . . [and] [u]pon detecting user selection of an item in the list, [displaying] contact information . . . for a respective caller corresponding to the user selected item.” *Id.* The ’760 Patent is intended to enable smartphone users to contact a missed caller easily and quickly by phone, e-mail, instant message, or other method of communication with just a few simple gestures on a touchscreen. The application for the ’760 Patent was filed on June 27, 2007, and the ’760 Patent issued on September 6, 2011.

1. “Completely substitut[e/ing] display of the list [of interactive items] with display of contact information”

Samsung’s Proposed Construction	Apple’s Proposed Construction
Original: “Display[ing] numbers, addresses, and/or instant messaging usernames for contacting a caller such that none of the list of missed calls is visible.” <i>Markman</i> Revised Construction: ³ “Entirely replac[e/ing] the display of interactive items from a missed call list with the contact list entry”	No construction necessary. Original, should the Court find construction necessary: “Replace[e/ing] the display of the list of interactive items with the display of information for a selected contact” <i>Markman</i> Revised Construction: “Displaying at least two contact objects in place of the display of the list of interactive items”

The term “completely substitute[e/ing] display of the list [of interactive items] with display of contact information” appears in various forms in Claims 1, 8, 10, 12, 14, 16, 18, 19, and 21 of the ’760 Patent. For example, independent Claim 1 of the ’760 Patent recites:

A method, comprising:

at a portable electronic device with a touch screen display:

displaying a list of interactive items comprising missed telephone calls, wherein each item in the list of interactive items includes a first interactive displayed portion and a second interactive displayed portion distinct from the first interactive displayed portion;

immediately in response to detecting a finger gesture on the first interactive displayed portion of a respective user selected item in the list, initiating a return telephone call to a return telephone number associated with the respective user selected item;

immediately in response to detecting a finger gesture on the second interactive displayed portion of the respective user selected item in the list, **completely substituting display of the list of interactive items with display of contact information** for a respective caller corresponding to the respective user selected item, the displayed contact information including a plurality of contact objects; the plurality of contact objects including:

a first contact object comprising a telephone number object having the return telephone number, and

³ During the technology tutorial, the Court requested that the parties clarify their dispute over “completely substituting” as the parties’ briefing and tutorials were unclear and the parties appeared to agree on several aspects. At the claim construction hearing, the parties narrowed and clarified their dispute for the Court and also proposed new constructions for “completely substituting.” See Tr. at 82:11-83:14. The Court’s Order is directed toward the parties’ revised, as opposed to original, constructions.

a second contact object associated with a non-telephonic communication modality for contacting the respective caller; and

immediately in response to detecting user selection of the second contact object, initiating a communication with the respective caller via the non-telephonic communication modality corresponding to the second contact object.

'760 Patent at col. 36:19-49 (emphasis added).

The '760 Patent claims a method for managing missed telephone calls on a mobile device, such as a smartphone. *See* '760 Patent Abstract. The Background of the '760 Patent notes that, due to the small size of modern smartphones, it can often be difficult to design an interface that is simple and easy to use, but still allows the user to access the multitude of functions the device offers. *See id.* at col. 1:49-col. 2:18. The inventors of the '760 Patent were particularly concerned with the design of an interface that would allow the user to view missed calls and be able to respond to those calls in one or more ways without having to memorize “complicated key sequences and menu hierarchies.” *Id.* at col. 1:66-67. In some embodiments, the user will be provided with a screen that lists missed calls from various persons. *Id.* at col. 24:45-64; *see also id.* at col. 30:41-64. Each entry on the list will have two distinct interactive portions (regions where the user may tap a touchscreen and activate a response). *Id.* at col. 30:41-61. If the user taps on the first interactive portion of an item, a return phone call is initiated to the return telephone number associated with that item. *Id.* at col. 32:16-23. If, instead, the user taps on the second interactive portion of an item, a display of “contact information” is shown for the caller corresponding to the selected item. *Id.* at col. 31:3-22. The screen showing the contact information for the selected item is “completely substitute[ed]” for the original screen containing the listing of missed calls. *Id.*; *id.* at col. 36:19-49 (Claim 1). The new display shows the “contact information” associated with the selected person and allows the user to communicate with that person in a variety of ways (such as another telephone number, instant messaging, or email). *Id.* at col. 31:23-47.

The parties appear to agree that, visually, the second display must take the place of the first display rather than being superimposed or concealing some portion of it. During the claim

construction hearing, the parties clarified that their dispute centered around whether “completely substituting” referred to completely substituting the *display* only, or the *content* of the display. *See* Tr. at 83:11-24 (describing Apple’s view on the limitation as relating to “how you’re viewing the information, not necessarily what the information is,” whereas Samsung’s position relates to the content of the information and requires “some additional information”). Apple maintains that the second display need only contain a plurality of contact objects, such as phone numbers or email addresses, as stated in the claim language. Samsung, on the other hand, contends that the second display of “contact information” must contain information beyond just replicating a portion of the original missed call list; specifically, the second display contains a “contact list entry” in addition to the plurality of contact objects. Accordingly, the Court will address the required and permissible content of the second display.

The parties’ dispute centers around the prosecution history of the ’760 Patent, but the Court will begin with the claims and specification as they form the objective starting point for the claim construction. For the reasons stated below, the Court concludes that Samsung’s proposed construction is not supported by the prosecution history, and construes this term as “displaying at least two contact objects in place of the display of the list of interactive items.”

a. Claim Language

The claims themselves do not provide a clear answer to the parties’ dispute: whether “completely substituting” refers to merely swapping the *displays* or, as Samsung contends, it refers to the *information* in the second display that must be completely substituted and must include a “contact list entry.”

Independent Claim 1 states that the second display includes “contact information for a respective caller,” and that this contact information includes a “plurality of contact objects,” including at least one “contact object comprising a telephone number” and “a second contact object associated with a non-telephonic communication method for contacting the respective caller.” *See* ’760 Patent at Claim 1, col. 36:19-49. Based on this plain language, Claim 1 does not appear to require that there be a “contact list entry” or other type of information in addition to the plurality of the required “contact objects.” Claim 1 only requires that the second display contain “contact

information,” which must include at least two “contact objects.” Claim 1 does not, however, define or make clear whether “completely substituting” refers to substituting only the actual displays, or whether it refers to the information contained in the displays. As such, the Court turns to the specification for further guidance.

b. Specification

For the specification to limit the scope of a claim, there must be a clear disavowal of the claim scope. *See Omega Eng’g, Inc.*, 334 F.3d at 1324. Samsung argues that Apple’s proposed construction is overly broad because it potentially reads the limitation as being met by merely a reiteration of missed call information for that particular caller. *See Samsung Resp.* at 24. Specifically, Samsung argues that Apple’s proposed construction would allow the second display to merely replicate a portion of the missed call list (for example, by merely displaying a list of missed calls from the selected contact). *Tr.* at 118:17-119:25. Samsung objects to this possibility both because missed call information itself does not permit contacting the caller, as the invention clearly contemplates, and because a display that includes missed call information cannot be said to “completely substitute” for the list of missed calls. Instead, Samsung maintains that, in addition to the plurality of contact objects, the second display must additionally include a “contact list entry,” as disclosed in the specification’s description of Figures 12B and 12C. *See Tr.* at 116:6-16; *see also Samsung Resp.* at 22-23.

However, to the extent that Samsung’s construction is intended specifically to foreclose the inclusion of only information about missed calls in the display of contact information, the specification does not include any clear disavowal of such a limited version of “contact information.” It is true that Figure 12C specifically depicts a “contact list entry” comprising information beyond the mere “plurality of contact objects.” However, the specification nowhere expressly limits the claims to this one embodiment of the invention. Instead, the description of Figure 12 states that, “[i]n some embodiments, in response to the user activating icon 2808 for a particular row . . . the touch screen displays the corresponding contact list entry for the other party” ’760 Patent at 24:55-60 (emphasis added).

Thus, based on the specification alone, the Court does not agree with Samsung that the second display must include a “contact list entry” in addition to the plurality of contact objects required by Claim 1. The “contact list entry” appears to be a particular element of one embodiment described by Figure 12, not a limitation on the entire patent.

Given that “completely substituting” was added late in the prosecution of the ’760 Patent and that this amendment forms the basis of the parties’ dispute, however, the Court finds that the specification does not clearly address to what “completely substituting” refers, and now turns to the prosecution history for further guidance.

c. Prosecution History

During the prosecution of the ’760 Patent, the PTO Examiner allowed the claims of the ’760 Patent after making an Examiner’s amendment. Rho Decl., Ex. N, at 15. The Examiner stated that the claims originally were anticipated or rendered obvious by U.S. Patent No. 6,593,949 (“Chew”), U.S. Patent No. 7,680,513 (“Haitani”), U.S. Patent No. 7,289,614 (“Twerdahl”), and Pub. No. US 20060281449 (“Kun”). *See id.* The Examiner altered the pertinent portion of several claims to read as follows:

. . . **immediately** in response to detecting a finger gesture on the second interactive displayed portion of the respective user selected item in the list, ~~immediately displaying~~ **completely substituting display of the list of interactive items with display of** contact information

See Rho Decl., Ex. N, at 3-14 (emphasis on additions, strikethroughs on removed portions). In multiple claims, the Examiner thus added the phrase “completely substituting display of the list of interactive items with [the second display]” in place of “displaying [the second display]” to allow the claims over the cited prior art references. In his reasons for allowance, the Examiner stated that none of the prior art taught “completely substituting the display of the list of interactive items . . . **as defined in the specification (Figs 12B-12C)**” *Id.* at 15 (emphasis added).

Apple argues that the limitation “completely substituting” was added precisely to distinguish from the Chew reference. *See* Apple Br. at 22. Specifically, the Chew reference discloses a second display that only partially covered the first display of phone numbers. *Id.* Thus, Apple maintains, the prosecution history makes clear that the phrase “completely substituting” was

added to distinguish Chew and make clear that the '760 Patent refers to completely replacing one display of missed calls with another display containing contact information. In essence, Apple argues that “completely substituting” was added to make it clear that the second display had to visually replace the first display, and not merely overlay or partially obscure it.

Samsung, by contrast, argues that the Examiner intended to limit the '760 Patent to only the embodiment described by Figures 12B and 12C. *See* Tr. at 108:8-12. Samsung contends that the Examiner’s statement should be read as requiring that the invention be limited to “the display of contact information . . . as defined in the specification (Figs 12B-12C).” Tr. at 3-7. If understood in this manner, Samsung argues that, instead of describing one embodiment of the invention, the description of Figure 12 which describes a “contact list entry” in addition to a plurality of contact objects is the only embodiment which was allowed by the Examiner. *See* Tr. at 110:3-7. Thus, Samsung concludes that the second display must contain both a plurality of contact objects and a contact entry which is pulled from the phone’s memory and thus “completely substituting” the information from the missed call list.

The Court disagrees with Apple’s contention that the amendment was made specifically to address the partial displays disclosed in the Chew reference. The Examiner’s amendment makes no reference to any specific figure of Chew, and the Examiner only referenced Chew when reciting the list of prior art now overcome with the “completely substituting” amendment. *See* Rho Decl. Ex. N at 15.

However, the Court also disagrees with Samsung’s argument that the Examiner’s statement expressly limits the claims to the contact list embodiment described by Figure 12. The Examiner made no statement to that effect, and it appears equally likely that the Examiner was referencing Figures 12B and 12C as an example of one display “completely substituting” or replacing another from a visual, not a content, standpoint.

Figure 12B shows a list of missed calls, and Figure 12 C shows an entirely new display of contact information which has totally replaced the display from Figure 12B. Thus, it appears that the Examiner’s reference to those two figures was meant to demonstrate that what he meant by “completely substituting” was that the second display was visually distinct from the first (as shown

in the figures). There is no indication in the Examiner’s reasons for allowance that he intended to limit the content of the displays to the content shown in Figures 12B and 12C.

Accordingly, the Court construes “completely substitute[e/ing] display of the list [of interactive items] with display of contact information” to mean **“Displaying at least two contact objects in place of the display of the list of interactive items.”**

III. DISCUSSION REGARDING SAMSUNG’S PATENTS

Next, Apple and Samsung request that the Court construe four disputed terms contained within three of Samsung’s patents. Specifically, the parties dispute the meaning of: (1) “non-scheduled transmission” contained within the ’807 Patent; (2) “zone specific storage and interface device” contained within the ’757 Patent; and (3) “means for capturing, digitizing, and compressing at least one composite signal” and “means for transmitting said composite signal” contained within the ’239 Patent.

A. The ’087 Patent

The disputed term “non-scheduled transmission” appears in Samsung’s ’087 Patent.⁴ The ’087 Patent, entitled “Method and Apparatus for Performing Non-Scheduled Transmission in a Mobile Communication System for Supporting an Enhanced Uplink Data Channel,” discloses a mobile communication method and apparatus that allows user equipment (“UE”), such as a cellular phone, to efficiently send non-scheduled data transmissions without interfering with other UEs. ’087 Patent Abstract. This is accomplished by specifying possible transmission time intervals (“TTIs”) during which a UE may send non-scheduled transmissions. The application for the ’087 Patent was filed on July 18, 2005, taking priority from a family of Korean patent applications, of which KR 10-2004-055678 was the earliest filed, on July 16, 2004. The ’087 Patent issued on July 13, 2010.

⁴ The parties initially disputed the term “N” as well in the ’087 Patent. However, after the technology tutorial held on February 14, 2013, the parties agreed that “N” should be construed as “a positive integer.” See Joint Submission Re: Claim Constr., ECF No. 389.

1. “Non-Scheduled Transmission”

Samsung’s Proposed Construction	Apple’s Proposed Construction
No construction necessary.	“Transmission of uplink data by the UE without using scheduling assignment information sent by the base station.”
Should the Court find construction necessary: “Transmission of data using non-scheduled transmission information to indicate possible TTIs”	

The term “non-scheduled transmission” appears in Claims 1, 4, 5, 9, 12, 13, 17, 18, 20, 22, 23, and 25 of the ’087 Patent.⁵ For example, independent Claim 1 of the ’087 Patent recites:

A method for performing **non-scheduled transmission** in a user equipment (UE) of a mobile communication system for supporting an enhanced uplink dedicated channel (E-DCH), comprising the steps of:

receiving non-scheduled transmission information indicating k transmission time intervals (TTIs) for transmitting non-scheduled data via the E-DCH, wherein **non-scheduled transmissions** can be performed during the k TTIs within a period having N TTIs; and

transmitting data on at least one TTI of the k TTIs within the period; wherein the parameter k is an integer greater than 0 and less than or equal to a positive integer N.

’087 Patent at col. 13:3-17 (emphasis added).

The ’087 Patent generally relates to a method and apparatus for controlling data transmission between a base station (“Node B”) and a plurality of user equipment (“UE”) devices (such as 3G capable smartphones). *See* ’087 Patent at col. 1:35-62. The invention disclosed in the ’087 Patent improves the overall performance of such systems by reducing interference and the number of communications through a novel scheduling system. *See id.* at col. 3:23-34. Traditional systems required that the Node B and each UE go through a series of scheduling communications in order for the UE to make a transmission. *Id.* at col. 2:42-53. These sorts of transmissions are known as “scheduled transmissions.” *Id.* To make a scheduled transmission, the UE contacts the

⁵ “Non-Scheduled Transmission *Information*” or “Non-Scheduled Transmission *Determination Value*” or “Non-Scheduled Transmission *Mode*” appear in other claims, but are separate terms from “Non-Scheduled Transmission.”

Node B and requests to make a scheduled transmission. *Id.* This request comprises information such as the amount of data to be transferred, transmission power, and other specifics related to the information to be transferred. *Id.* The Node B then considers requests from a plurality of UEs and creates scheduling assignment information for each requested transmission. *Id.* at col. 2:54-61. This scheduling assignment information lets the UE know when it can send the requested file, at what data rate, and other transmission information. *Id.* The scheduling assignment information is sent to the UE and the UE then sends the data along during the scheduled timeframe. *Id.*

The '087 Patent covers a novel method of transmitting data between a UE and a Node B as “non-scheduled transmissions.” *See* '087 Patent Abstract. Rather than wait for the UE to request scheduling assignment information, the '087 Patent discloses a system where a radio network controller (“RNC”) at the Node B calculates potential transmission time intervals (“TTIs”) ahead of time. *Id.* at col. 7:50-8:34. These potential transmission times, or TTIs, are then transmitted to the UE, and the UE may make “non-scheduled” transmissions during the upcoming TTIs. *Id.* This system offers the advantage of the UE not having to go through the process of requesting a data transfer schedule from the Node B; instead, the UE is provided ahead of time with several time intervals during which it may transmit data should it chose to do so. *Id.* at col. 6:49-59. These TTIs are expressed in terms of the integers k and N; N represents the period of total TTIs, and k represents the number of TTIs during the period N in which the UE may make “non-scheduled” transmissions. *Id.* at col. 6:60-7:3. By allowing both traditional “scheduled” transmissions, and the novel “non-scheduled” transmissions, the '087 Patent lets the Node B and UEs communicate faster and with less overall interference. '087 Patent Abstract.

Samsung’s proposed construction explains that “non-scheduled transmissions” are sent using non-scheduled transmission information, which designates possible TTIs for transmission. Apple’s proposed construction adds a negative limitation: that non-scheduled transmissions must be sent “without using scheduling assignment information sent by the base station.” The Federal Circuit has cautioned against reading negative limitations into claims where there is no express disclaimer or independent lexicography in the written description that would justify adding that negative limitation. *Omega Engineering*, 334 F.3d at 1322. As set forth below, there is no express

disclaimer or independent lexicography in the claim language or specification; thus, the Court does not find support for Apple’s proposed construction. Consequently, the Court adopts Samsung’s proposed construction.

a. Claim Language

Claim 1 requires “receiving non-scheduled transmission information,” which indicates particular TTIs during which the UE may transmit, and “transmitting data on at least one TTI” of the possible TTIs identified. Samsung’s construction, “[t]ransmission of data using non-scheduled transmission information to indicate possible transmission time intervals (TTIs),” restates the claim language in a somewhat simplified phrasing.

Apple’s construction, on the other hand, bars the use of “scheduling assignment information.” Of the 40 independent and dependent claims, only independent Claims 27 and 34 refer to “scheduling assignment information.” Claim 34 recites in relevant part:

a receiver receiving at least one of scheduling assignment information generated by Node B [a “base station,” *e.g.*, a cellphone tower] based on scheduling information . . . and non-scheduled transmission information indicating [TTIs] . . . for transmitting non-scheduled data

’087 Patent at col. 19:4-9. Claim 34 claims transmission using scheduling assignment information in “Node B controlled scheduling mode” and transmission during at least one of the possible TTIs during “non-scheduled transmission mode.” ’087 Patent at col. 19:13-17. However, Claim 34 does not explicitly exclude any use of scheduling assignment information when the UE is in non-scheduled transmission mode or is making non-scheduled transmissions; it requires only that non-scheduled transmission information be used. *Id.* Indeed, Claim 34 makes clear that the invention contemplates that both non-scheduled transmission information and scheduling assignment information are available to the UE.

Similarly, Claim 27 recites both “transmitting uplink data according to the scheduling assignment information in a Node B controlled scheduling mode” and “transmitting uplink data on at least one TTI of the k TTIs within the period in a non-scheduled transmission mode.” Claim 27 thus claims both using scheduling assignment information and making transmissions during at least one of the designated TTIs within the non-scheduled transmission period. However, a transmission

made during one of those designated TTIs would meet the limits of the claim, whether or not the transmission also used some of the available scheduling assignment information.

Thus, there is no clear support in the claims for Apple’s proposed negative limitation. The Court now turns to the specification.

b. Specification

In support of Apple’s construction foreclosing the use of scheduling assignment information, Apple points to language in the specification disclosing that a UE can operate without using scheduling assignment information. *See* Apple’s Resp. Claim Constr. Br. (“Apple Resp.”), ECF No. 350, at 3-4. For example, the specification discloses:

The UE **enables** non-scheduled transmission (referred to as non-scheduled transmission) for transmitting uplink data through the E-DCH without using scheduling assignment information. The non-scheduled transmission **can** quickly transmit E-DCH data by omitting a series of processes for sending scheduling information from the UE to the Node B and receiving scheduling assignment information from the Node B. The system limits a data rate possible for the non-scheduled transmission to within a relative low level, thereby maintaining system performance enhancement through the Node B controlled scheduling and reducing a delay time due to scheduling.

’087 Patent at col. 3:23-34 (emphasis added).

However, the fact that scheduling assignment information is not *necessary* in a non-scheduled transmission does not mean that it is not *allowed*. Therefore, this passage does not support Apple’s construction that scheduling assignment information is forbidden in making non-scheduled transmissions.

Moreover, Samsung argues that, in some embodiments, “non-scheduled transmission information” alone will not be sufficient to allow the non-scheduled transmission, but that additional information from the base station will be required. *See* Samsung Op. Claim Constr. Br. (“Samsung Br.”), ECF No. 335, at 7-8. “Non-scheduled transmission information,” as defined in Claim 1, need only “indicat[e] k TTIs for transmitting non-scheduled data . . . within a period having N TTIs” in other words, the set of possible TTIs a given UE may use for transmission. *Id.* at col. 15:38-42. However, Figure 8 and the accompanying text disclose an embodiment in which non-scheduled transmission information is supplemented by data rate information. In this embodiment, a base station node transmits to a UE “non-scheduled transmission parameters such

as a non-scheduled transmission period N , the number of non-scheduled transmissions k , a possible non-scheduled transmission time interval, and so on.” *Id.* at col. 11:44-48. Additionally, in this embodiment, any ultimate non-scheduled transmissions by the UE also depend upon the allowed data rate. *Id.* at col. 11:48-58. Thus, non-scheduled transmissions can clearly use data rate information in addition to non-scheduled transmission information.

Because non-scheduled transmissions can use data rate information, the Court must determine whether data rate information may be obtained from the scheduling assignment information. If it can, then Apple’s additional negative limitation excluding the use of scheduling assignment information cannot be correct, because the specification specifically contemplates a non-scheduled transmission using data rate information.

The Background of the ’087 Patent explains the scope of “scheduling assignment information.” In describing the related art, the specification discloses that “scheduling assignment information [may] compris[e] information about an allowed data rate . . . and so on.” *Id.* at col. 2:59-61. Thus, the Patent is explicit that data rate information *is* part of the scheduling assignment information, meaning that if a non-scheduled transmission uses data rate information from the scheduling assignment information, then it cannot be said to occur “without using scheduling assignment information from the base station.” Accordingly, Apple’s construction precluding the use of scheduling assignment information is foreclosed by the specification.

In sum, the invention involves sending from a base station to a UE non-scheduled transmission information that specifies possible TTIs that may be used for non-scheduled data transmission. The claim language does not limit the use of additional data from other sources when making non-scheduled transmissions, and the specification and dependent claims explicitly disclose using data rate information, which is a component of scheduling assignment information.

Accordingly, the Court agrees with Samsung’s proposed construction, and disagrees with the additional limitation proposed by Apple. The Court therefore adopts the following construction: **“Transmission of data using non-scheduled transmission information to indicate possible transmission time intervals (TTIs).”**

B. The '757 Patent

The disputed term “zone specific storage and interface device” appears in Samsung’s ’757 Patent. The ’757 Patent, entitled “Multimedia Synchronization Method and Device,” discloses “[a] system . . . for synchronizing a multiplicity of devices in a multimedia environment” so that users can access their multimedia collection (*e.g.*, movies and music) in different locations. ’757 Patent Abstract. The system is comprised of “at least one central storage and interface device,” “at least one zone,” and “at least one zone specific storage and interface device.” ’757 Patent at col. 10:31-50 (Claim 1). The application for the ’757 Patent was filed on October 19, 2006, as a continuation of Patent Application No. 9/884,661, which was filed on June 19, 2001. The ’757 Patent issued on August 18, 2009.

1. “zone specific storage and interface device”

Samsung’s Proposed Construction	Apple’s Proposed Construction
“A storage and interface device associated with a particular viewing and/or listening zone”	“a device fixed in a room, or similar bounded location, for multimedia playback”

The term “zone specific storage and interface device” appears in independent Claim 1 of the ’757 Patent, and dependent claims 2-4, 6, and 8-13. Independent Claim 1 recites:

A system for synchronizing devices in a multimedia environment, the system comprising:

at least one central storage and interface device, wherein audio, video, or photographic data, including content information and content management information, relating to at least one user, are stored in digital form; and

at least one zone, each zone having at least one **zone specific storage and interface device** capable of storing or interfacing with information stored in the central storage and interface device, wherein audio, video, or photographic information, relating to at least one user, contained within the **zone specific storage and interface device** and the central storage and interface device, are updated in relation to the **zone specific storage and interface devices** and the central storage and interface device, whereby the at least one user can be situated in any one of the zones and access the audio, video, or photographic information related to the at least one user.

’757 Patent at col. 10:31-50 (emphasis added).

The '757 Patent discloses methods and a device for providing audio, video, and photographic information across a multiplicity of devices. '757 Patent Abstract. The invention allows a single user to access the same database of music, movies, or photographs from one of many "zones." *Id.*

The device functions by having a plurality of "zone specific storage and interface devices" synchronized with a "central storage and interface device." *Id.* at col. 4:17-35. The "central storage and interface device" maintains digital copies of a user's audio, video, and photographic information. *Id.* at col. 4:19-23. The various "zone specific storage devices," located in a "plurality of zones," then synchronize with that data so that the user can enjoy the same collection of entertainment options from a wide variety of areas. *Id.* at col. 4:23-32.

Samsung's proposed construction requires only that a zone specific storage and interface device be "associated" with a particular "zone" for viewing and/or listening to the multimedia content stored on the system. Apple's proposed construction adds the limitation that the zone specific device must be "fixed" in a physical zone, rather than merely "associated" with the zone. In addition, Apple's proposed construction requires that the relevant zone be "a room, or similar bounded location."⁶ The Court concludes that neither party's construction is completely consistent with the '757 Patent and instead construes "zone specific storage and interface device" as "a storage and interface device that resides in an area, such as a room or similar location."

a. Claim Language

Although neither party selected the term "zone" for construction, the parties' disagreement about whether a zone-specific device may move or must be fixed is predicated largely on the parties' different definitions of the term "zone."

⁶ Apple's proposed construction also includes the additional limitation that the "zone specific storage and interface device" be for "multimedia playback." However, the parties have not addressed this limitation in their briefing. Additionally, the Court finds that the zone specific device itself should not be limited to requiring "multimedia playback" as dependent Claim 4 recites that an "output device" may be coupled to the "zone specific storage and interface device" for outputting the "audio, video, and photographic information." This functionality may thus be accomplished by an "output device" rather than the "zone specific storage and interface device" itself.

Apple construes the term “zone” as “a room, or similar bounded location.” Apple contends that, by virtue of requiring that the “storage and interface device” be “zone specific,” the term itself requires that the device “be dedicated to and fixed in a zone, and not move across multiple zones.” Apple Resp. at 9. While the claims do state that a “storage and interface device” must be “specific” to a “zone,” nothing in the language of the claims themselves requires that the specific zone be a fixed location, that the device be fixed within that zone, or that the zone must be bounded.

For additional support of its construction, Apple notes that dependent Claim 13 draws a distinction between a “wireless mobile device,” which is “mobile,” and thus not fixed in a room or similar bounded location, and a “zone specific storage and interface device.” *See* ’757 Patent at col. 12:12-15 (Claim 13) (“The system of claim 1, wherein the zone specific storage and interface device is disposed to be coupled to a wireless mobile device.”). However, the plain language of Claim 13 does not state that the “zone specific storage and interface device” must be fixed or bounded, only that it must be “zone specific.” The only requirement of Claim 13 on its face is that the zone specific device must be “disposed to be coupled to” a wireless mobile device.

Accordingly, the Court does not find that the claims themselves clearly support Apple’s proposed limitation. The Court now turns to the specification.

b. Specification

Samsung contends that the examples of portable and mobile multimedia devices found in the specification show that these devices may serve as “zone specific storage and interface device[s].” *See Samsung* Br. at 14. However, the specification distinguishes “zone specific storage and interface devices” from portable and mobile multimedia devices. For example, in Figure 7 which depicts various elements of the invention the specification discloses a central storage and interface device, “702,” linked via a local area network (“LAN”) to a multitude of devices including: (1) “zone specific storage and interface devices 706, 708, and 710, each of which resides in a specific zone;” (2) a “personal computer 712”; (3) an “automobile 716”; and (4) “[an]other device 714 such as an intelligent MP3 player.” *Id.* at col. 8:17-31. Thus, Figure 7 distinguishes “zone specific storage and interface devices” from a personal computer, an automobile, and an

MP3 player. Furthermore, in discussing Figure 7, the specification repeatedly refers to zone specific devices *without* including networked digital portable personal players, “714,” or automobile devices, “716.” *See, e.g.,* ’757 Patent at col. 8:40-44 (stating that “[a] practical example of implementing the instant invention” involves the AudioReQuest Pro, the patent’s example of a central storage device, and the AudioReQuest Multizone, the patent’s example of “zone specific storage and interface devices 706, 708, 710.”); *see also id.* at col. 9:44-45 (“zone specific storage and interface devices 706, 708, 710”).

Moreover, despite the specification’s reference to portable and mobile multimedia devices, the specification never suggests that such devices are “zone specific.” Rather, mobile and portable devices are simply described as being “coupled” to the central device via networks such as LAN. *Compare* ’757 Patent at 8:25-31 (stating that portable devices and automobiles can be coupled to LAN); *with id.* at 8:23-24 (stating that “zone specific storage and interface devices 706, 708, and 710,” each “reside[] in a specific zone”).

The specification further indicates that some portable devices could simply be secondary devices that connect to the “central storage and interface device” through a network rather than being “zone specific storage and interface devices.” *See, e.g., id.* at col. 9:17-27; col. 9:36-38 (distinguishing between: (1) the zone specific storage and interface devices, such as AudioReQuest Multizone, which have removable hard drives to store the entire multimedia collection; and (2) “car and other mobile devices” which “can . . . synchronize over wired or wireless connections”); *see also id.* at col. 10:1-10 (distinguishing between: (1) “content [that] is stored locally in a device within a zone or any zone, so that output can be played in multiple zones and rooms;” and (2) “other device[s] for mobile applications such as car, boat, airplane, and other transportation, that would synchronize through either hardwired or wireless means resulting in storing the content locally.”).

Therefore, the specification contradicts Samsung’s claim that the portable and mobile multimedia devices found in the specification are “zone specific storage and interface device[s].” Samsung Br. at 14. Instead, they appear to be different types of devices, which may be connected

to the central storage and interface device over a network, but are portable rather than zone-specific.

Samsung argues that, should the Court construe automobile and personal mobile devices as distinct from “zone specific storage and interface devices,” the Court will exclude disclosed elements from the scope of the claims. However, Claims 13, 14, and 15 make clear that a system including a networked wireless mobile device coupled to a “zone specific” device can still fall within the scope of the invention, even if that networked device is not one of the “zone specific storage and interface devices” found in Claim 1. *See, e.g.*, ’757 Patent at col. 12:12-15 (Claim 13) (“The system of claim 1, wherein the zone specific storage and interface device is disposed to be coupled to a wireless mobile device.”). Therefore, the Court’s construction does not exclude mobile devices from the scope of the patent, even if they are not “zone specific storage and interface devices.” Similarly, an automobile or boat device can fall within the scope of Claims 14 and 15, which require “central” and “mobile” devices, but do not require the use of “zone specific” devices. *See, e.g., id.* at col. 12:20-22 (Claim 15) (“The system if claim 1, wherein the central storage and interface device is disposed to be coupled to a wireless mobile device”). Therefore, the Court is not persuaded that “zone specific storage and interface devices” must include automobile and personal mobile devices.

However, the Court does not believe that the specification clearly supports Apple’s proposed limitation that the zone of the “zone specific storage and interface device” must be fixed and bounded. In support of its construction, Apple points to examples of a zone in the embodiment, which liken it to a “room.” *See id.* at col. 9:12-16 (“In a typical custom home installation, there may be upwards of 20 zones (*e.g.*, rooms) with independent control and output. By way of example, instead of only playing one CD throughout the building, different songs can be played at the same time.”) (emphasis added); *see also id.* at col. 10:3-5 (distinguishing between “multiple *zones or rooms* in a networked building,” and “multiple *locations* traveling through a wide area network such as the Internet.”) (emphasis added). It is axiomatic that claims should not be limited simply because a specific embodiment in the specification discloses only a portion of the potential claim scope. *See Phillips*, 415 F.3d at 1327 (holding that the claim was not limited to

only the preferred embodiment). The applicability of this doctrine in this instance is emphasized by the clear language of the specification, which explicitly lists rooms as simply *examples* of zones, *see* '757 Patent at col. 9:13-14 (“*e.g.*, rooms”), rather than as synonyms.

In further support of its construction, Apple argues that the term “zone” refers to a “fixed” location because “[o]ne of the purposes of the zone is to give a user substantially exclusive or reclusive enjoyment of information shared by zone specific storage and interface devices 706, 708, 710, as well as by central storage and interface device 702, and other devices.” *Id.* at col. 9:47-51. However, the purpose of “exclusive or reclusive enjoyment” is not necessarily undermined by a device being mobile. For example, a person can listen to an intelligent MP3 player with headphones and benefit from “substantially exclusive or reclusive enjoyment” of shared data. Moreover, for purpose of multimedia enjoyment, a car is obviously quite similar to a room – it is simply a room on wheels, and often includes multimedia devices that are built into the car. Thus, it is not clear why a car should be treated any differently from a zone specific device located in a room within a house.⁷

However, the most persuasive argument raised by Apple as to why the “zone specific storage and interface device” must be fixed and bounded is the fact that the '757 specification describes “zone specific storage and interface devices” as “resid[ing] in” or “exist[ing]” in a single zone. *See id.* at col. 8:23-24 (“zone specific storage and interface devices 706, 708, and 710, each of which resides in a specific zone”); *id.* at 7:66-67 (referring to “devices residing in different zones”); *id.* at 9:44-47 (stating that “zone specific storage and interface devices 706, 708, 710 . . . can be located in separate zones respectively. Or, some can co-exist in a zone.”). While the Court finds the specification’s use of the term “reside” to reflect some degree of being contained within a certain location rather than moving around freely, the Court is concerned that the terms “fixed” and “bounded” may be overly limiting.

⁷ Apple also construes the terms “exclusive or reclusive enjoyment” to mean that each zone must be exclusive, and therefore separate from, every other zone. Apple Br. at 10. However, the specification states that “zone specific storage and interface devices 706, 708, 710, or PC 712 *can be* located in separate zones respectively. Or, some *can* co-exist in a zone.” '757 Patent at 9:44-47. Therefore, the specification does not clearly support Apple’s construction.

Thus, while the Court concludes that the specification indicates that “zone specific storage and interface devices” are distinct from a “car and other mobile devices,” the Court does not find support in the specification for defining “zone specific storage and interface devices” as fixed and bounded. At best, the specification supports concluding that zone specific devices “reside in” a room or similar location. In fact, during the claim construction hearing, Apple agreed with the Court’s suggestion that the terms “resides” or “remains” better reflect the specification and should be used in place of Apple’s proposed terms “fixed” and “bounded.” See Tr. at 140:9-14.

c. Extrinsic Evidence

Apple contends that “zone” is a term of art in the home audio field, synonymous with room. See Apple Resp. at 12 (citing Mark Fleischmann, *Practical Home Theater: A Guide to Video and Audio Systems*, pg. 167 (2003 ed. 2001), for the proposition that the term “Multi-room” is defined as an “[a]udio system serving more than one room. Also called multi-zone.”); see also *id.* (citing Danny Briere & Pat Hurley, *Home Theater for Dummies*, p. 127 (2003), for the proposition that “multizone” means multiple rooms with different audio sources). This use is consistent with specific examples listed in the specification.⁸

Samsung does not contest that “zone” is often related to a room, but argues that it need not be so limited. Rather, Samsung contends that the term “zone” is just a listening area where multimedia content from a particular source may be viewed or heard. See Samsung Br. at 16 (citing John Sciacca, *Sound All Around*, Sound & Vision, p. 95 July/August 2001, for the proposition that, “[w]ith a multizone system, you divide your home into *areas* that can each play a different source. Each zone can contain as many rooms or speakers as your electronics can sustain.”); see also *id.* (citing Bose Corporation, *The Bose Lifestyle 11 Music System Overview 5* (Rev. 1, 1994), for the proposition that “[e]ach listening area, whether a room or a group of rooms (including outdoor areas), is referred to as a zone.”). Therefore, Samsung states that “a portable

⁸ Nevertheless, Apple’s extrinsic evidence does not prove that the term must be “fixed” or “bounded.” The Court is also concerned that these terms might be interpreted in an overly restrictive manner by a jury, such as interpreting the term “bounded” to require limitations such as walls, and the term “fixed” to require that a device be built in.

radio creates a listening zone that moves with the radio.” Samsung Reply Claim Const. Br. (“Samsung Reply”), ECF No. 363, at 7.

While Samsung’s extrinsic evidence indicates that a zone may be defined more broadly than a “room” to include an “area,” the phrase “zone” does appear connected to a particular geographical location. Moreover, nothing Samsung sets forth indicates that the “area” is construed to be mobile. Therefore, the extrinsic evidence does not appear to support construing the term “zone specific interface device” as necessarily including mobile phones. Moreover, the Court believes that Samsung’s use of the term “associated” in its construction is ambiguous, and may potentially include highly transitory associations with an infinite series of locations, as with a mobile device, thereby evading the limitation of “zone specific.” *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1562 (Fed. Cir. 1991) (“All the limitations of a claim must be considered meaningful.”). Samsung’s use of the term “particular” to describe the zone does not cure this defect, because “particular” does nothing to restrict the zone to one location as opposed to one amorphous transitory area. Similarly, the term “viewing or listening zone” is ambiguous, and again could incorporate an infinite series of locations, for example, the zone in which a personal mobile device is carried.

Thus, the Court adopts the following construction for a “zone specific storage and interface device” based on the intrinsic and extrinsic evidence set forth by the parties: **“a storage and interface device that resides in an area, such as a room or similar location.”**

C. The ’239 Patent

The parties dispute two means-plus-function terms in Samsung’s ’239 Patent. The ’239 Patent, entitled “Remote Video Transmission System,” discloses a “system for digitizing and compressing an audio/visual signal, transmitting that signal over low band width lines . . . decompressing the digitized data and converting it to an audio/visual signal for broadcast.” ’239 Patent Abstract. The ’239 Patent addresses the need for broadcasters to capture and transmit “broadcast quality video” (*e.g.*, news coverage of a natural disaster) from a “remote location” to a network “host” station for immediate “real time” broadcast. ’239 Patent at col. 1:14-col. 2:22.

The application for the '239 Patent was filed on February 16, 1994, and the '239 Patent issued on November 26, 1996. Samsung purchased the '239 Patent in 2011.

1. “Means for capturing, digitizing, and compressing at least one composite signal”

Samsung’s Proposed Construction	Apple’s Proposed Construction
Agreed function: “capturing, digitizing, and compressing at least one composite signal”	Agreed function: “capturing, digitizing, and compressing at least one composite signal”
Corresponding structure: “A video and/or audio capture module, and equivalents”	Corresponding structure: “An audio card, a video card having a video capture module, and a video capture software package, such as Video for Windows software using the software sequence set forth at 2:63-3:3, 4:39-63, 5:4-6:23, and 6:62-7:14.”

The term “means for capturing, digitizing, and compressing at least one composite signal” appears in asserted independent claim 1 and dependent Claims 5 and 6 of the '239 Patent.

Independent Claim 1 of the '239 Patent recites:

An apparatus for transmission of data, comprising:

a mobile remote unit including:

- a.) **means for capturing, digitizing, and compressing at least one composite signal;**
- b.) means for storing said composite signal;
- c.) means for transmitting said composite signal;

a host unit including:

- a.) means for receiving at least one composite signal transmitted by the remote unit;

a playback unit including:

- a.) means for exchanging data with said host unit;
- b.) means for storing the composite signal received by the host unit;
- c.) means for decompressing said composite signal.

'239 Patent at col. 13:4-17 (emphasis added).

The parties agree, as does the Court, that “means for capturing digitizing, and compressing at least one composite signal” is a means-plus-function limitation recognized by 35 U.S.C. § 112,

¶ 6. See 35 U.S.C. § 112, ¶ 6 (stating that means-plus-function terms are limited to structures disclosed in the specification that perform the claimed function, and equivalents of those structures).

A court must construct a means-plus-function limitation in two steps. “First, the court must determine the claimed function. Second, the court must identify the corresponding structure in the written description of the patent that performs the function.” *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012) (quoting *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006)). “A structure disclosed in the specification qualifies as a ‘corresponding structure’ if the specification or the prosecution history ‘clearly links or associates that structure to the function recited in the claim.’” *Id.* (quoting *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)). Moreover, the disclosure in the patent’s specification must “show [] what is meant by that [claim] language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by . . . section 112[, ¶2].” *Id.* at 1311-12 (quoting *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc)).

Here, the parties agree that the claimed function is “capturing, digitizing, and compressing at least one composite signal.” See Samsung Br. at 17 (“Apple and Samsung agree on the functions for both terms.”). The parties disagree, however, as to what the corresponding structure is in the specification. Samsung argues that the corresponding structure is simply “a video and/or audio capture module, and equivalents.” Samsung Br. at 18. In contrast, Apple adds three limitations to the construction of this claim. First, Apple argues that the corresponding structure must have components capable of dealing with both audio and video signals. Thus, Apple requires both an audio card and a video card. Second, Apple’s construction requires cards, rather than merely modules. Third, Apple argues that the corresponding structure must include specific software operating as discussed in several columns of the specification. While the Court agrees with Apple that the corresponding structure for “means for capturing, digitizing, and compressing

at least one composite signal” must include an audio capture card⁹ and a video card with a video capture module, the Court does not agree that the corresponding structure must also include specific software.

a. Audio and/or Visual vs. Audio and Visual

First, the parties dispute whether the corresponding structure must have components capable of dealing with *both* audio and visual signals or just one or the other. While the claim language and specification are ambiguous as to the proper construction of this expression, the prosecution history clarifies that the term “composite” requires that the structure have the ability to capture *both* audio and visual signals. Therefore, the Court agrees with Apple that the “means for capturing, digitizing, and compressing at least one composite signal” must be capable of capturing, digitizing and compressing both audio and visual components.

i. Claim Language

Independent Claim 1 does not specify the “means for capturing, digitizing, and compressing at least one composite signal,” nor does it define the term “composite.” *See* ’239 Patent at col. 13:4-17. Nevertheless, Samsung argues that the claims support its construction that the corresponding structure need only have video or audio components. *See* Samsung Br. at 18. Specifically, Samsung relies on Claims 5 and 6, which depend from Claim 1, as evidence that the corresponding structure can have video and/or audio components. Notably, dependent Claim 5 claims only a video component, *see* ’239 Patent at col. 13:25-28, whereas dependent Claim 6, which is dependent on Claim 5, claims both a video and audio component. *Id.* at col. 13:29-32.

According to Samsung, “[t]o require both to be read into claim 1 would render claims 5 and 6 superfluous.” Samsung Br. at 20 (*citing Retractable Techs.*, 653 F.3d at 1312). However, the presence of a dependent claim reciting a structure does not override the requirements of § 112, ¶ 6. *See Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir.1991) (holding that the requirements for means-plus-function limitations cannot be avoided by adding a dependent claim reciting the corresponding structure).

⁹ During the claim construction hearing, Apple clarified that their construction was for an “audio capture card” not an “audio card.” *See* Tr. at 153:18-25.

Furthermore, both Claims 5 and 6 reference an audio or video capture device “installed in” said remote unit for capturing. Additionally, Claim 5 refers to capturing the composite signal “in real time.” Thus, it is not clear from the claim language whether the differentiation between Claim 1 and Claims 5 and 6 is the presence of an audio versus a video card or, rather, that in Claim 1 the cards need not be installed *in* the remote capture unit or capture the composite signal “in real time.”¹⁰

Samsung also notes that “[d]ependent claim 4 makes it clear that the signal can be video and/or audio.” Samsung Br. at 20; *see* ’239 Patent at col. 13:23-25 (Claim 4) (“An apparatus according to claim 3 further including means for splitting and organizing the digitized, compressed *audio and/or video signal* prior to transmission.”) (emphasis added). Apple argues, however, that the doctrine of claim differentiation cannot apply to Claim 4, which adds requirements directed to a “means for splitting and organizing” limitation, not the “means for capturing, digitizing, and compressing” at issue here. Apple Resp. at 20. Just as it is unclear that the audio or visual component is the differentiating factor in Claims 5 and 6, it is not clear that this is the differentiating factor in Claim 4 either. Therefore, the Court does not find that the claims clearly support Samsung’s proposed corresponding structure. As such, the Court turns to the specification for further guidance.

ii. Specification

The Court also finds the specification to be ambiguous as to whether the corresponding structure must have components capable of dealing with *both* audio and visual signals. The term “composite” is never used in the specification. Instead, the specification refers to an “audio/visual

¹⁰ Apple also contends that dependent Claims 5 and 6 do not support Samsung’s construction because they do not refer to the capture, digitization, or compression of an audio signal alone. According to Apple, this is significant because, “[i]f only audio was needed (as Samsung’s ‘video and/or audio’ construction would permit), a reporter could simply make a traditional phone call.” Apple Resp. at 19. While it is true that dependent Claims 5 and 6 do not mention solely capturing an audio signal, a proper corresponding structure could, in accordance with the claims’ terms, involve only video signals or video and audio signals. However, as described above, Claims 5 and 6 introduce multiple additional limitations, and thus it is not clear from the claim language alone whether the “means for capturing, digitizing, and compressing at least one composite signal” requires the ability to capture both audio and visual components.

signal,” *see, e.g.*, ’239 Patent at col. 2: 28 (“audio/video signals”); col. 2:59 (“audio/visual signal”); col. 2:67 (same), or to a “video signal” and an “audio signal” separately, *see, e.g., id.* at col. 2:47 (“video signal”); *id.* at col. 5:47 (“audio signal”).

The specification also discloses one preferred embodiment in which an audio and visual signal is digitized and compressed. The specification further describes a situation where a user has the option of capturing only the video signal, enabling the video data to be transmitted more quickly than combined audio/video data. *Id.* at col. 5:39-60. This suggests that the captured, digitized, and stored composite signal need not include audio signal, and that therefore an audio card need not be a part of the structure required to perform the claim function of capturing, digitizing, and compressing a composite signal.

Apple argues, however, that this optional *function* in the embodiment is irrelevant to a proper construction of the claims because the means limitation at issue is found in an *apparatus* claim, and the specification describes that apparatus as requiring hardware and software capable of capturing, digitizing, and compressing *both* video and audio signals. *See* Apple Resp. at 19. Apple contends that the mere fact that the claimed device may be *used* to capture and transmit video alone in some situations is irrelevant. *Id.*; *see Paragon Solutions, LLC v. Timex Corp.*, 566 F.3d 1075, 1091 (Fed. Cir. 2009) (rejecting a construction that injected a use limitation into a claim written in structural terms because “apparatus claims cover what a device *is*, not what a device *does*.”) (citing *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990)). However, the patent does refer to the device capturing only a video signal, as opposed to capturing an audio/visual signal, and it is unclear from the specification whether this is merely a function, as Apple claims, or instead the entire structure for capturing a composite signal. Accordingly, the specification does not clearly resolve the parties’ dispute.

iii. Prosecution History

Despite the ambiguity within the claims and the specification, the prosecution history indicates that the “means for capturing, digitizing, and compressing at least one composite signal” requires the means for capturing, digitizing, and compressing both an audio and a visual signal.

Initially, Claim 1 referred to “audio and/or visual signal” rather than “composite signal.” *See* Decl. of Peter J. Kovolos in Supp. Apple. Resp. (“Kovolos Decl.”), ECF No. 350, Ex. 4, at 2-3 (“8/20/95 Office Action”). The Examiner objected to the expression “audio and/or visual signal” as covering “two different elements” video and audio and thereby found the claim to be “vague and indefinite.” *Id.* Accordingly, the term was replaced with the term “composite signal,” which the patent applicant explained “is generally known to mean a signal which includes *components* such as audio and/or visual.” Decl. of Todd Briggs in Supp. Samsung Br. (“Briggs Decl.”), ECF No. 335, Ex. I, at 6 (“2/2/96 Amend.”). The applicant further explained that:

With regard to the present invention, the composite signal which is captured by the remote unit *may* have both audio and video components as is commonly known to be a “composite signal.” However, a “composite signal” having both audio and video information is necessarily a larger quantity of information and correspondingly has larger digitized file sizes. In instances where rapid transmission of a video segment is desired in order to reduce the size of the resultant digitized and compressed data file to be transmitted to the host unit, the remote unit may be instructed to capture the video portions of the composite signal only.

Id. (emphasis added).

Samsung emphasizes that the applicant stated only that the composite signal “may” have both audio and video components, meaning simply that the composite signal *may* be: (1) an audio signal, (2) a video signal, or (3) an audio and video signal. *See* Samsung Reply at 12. However, construing the term “composite signal” so broadly completely disregards the Examiner’s reason for initially rejecting Claim 1, which was to avoid covering “audio and/or visual signal” and thereby render the claim “vague and indefinite.” *See* 8/20/95 Office Action at 2-3.

Moreover, construing the expression “composite signal” as having multiple components is consistent with the basic linguistic understanding that something described as “composite” will have multiple parts. Importantly, the only two signal components disclosed in the specification are audio and visual. Therefore, to be a composite signal, presumably both are required. Furthermore, the patent applicant emphasized that, where the components of the composite signal are audio and visual signals, it may be desirable to capture only the video “portions” of the composite signal. *See* 2/2/96 Amend. at 6. If, as made clear by the applicant, a video signal alone is only a portion of a “composite signal,” then the rest of the signal must be audio in order to actually be “composite.”

Although the specification discloses the option of not capturing audio, the ability to capture the full composite signal, including audio, is still required by this claim term.

Therefore, the Court agrees with Apple that the structure corresponding to the claimed “means for capturing, digitizing, and compressing at least one composite signal” must have components capable of dealing with **both audio and visual signals** and not audio or visual signals as Samsung proposes.

b. Capture Module vs. a Card

Contrary to Samsung’s proposed construction, which construes the “means for capturing, digitizing, and compressing at least one composite signal” as requiring “a video and/or audio *capture module*,” the Court finds that the structure requires a video *card* having a video capture module and an audio capture *card*.

The parties agree that the claimed function requires “capturing, digitizing, and compressing.” However, the specification never discloses a “capture module” that is capable of digitizing and compressing. Instead, the specification discloses a “video capture card,” which “takes the audio/visual signal, digitizes it into a computer data file, and compresses that data file.” ’239 Patent at col. 2:66-col. 3:1. Only *after* the data file has been digitized and compressed by the video capture card is it captured in the computer’s memory “by a capture module on the video capture card.” *Id.* at col. 3:1-3. Thus, the corresponding structure in the specification that can perform the claimed function of “capturing, digitizing, and compressing at least one composite signal” is not a “capture module” but instead a “video card having a video capture module” as proposed by Apple.

Samsung argues that independent Claims 9 and 15, which recite apparatuses containing only a “video capture module to capture, digitize, and compress said composite signal into a data file” support Samsung’s claim that the means in Claim 1 does not require a video card, but only a module.¹¹ See Samsung Reply at 9-10. Samsung notes correctly that the claims are a part of the

¹¹ Samsung also cites to the prosecution history of Claims 9 and 15, wherein the Examiner allowed the claims after the phrase “video card having a video capture module” was replaced with only “a video capture module” in support of its construction. However, as described above, the Court finds

specification and may be considered when determining the corresponding structure for a means-plus-function term. *See id.* (citing *In re Hayes MicroComputer Prods., Inc. Patent Litig.*, 982 F.2d 1527, 1543 (Fed. Cir. 1992)).

However, while Claim 1 comprises a “mobile remote unit including . . . means for capturing, digitizing, and compressing,” Claims 9 and 15 recite a “remote unit *being a computer* comprising . . . a video capture module to capture, digitize, and compress” (Claim 9) and “a *computer* including a video capture module to capture and compress video in real time” (Claim 15). *Compare* ’239 Patent at col. 13:4-9 (Claim 1), *with* col. 13:43-45 (Claim 9), *and* col. 14:17-20 (Claim 15). Claim 1 differs significantly from Claims 9 and 15 in that there is no requirement that the mobile unit in Claim 1 be “a computer.” It is unclear from the claims or the specification whether a mobile unit which is not necessarily a computer, as Claim 1 recites, would require the same structure to capture, digitize, and compress a composite signal as would a mobile unit which is a computer. Thus, the Court agrees with Apple that, in the context of Claim 1, the specification requires the means to include a video card having a video capture module.¹²

Furthermore, the Court declines to adopt Samsung’s proposed construction of “audio capture module” or “audio module.” The specification only uses the term “audio capture card” and never uses the term “audio capture module.” The Court agrees with Apple that it would be error to introduce a new and unidentified term into the claims. *See Cross Medical Prods. v. Medtronic*

that the inherent differences between the two claims and Claim 1 prevent these claims from resolving the ambiguity.

¹² Samsung also argues that the doctrine of claim differentiation requires that independent Claim 1 be broader than dependent Claims 5 and 6, which recite audio and video capture “devices.” However, the doctrine of claim differentiation may not be used to impermissibly expand the scope of a means-plus-function claim. *See, e.g., Nomos Corp. v. Brainlab USA, Inc.*, 357 F.3d 1364, 1368 (Fed. Cir. 2004) (“[O]ur interpretation of the corresponding structure comes from the written description, not from [the dependent claims] and, therefore, the prohibition against reading limitations from a dependent claim into the independent claim is not violated.”) (internal quotations and citation omitted); *Laitram Corp.*, 939 F.2d at 1538 (“[T]he judicially developed guide to claim interpretation known as ‘claim differentiation’ cannot override the statute. A means-plus-function limitation is not made open-ended by the presence of another claim specifically claiming the disclosed structure which underlies the means clause or an equivalent of that structure.”). The Court finds that adopting Samsung’s construction would impermissibly expand the scope of Claim 1.

Sofamor Danek, Inc., 424 F.3d 1293, 1304 (Fed. Cir. 2005) (refusing to include structures not disclosed in the specification). Thus, the Court finds that the means for “capturing, digitizing, and compressing at least one composite signal” must include **“an audio capture card, and a video card having a video capture module.”**

c. Specific Software as Part of the Corresponding Structure

Finally, Samsung argues that the structure disclosed in the specification does not require specific software. Notably, Samsung has altered its proposed construction from “a video and/or audio capture module with associated software, and equivalents,” as disclosed in the joint prehearing claim construction statement by dropping the phrase “with associated software.” *See* Samsung Reply at n.6.

In contrast, Apple argues that the specification makes clear that software is part of the structure required to perform the claimed capturing, digitizing, and compressing functions. In support of this position, Apple notes that the “Detailed Description of the Preferred Embodiment” discloses: “A computer software program such as ‘VIDEO FOR WINDOWS’ . . . *operates with* the video card and capture module to capture, digitize, and compress the video signal into a data file.” ’239 Patent at col. 4:41-46 (emphasis added). However, other parts of the specification make clear that Video for Windows does not itself perform the capturing, digitizing and compressing. Instead, these functions are performed by the card and capture module. For example, the specification’s “Summary of the Invention” discloses that “[c]omputer software loaded on a hard disk drive in the remote unit instructs it to capture the input signal to a video capture card within the remote unit.” *Id.* at col. 2:63-66. Yet, it is the *video card* that digitizes and compresses the audio/visual signal, *id.* at col. 2:66-3:1, and the video capture module on the video capture card that captures the data file in the computer’s memory, *id.* at col. 3:1-3. *See also id.* at col. 6:9-14 (“[T]he video card in the remote unit captures the input video signal to its memory. Capture includes digitizing the input video signal to form a binary data file and then compressing that file. The file is compressed in order to conserve memory space and reduce transmission time.”). Thus, the software does not appear necessary to “capturing, digitizing, and compressing” the audio and visual signal.

Indeed, both Video for Windows and the “software sequence” discussed in the specification relate to ancillary functions not required for the video card and capture module. These ancillary functions include: (1) displaying images of the first frames of video clips that have not been captured, digitized, and compressed for selection on a user interface, *see id.* at col. 5:9-33; (2) allowing the user to input optional capture parameters such as whether the video should be captured with or without audio, *see, e.g., id.* at col. 5:49-col. 6:8; and (3) allowing editing of captured video clips, *see, e.g., id.* at col. 6:31-35. Accordingly, the specification makes clear that the additional software that “instructs,” *id.* at col. 2:65, and “operates with” the video card and capture module to capture, digitize, and compress the video signal, *id.* at col. 4:43-44, is not required to enable the claimed “capturing, digitizing, and compressing.” Thus, Video for Windows and the software sequence that Apple seeks to incorporate into the claim construction are not part of the structure in the specification that corresponds to the claimed functions of “capturing, digitizing, and compressing.”

Section 112, ¶ 6, which governs means plus function claims, “does not permit incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999). Therefore, it is inappropriate to limit the claimed “means for capturing, digitizing, and compressing at least one composite signal” to require “Video for Windows software using the software sequence set forth at 2:63-3:3, 4:39-63, 5:4-6:23, and 6:62-7:14.”

Having found that the claimed “means for capturing, digitizing, and compressing at least one composite signal” requires a video card having a video capture module and an audio capture card, but does not require additional software, the Court construes this term as: **“an audio capture card, and a video card having a video capture module.”**

2. “means for transmitting said composite signal”

Samsung’s Proposed Construction	Apple’s Proposed Construction
Agreed function: “transmitting said composite signal”	Agreed function: “transmitting said composite signal”
Corresponding structure: “one or more cellular telephone transmitters, radio frequency	Corresponding structure: “one or more modems connected to a corresponding number of cellular

transmitters, telemetric frequency transmitters, and/or standard telephone line transmitters, and equivalents”	telephones or telephone lines and the run-time module of a communications software package, such as ProComm Plus for Windows software, using the software sequence set forth at 3:8-14, 6:36-61, 7:24-33, 7:60-10:2”
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The term “means for transmitting said composite signal” appears in independent Claim 1 and dependent Claim 7 of the ’239 Patent. Independent Claim 1 of the ’239 Patent recites:

An apparatus for transmission of data, comprising:

a mobile remote unit including:

- a.) means for capturing, digitizing, and compressing at least one composite signal;
- b.) means for storing said composite signal;
- c.) **means for transmitting said composite signal;**

a host unit including:

means for receiving at least one composite signal transmitted by the remote unit;

a playback unit including:

- a.) means for exchanging data with said host unit;
- b.) means for storing the composite signal received by the host unit;
- c.) means for decompressing said composite signal.

’239 Patent at col. 13:4-17 (emphasis added).

The parties agree that “means for transmitting said composite signal” is a means plus function term. As discussed previously, means plus function terms are limited to structures disclosed in the specification that perform the claimed function, and equivalents of those structures. 35 U.S.C. § 112, ¶ 6. The parties also agree that the claimed function is “transmitting said composite signal.” *See* Samsung Br. at 22 (“As with the first disputed ’239 means plus function claim term, the parties agree that the function for this term is ‘transmitting the composite signal.’”).

The parties disagree as to what the corresponding structure is in the specification. Samsung’s proposed structure is “one or more cellular telephone transmitters, radio frequency transmitters, telemetric frequency transmitters, and/or standard telephone line transmitters, and equivalents.” Samsung Br. at 22. In contrast, Apple’s proposed structure is “one or more modems connected to a corresponding number of cellular telephones or telephone lines and the run-time module of a communications software package, such as ProComm Plus for Windows software, using the software sequence set forth at 3:8-14, 6:36-61, 7:24-33, 7:60-10:2.” *See* Apple Resp. at 21.

Apple's proposed construction limits the corresponding structure in three ways. First, Apple limits the means of transmission to cellular and conventional telephones, excluding radio frequency and other telemetric means of transmission. Second, Apple requires the use of modems. Third, Apple requires specific software: the run-time module of a communications software package, such as ProComm Plus for Windows software, using the software sequence set forth at col. 3:8-14; col. 6:36-61; col. 7:24-33; and col. 7:60-10:2. The Court agrees with Apple that the structure for transmitting requires modems, but the Court also finds that the structure may include cellular telephone transmitters, standard telephone transmitters, and radio transmitters. Additionally, the Court agrees with Apple that software is necessary structure, but disagrees as to the actual algorithms required.

a. Radio Frequency and Other Telemetric Means

First, the parties disagree about whether the required structure for performing the "means for transmitting" includes "cellular telephone transmitters, radio frequency transmitters, telemetric frequency transmitters, and/or standard telephone line transmitters," as Samsung contends, or merely cellular telephones and telephone lines, as Apple argues.

Samsung notes correctly that the claims themselves strong imply that "telephone lines, cellular, radio, or other telemetric frequencies" may be used to transmit the claimed signal. Dependent Claim 3 recites, "[a]n apparatus according to claim 1 wherein the composite signal is transmitted over telephone, cellular, *radio or other telemetric frequencies.*" '239 Patent at col. 13:20-22 (emphasis added). In contrast, Apple's proposed construction would exclude the use of radio or other telemetric frequencies from both independent Claim 1 and its dependent Claim 3, contrary to the plain language of Claim 3. *But see InterDigital Communications, LLC v. International Trade Com'n*, 690 F.3d 1318, 1324-1325 (Fed. Cir. 2012) (finding that the presumption of claim differentiation was "especially strong" where a party was urging that a limitation in a dependent claim be read into the independent claim) (quoting *SunRace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003)).

Samsung’s position is further supported by the fact that the specification repeatedly states that the transmitted data may be sent over radio or other telemetric frequencies. For example, the “Background of the Invention” explains that:

A need also exists for a capture and transmission apparatus over cellular, land lines, *or radio or other frequencies*. Additionally, with the current FCC limitations regarding cellular transmissions from airborne craft an additional need is evidenced for video *over the radio or other telemetric frequencies*.

’239 Patent at col. 2:17-22 (emphasis added). Similarly, in the “Detailed Description of the Preferred Embodiment,” the specification discloses that “[f]iles may be transmitted using telephone lines, cellular, radio and other telemetric frequencies,” *id.* at col. 9:25-26, and that, “[i]n areas which are inaccessible to standard telephone lines and outside cellular telephone ‘cell,’ files can be transmitted using radio frequencies,” *id.* at col. 9:38-40. *See also* 2/2/96 Amend. at 7 (confirming that “other telemetric frequencies” are contemplated for transmission and include “any frequency over which data may be transmitted”).

Apple responds by pointing out that Samsung’s arguments do not answer the question before the Court: whether the specification discloses a structure capable of transmitting over radio or other telemetric frequencies. Specifically, Apple contends that “the specification does not even mention a ‘cellular telephone transmitter,’ ‘telemetric frequency transmitter,’ or ‘standard telephone line transmitters,’ or otherwise explain what those things are, how they work, or how they might be involved in transmitting (and it only contains a passing mention of ‘radio transmitters,’ with no explanation of what they are or how they are connected to the ‘remote unit.’).” Apple Resp. at 24. Consequently, Apple argues that “Samsung’s construction should be rejected because it would render the claims indefinite.” *Id.* (citing *Blackboard, Inc. v. Desire2Learn Inc.*, 574 F.3d 1371, 1382 (Fed. Cir. 2009), for the proposition that failure to provide adequate disclosure of structure renders claim indefinite).

The Court partially disagrees with Apple as to the adequacy of the disclosure within the specification. As to radio frequencies, the Court finds that the patent discloses that, when using radio rather than cellular frequencies, “the cellular telephones in the remote [broadcasting unit] are replaced with radio transmitters.” ’239 Patent at col. 9:40-42. “Corresponding radio receivers are

then installed in the host unit to receive the signal transmitted from the remote. Each transmitter operates using a different frequency so as to keep each signal segregated.” *Id.* at col. 9:42-45. The Court finds that this constitutes an adequate disclosure showing what is meant by language in the claim. *See In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc).

However, the Court agrees with Apple that the specification does not disclose any transmitter using any “other telemetric frequency.” Moreover, during prosecution, the applicants admitted that the phrase “other telemetric frequencies” means “*any frequency on which data may be transmitted.*” 2/2/96 Amend. at 7 (emphasis added). Thus, lacking any disclosed structures in the specification for transmissions via “other telemetric frequencies” the Court concludes that the means of transmission includes **“one or more cellular telephones, telephone lines, and/or radio transmitters.”**

b. One or More Modems

Apple and Samsung also disagree as to whether the corresponding structure disclosed in the specification includes one or more modems.

Samsung contends that “modem” is not part of the structure for “transmitting the composite signal” because the modem is for “interfacing each communication port.” Samsung Br. at 23 (citing ’239 Patent at col. 8:61-63 (“The modems interfacing each communication port execute the dialing directory file . . . and obtain a connection with the telephone line on the host unit.”)).

Samsung appears to argue that, because the modem is interfacing between the remote unit and the signal hardware, it cannot be a part of the transmission structure. However, the very section cited by Samsung indicates that the modem is in fact a necessary structure for transmission. In the embodiments which utilize a cell phone connection, for example, a successful transmission requires that there be “a cellular connection with each cellular telephone to the host unit.” ’239 Patent at col. 8:27-28. As cited by Samsung, the modem performs the function of “obtain[ing] a connection with the telephone line on the host unit.” *Id.* at col. 8:62-63. Thus, in the telephone and cell phone embodiments, the means for transmitting requires that a connection to the host unit be made, and the modem is the structure responsible for making that connection.

Apple argues that the required structure includes one or more modems because the specification repeatedly discloses the use of modems as the sole interface between the remote unit and the signal hardware. For example, the “Detailed Description of the Preferred Embodiment,” discloses a modem as one example of an interface. *See id.* at col. 4:25-27 (“The remote unit also has up to four *computer interfaces such as modems*, each connected to a cellular telephone.”); *see also id.* at col. 8:40-41 (“Each modem interfaces through a different communications port.”); *id.* at col. 8:61-63 (“The modems interfacing each communication port . . . obtain a connection with the telephone line on the host unit”).

The Court agrees with Apple in that, for all three of the possible transmission modes discussed in the previous section (telephone, cell phone, and radio), the specification refers to a modem connecting the signal hardware to the remote unit. For instance, the specification discloses that, in certain circumstances, “the cellular telephones [may be] omitted from the remote, and the modems connected to standard telephone jacks, using standard telephone connectors and wiring.” *Id.* at col. 9:34-37. Similarly, the specification discloses that “cellular telephones in the remote [may be] replaced with radio transmitters,” but makes no mention of replacing or omitting the modems discussed in the previous paragraph of the specification. *Id.* at col. 9:41-42. The specification never discloses any interface structure other than a modem.

Finally, the Court notes that Samsung’s claim term differentiation argument that the claimed means of transmitting cannot include an interface because Claim 3 adds an interface as a limitation is not persuasive. Claim 3 clearly adds the use of cellular transmission as a limitation to the means of transmitting, and this cellular limitation is sufficient to render Claim 3 distinct from Claim 1.

Accordingly, the Court concludes that the means for transmitting requires “**one or more modems.**”¹³

¹³ This conclusion is supported by the Court’s understanding that an interface such as a modem is necessary to transform digital data into analog before transmission over analog frequencies, such as traditional phone lines, cellular frequencies, and radio frequencies in existence at the time the ’239 Patent was filed. Although equivalents to the corresponding structures disclosed in the specification infringe a means plus function claim, such equivalents must have been in existence at the time the patent was filed. *See Welker Bearing Co. v PHD, Inc.*, 550 F.3d 1090, 1099-1100 (Fed. Cir. 2008) (“[A]n equivalent structure under § 112, ¶ 6 ‘must have been available at the time

c. Software as Part of the Corresponding Structure

Finally, the parties disagree about whether the corresponding structure for the transmitting means must include software and, if so, whether the software includes the specific software algorithms listed in the specification. While the Court agrees that the corresponding structure must include certain software procedures, the Court does not find that the corresponding structure requires the specific software algorithms suggested by Apple. Rather, the Court finds that the transmitting means requires software procedures that must merely be capable of: (1) performing a software sequence of initializing one or more communications ports on the remote unit; (2) obtaining the stored data file; and (3) transmitting the stored data file. Additionally, the Court finds that these sequences are not limited to the specific brand of software mentioned in the specification.

First, Samsung argues that the corresponding structure does not need to include any software because the means for transmitting relates only to the actual hardware “transmitter,” and “does not even include any processor element.” *See* Samsung Br. at 24. In support of this position, Samsung relies on *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech*, 521 F.3d 1328 (Fed. Cir. 2008), for the proposition that, since the means does not include a “general purpose processor,” it cannot be limited to a specific algorithm listed in the specification. Samsung Br. at 24; *see Aristocrat Techs.*, 521 F.3d at 1333 (holding computer-implemented means-plus-function limitations of a claim lacked sufficient disclosure of structure without an algorithm because “general purpose computers can be programmed to perform very different tasks in very different ways” and, therefore, “simply disclosing a computer as the structure designated to perform a particular function does not [sufficiently] limit the scope of the claim . . . as required by section 112 paragraph 6.”). In *Aristocrat Techs.*, however, the Federal Circuit also stated that the relevant inquiry into whether a specification has adequately disclosed sufficient structure is whether, based on “the disclosure of the patent . . . one of skill in the art would have understood that disclosure to encompass software [to perform the function].” *Id.* at 1337 (quoting *Medical Instrumentation &*

of the issuance of the claim,’ whereas the doctrine of equivalents can capture after-arising ‘technology developed after issuance of the patent.’”) (quoting *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999)).

Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1212 (Fed. Cir. 2003). Therefore, *Aristocrat Techs.* does not foreclose construing the transmitting means to require software algorithms as Samsung proposes. Instead, it merely requires that, *if* software is required by the means-plus-function claim, that software must be described by an algorithm and not an abstract idea or concept.

As such, whether software algorithms are a required structure depends on whether the software included in the specification is required for the hardware to perform the claimed function of transmitting. Apple argues that it must be required, because the '239 Patent specification repeatedly describes the structure for performing the "means for transmitting" as including the run-time module of a communications software package. Samsung disputes that there is any basis to incorporate Apple's proposed limitation into the construction.

The specification does appear to support finding that the corresponding structure must include software as a "means for transmitting said composite signal." The specification discloses a preferred embodiment of the invention which includes software:

Transfer *software sequence B enables the remote unit* to communicate with the host unit *to transmit* a stored data file using the system hardware. *Transfer software sequence B contains all of the instructions necessary* to [1] initialize the communications ports on the remote, [2] obtain a cellular connection with each cellular telephone to the host unit, [3] obtain the stored data file, [4] initiate file splitting sequence C, and [5] transmit the split data file.

'239 Patent at col. 8:23-30 (emphasis added).

However, not all of the five software algorithms listed above for the preferred embodiment are necessary for performing the basic function of transmitting. For example, the specification states that the step of splitting and organizing the file may occur *prior* to transmission. *See* '239 Patent at col. 3:22-23 ("In an alternate embodiment, a basic one, the signal is not divided before it is transmitted."); *see also id.* at col. 9:66-col. 10:2 ("In order to decrease transmission time of the data file, it *may* be split into 10K files and [then] transmitted over multiple land telephone lines, cellular telephones, or radio frequencies.") (emphasis added); *see also id.* at col. 13:23-25 (Claim 4) (describing an additional means for "splitting and organizing the digitized, compressed . . .

signal *prior to* transmission) (emphasis added). Thus, the software sequence for “initiating file splitting sequence C” is not required for the basic embodiment of “transmitting.”

Furthermore, as discussed above, the transmission may take place using a radio transmitter instead of a traditional phone or cell phone. Thus, the software algorithm of “obtain[ing] a cellular connection with each cellular telephone” relates only to a particular embodiment of the invention using cell phones, and is not necessary for the embodiments using a radio transmitter.

However, the other steps performed by software sequence B—initializing communication ports, obtaining the stored data file, and transmitting the stored data file—all appear to be necessary for any transmission because they are never described as optional or elective operations by the specification.

Thus, the Court finds that three software algorithms are required for the means for transmitting: (1) software that initializes the communication ports on the remotes, (2) software that obtains the stored data file, and (3) software that transmits the data file.

While Apple requests that the exemplar software in the specification, “ProComm Plus for Windows,” be required as part of the corresponding structure, the Court finds that limiting the corresponding structure to the specific brand name software package would be unduly narrow. Moreover, a construction naming this software package would risk misleading the jury, even if the construction explicitly includes “equivalents.” Instead, the Court’s construction is based upon the specification’s disclosure of the actual processes performed by “software sequence B,” as disclosed in the specification’s “Detailed Description of a Preferred Embodiment.”

Accordingly, the Court construes the corresponding structure as follows: **“one or more modems connected to one or more cellular telephones, telephone lines, and/or radio transmitters, and software performing a software sequence of initializing one or more communications ports on the remote unit, obtaining the stored data file, and transmitting the stored data file.”**

IV. CONCLUSION

In summary, and for the reasons stated herein, the Court construes the parties’ disputed terms as follows:

United States District Court
 For the Northern District of California

Patent	Disputed Term	Court's Construction
5,666,502	"history list"	"a list of previously used entries"
	"field class"	"a category of information associated with a field"
5,946,647	"action processor"	"program routine(s) that perform the selected action on the detected structure"
7,761,414	"concurrently with"	"the synchronization thread and the non-synchronization thread are both active during an overlapping time interval"
8,014,760	"Completely substitut[e/ing] display of the list [of interactive items] with display of contact information"	"Displaying at least two contact objects in place of the display of the list of interactive items"
7,756,087	"non-scheduled transmission"	"Transmission of data using non-scheduled transmission information to indicate possible transmission time intervals (TTIs)"
7,577,757	"zone-specific storage and interface device"	"a storage and interface device that resides in an area, such as a room or similar location"
5,579,239	"means for capturing, digitizing, and compressing at least one composite signal"	"an audio capture card, and a video card having a video capture module"
	"means for transmitting the composite signal"	"one or more modems connected to one or more cellular telephones, telephone lines, and/or radio transmitters, and software performing a software sequence of initializing one or more communications ports on the remote unit, obtaining the stored data file, and transmitting the stored data file"

IT IS SO ORDERED.

Dated: April 10, 2013


 LUCY H. KOH
 United States District Judge