

No. 16-

IN THE

Supreme Court of the United States

SAMSUNG ELECTRONICS CO., LTD., SAMSUNG
ELECTRONICS AMERICA, INC., AND SAMSUNG
TELECOMMUNICATIONS AMERICA, LLC,

Petitioners,

v.

APPLE INC.,

Respondent.

**On Petition for a Writ of Certiorari to the
United States Court of Appeals
for the Federal Circuit**

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

This petition presents three questions of great importance to patent law that arise from the decisions of a deeply divided Federal Circuit:

1. Do this Court's decisions in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), and *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), require a court to hold patents obvious as a matter of law under 35 U.S.C. § 103 where the patents make at most trivial advances over technologies well-known to a person of skill in the art?

2. Does this Court's decision in *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), require application of the four-factor test for injunctions in accordance with traditional equitable principles, and therefore require more than merely "some connection" between an infringing feature and asserted irreparable harm to support issuance of an injunction for patent infringement?

3. Does this Court's decision in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997), require evidence that an accused product meets all elements of the relevant claim to support entry of a judgment of patent infringement?

RULE 29.6 STATEMENT

Samsung Electronics America, Inc. (“SEA”) is a wholly-owned subsidiary of Samsung Electronics Co., Ltd. (“SEC”), a publicly held corporation organized under the laws of the Republic of Korea. SEC is not owned by any parent corporation and no other publicly held corporation owns 10% or more of its stock. No other publicly held corporation owns 10% or more of SEA’s stock. Effective January 1, 2015, Samsung Telecommunications America, LLC (“STA”) merged with and into SEA, and therefore STA no longer exists as a separate corporate entity.

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INTRODUCTION

This petition arises from a pair of deeply divided decisions by the Federal Circuit that make critical changes in several of the most frequently litigated issues of patent law: obviousness, injunctive relief, and infringement. In one decision, the *en banc* Federal Circuit overturned a unanimous panel decision that had reversed a nearly \$120 million judgment of patent infringement—and did so without briefing or argument and over the dissents of all three panel members. In the other decision, on interlocutory review, a different Federal Circuit panel insisted over a vigorous dissent that the district court should have issued a permanent injunction despite detailed findings of lack of irreparable harm.

The four dissents from the two decisions starkly demonstrate the need for this Court's review. As to obviousness, this Court held in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), and *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), that obviousness is a question of law requiring objective inquiry. But the *en banc* majority treated obviousness as a question of fact, found it dispositive that prior art was embodied in a different device, and gave secondary considerations like industry praise greater weight than technical evidence showing obviousness to a skilled artisan. The decision thus raised the bar for proving obviousness so high as to make *KSR* and *Graham* all but meaningless.

As to injunctive relief, this Court held in *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), that patent injunctions are to be governed by the same four-factor, equitable test as other injunctions. Ordinary injunctions require a causal nexus to irreparable harm. But the injunction decision below held that

there need only be “some connection” between patent infringement and irreparable harm. This abrogation of traditional causation principles creates a special rule for patent injunctions in violation of *eBay* and has encouraged a resurgence of patent injunctions no matter how minor the patent at issue.

Finally, as the Court reaffirmed in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997), a patent claim can be infringed only if the accused product practices all elements of the claim. But the *en banc* decision reinstates a judgment of infringement without even considering two of the three asserted claim elements challenged on appeal.

For all these reasons, the decisions below are wrong and warrant this Court’s review. But they especially warrant this Court’s review because of the troubling way in which they were issued. The *en banc* decision took the parties and observers entirely by surprise. It was issued without notice, briefing, or argument and without any plausible Rule 35 basis. It thus caused one prominent commentator to suggest that it “smacks of pro-patentee bias” and may be the Federal Circuit’s “most controversial decision ever,”¹ and another to suggest that its “strange procedural path” may “ultimately undermine perceptions of the Federal Circuit’s institutional legitimacy.”² As to the injunction decision, its author stated at oral argument, “I think *eBay*

¹ Donald Chisum & Janice Mueller, *Smartphone Wars: Federal Circuit Shenanigans?*, NATIONAL LAW REVIEW (Oct. 31, 2016), available at <http://www.natlawreview.com/article/chisum-and-mueller-dissect-recent-en-banc-decision-apple-v-samsung-smartphone-wars>.

² Derek F. Dahlgren et al., *Apple v. Samsung: Procedural Fairness At The Fed. Circ.*, LAW360 (Nov. 6, 2016), available at

was wrongly decided I think patentees should get injunctions.”³ And the decision retrenched so far from settled Federal Circuit law that, in one commentator’s words, the Federal Circuit’s “new and lower causal nexus standard appears disconnected from the reality of multicomponent devices. ... The result is a causal nexus standard that has almost no connection to causation at all.”⁴

Because no other circuit can consider the important patent issues here, and because the Federal Circuit was so deeply divided and followed such troubling procedures, this Court should grant certiorari.

OPINIONS BELOW

For the merits appeal, the opinion of the *en banc* U.S. Court of Appeals for the Federal Circuit is reported at 839 F.3d 1034 and reproduced at App. 1a-111a, and the opinion of the panel is reported at 816 F.3d 788 and reproduced at App. 112a-158a. The Federal Circuit’s order denying Samsung’s petition for rehearing *en banc* is reproduced at App. 353a-354a.

For the injunction appeal, the Federal Circuit’s opinion is reported at 809 F.3d 633 and reproduced at App. 159a-217a. The orders of the court of appeals denying rehearing *en banc* and granting panel rehearing for the limited purpose of modifying the opinion are reproduced at App. 355a-359a.

<https://www.law360.com/articles/860063/apple-v-samsung-procedural-fairness-at-the-fed-circ>.

³ *Apple Inc. v. Samsung Elecs. Co.*, No. 14-1802, Oral Argument at 8:32-8:40 (Fed. Cir. Mar. 4, 2015), available at <http://oralarguments.ca9.uscourts.gov/default.aspx?fl=2014-1802.mp3>.

⁴ Bernard Chao, *Causation and Harm in a Multicomponent World*, 164 U. Pa. L. Rev. Online 61, 70 (2016).

JURISDICTION

On November 28, 2016, the court of appeals denied Samsung's petition for rehearing *en banc* in the merits appeal from the district court's final judgment. On February 21, 2017, the Chief Justice extended the time for filing a petition for a writ of certiorari to March 29, 2017. This Court has jurisdiction under 28 U.S.C. § 1254(1). The interlocutory decision on the injunction appeal is properly raised for certiorari now on final judgment. *See, e.g., Major League Baseball Players Ass'n v. Garvey*, 532 U.S. 504, 508 n.1 (2001).

STATUTORY PROVISIONS INVOLVED

Section 103 of the Patent Act, 35 U.S.C. § 103, states:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, 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. Patentability shall not be negated by the manner in which the invention was made.

Section 283 of the Patent Act, 35 U.S.C. § 283, states:

The several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by

patent, on such terms as the court deems reasonable.

STATEMENT OF THE CASE

This petition arises from the Federal Circuit’s *en banc* decision (App. 1a-111a) affirming a judgment of infringement as to three utility patents (U.S. Patent No. 5,946,647 (“the ’647 patent”), U.S. Patent No. 8,046,721 (“the ’721 patent”), and U.S. Patent No. 8,074,172 (“the ’172 patent”)) and from an earlier panel decision on interlocutory review (App. 159a-217a) vacating the denial of a permanent injunction.

A. The Patents At Issue

1. Filed in 1996 in the age of desktop computers, Apple’s ’647 patent, commonly known as “quick links,” allows use of an “analyzer server” to “perform[] actions” (like sending an email) by clicking on a “detected structure” (like an email address) when that data is received in a document. Claim 9 of the ’647 patent depends from claim 1, which provides:

1. A computer-based system for detecting structures in data and performing actions on detected structures, comprising: ...

an analyzer server for detecting structures in the data, and for linking actions to the detected structures

A597.⁵ In a decision issued in a separate case on the last day of trial in this case, the Federal Circuit construed the limitation “analyzer server” in this claim as “a server routine separate from a client that receives data having structures from the client.”

⁵ Cites to “A__” refer to the appendix filed in the Federal Circuit. Cites to “App. __” refer to the Petition Appendix.

Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1304 (Fed. Cir. 2014).

2. Apple’s ’721 patent, commonly known as “slide to unlock,” concerns software for a user interface on a touchscreen in which the screen can be unlocked by sliding a finger across the screen. Claim 8 of the ’721 patent depends from claim 7, which provides for:

7. A portable electronic device, comprising: ...
one or more modules ... including instructions: ...

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.

A685.

3. Apple’s ’172 patent, commonly known as “autocorrect,” is directed to one particular way of providing word recommendations for correcting text a computer user types. Claim 18 of the ’172 patent provides for:

a first area of the touch screen display that displays a current character string ... ; and

a second area of the touch screen display ... that displays the current character string or a portion thereof and a suggested replacement character string ... ;

wherein;

the current character string in the first area is replaced with the suggested replacement character string if the user activates a ... delimiter [or] if the user performs a gesture

on the suggested replacement character string in the second area

A707-08.

B. The District Court Proceedings

Apple filed a complaint alleging infringement of eight patents, including the three discussed above. A3044-57. In summary judgment proceedings, the district court found the '172 patent infringed as a matter of law. A164. After a four-week trial, a jury returned a verdict finding that nine Samsung products infringed one or both of Apple's '647 and '721 patents. A40869; A40872. The jury also answered "Yes" to a general verdict question as to the validity of the '721 and '172 patents. A40874. The jury awarded Apple \$119.6 million in damages. A40875.

The district court denied Samsung's post-trial motion for, *inter alia*, judgment as a matter of law that the '647 and '721 patents were invalid and not infringed and that the '172 patent was invalid. App. 219a-251a, 256a-259a.

The district court also denied Apple's motion for a permanent injunction. App. 291a-352a. Applying previously settled Federal Circuit law, the district court made detailed factual findings that there was no showing that "quick links," "slide to unlock" or "autocorrect" drove consumer demand for the phones, and thus no showing of causal nexus between infringement and Apple's asserted irreparable harm from lost sales. App. 300a-336a. The district court entered final judgment for Apple. A1-2.

C. The Federal Circuit's Injunction Decision

On interlocutory appeal, a divided panel of the Federal Circuit (Moore, J., joined by Reyna, J.) vacated

the district court's denial of a permanent injunction. App. 159a-183a. The panel majority held that irreparable harm from lost sales could be established merely by a showing of "some connection' between the patented features and the demand for the infringing products" (App. 170a), and that "the public interest nearly always weighs in favor of protecting property rights in the absence of countervailing factors, especially when the patentee practices his inventions" (App. 181a).

Chief Judge Prost dissented, stating (App. 203a) that "[t]his is not a close case" for an injunction. App. 203a-217a. The dissent emphasized the utter absence of record evidence that consumer demand for Samsung's smartphones is driven by "quick links," "slide to unlock," or "autocorrect." App. 209a-215a. The dissent would have found no abuse of discretion in the district court's finding that Apple had failed to prove any "causal nexus" between the infringing features and irreparable harm. App. 215a.

On Samsung's petition for panel rehearing or rehearing *en banc*, the panel majority amended the opinion to delete the statement that the patented features were not a "significant driver of customer demand." App. 358a. Prior Federal Circuit precedent had established that "some *insubstantial* connection between the alleged harm and the infringement" did not suffice. App. 207a (Prost, C.J., dissenting) (quoting *Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370, 1375 (Fed. Cir. 2012)) (emphasis added by Chief Judge Prost); see *Apple Inc. v. Samsung Elecs. Co.*, 735 F.3d 1352, 1364 (Fed. Cir. 2013). Nonetheless, the panel majority did not state that the patented features were a significant driver of demand, and thus Chief Judge Prost concluded that the amendment "does not obviate

the central problem with the majority’s conclusion.” App. 209a. Samsung’s petition was otherwise denied. App. 355a-359a. On remand, the district court enjoined Samsung from infringing the ’647, ’721, and ’172 patents. *Apple Inc. v. Samsung Elecs. Co.*, No. 12-cv-630, Dkts. 2157, 2158 (N.D. Cal. Jan. 18, 2016).⁶

D. The Federal Circuit’s Merits Decision

After the decision in the injunction appeal, on a separate appeal and cross-appeal from final judgment, a unanimous panel of the Federal Circuit (Dyk, J., joined by Prost, C.J., and Reyna, J.) reversed in relevant part. App. 112a-158a. The panel held that the evidence was insufficient as a matter of law to support the judgment of infringement of the ’647 patent (App. 117a-124a), and that the ’721 and ’172 patents are invalid as obvious as a matter of law in light of prior art references (App. 124a-147a). The panel’s decision that no Apple patent was valid and infringed effectively mooted the decision in the injunction appeal.

E. The Federal Circuit’s *En Banc* Decision

Apple petitioned for rehearing *en banc*, and after six months with no sign of any grant of *en banc* review, a divided Federal Circuit suddenly issued an *en banc* opinion (Moore, J., joined by Newman, Lourie, O’Malley, Wallach, Chen, and Stoll, JJ.) that abrogated the panel’s merits decision. App. 1a-55a.

⁶ Samsung filed a petition for certiorari (No. 15-1386) asking that the injunction decision be vacated as moot in light of the subsequent panel decision in the merits appeal. This Court denied the petition. *Samsung Elecs. Co. v. Apple Inc.*, 136 S. Ct. 2522 (2016).

The '647 Patent—The *en banc* majority first vacated (App. 6a-21a) the panel decision’s reversal of the judgment of infringement as to the ’647 “quick links” patent. The panel had found no basis in the record to conclude that the code that Apple had accused is a “server routine separate from a client that receives data having structures from the client,” as the *Motorola* claim construction required, because the code does not run separately from the client. App. 117a-124a. The *en banc* majority overturned that ruling, concluding that the claim’s “separateness” requirement is satisfied by Apple’s expert’s testimony that the code was *located* in parts of memory separate from the client, even if it did not *run* separately from the client. App. 9a-16a.

The *en banc* majority failed to consider Samsung’s arguments that, in addition to not satisfying the “separateness” requirement, the accused code does not meet the “server” or “receiving data” requirements of the *Motorola* claim construction. While the panel need not have reached either of those elements once it found the separateness element not met, the *en banc* majority was obliged to identify all claim elements in the accused products before reinstating the judgment of infringement, but did not do so.

The '721 Patent—The *en banc* majority next vacated (App. 21a-45a) the panel’s holding (App. 126a-140a) that claim 8 of the ’721 “slide to unlock” patent is invalid as obvious in light of two pieces of prior art: “Neonode,” which discloses all the limitations of claim 8 other than a moving image associated with the sliding gesture, and “Plaisant,” which discloses such a moving image in a slider-toggle design for wall-mounted touchscreens. The *en banc* majority held it undisputed that “Neonode and Plaisant disclose all the

elements of claim 8.” App. 28a. But it nonetheless held their combination nonobvious.

In reaching that surprising conclusion, the *en banc* majority assumed that, “where there is a black box jury verdict,” it must “presume the jury resolved underlying factual disputes in favor of the verdict winner.” App. 21a-22a. Holding (App. 29a) that “whether a skilled artisan would have been motivated to combine references [is a] question[] of fact,” the court attributed to the jury (App. 31a) a hypothetical factual finding that a skilled artisan would not have combined Neonode and Plaisant because one involved a mobile phone and the other involved a wall-mounted controller. The *en banc* majority also held (App. 22a-23a) that secondary considerations like industry praise, copying, commercial success, and long-felt need “must be considered in every case where present.” The court further held (App. 33a-43a) that facts supporting such considerations may be presumed from a black-box jury verdict of validity, and held (App. 45) that these implicit jury findings on secondary considerations must be treated as “particularly strong” and that they “powerfully weigh in favor of validity.” The *en banc* majority thus, for example, attributed great significance to the fact that a general audience “burst into cheers” when Apple founder Steve Jobs demonstrated “slide to unlock” at an Apple event. App. 35a, 39a (quotation marks omitted).

The ’172 Patent—Finally, the *en banc* majority overturned (App. 45a-55a) the panel’s holding (App. 140a-147a) that claim 18 of the ’172 “autocorrect” patent is invalid as obvious based on two pieces of prior art: “Robinson,” which discloses every element of the claim except displaying and replacing an incorrectly typed word in a first text-entry area, and

“Xrgomics,” which discloses that very element for auto-completion. The *en banc* majority held that the jury could have found that Xrgomics does not supply the missing element in Robinson because “Xrgomics is not directed to spelling correction, but is a ‘word completion patent.’” App. 50a (quotation marks omitted). The majority also concluded that the jury could have found each secondary consideration satisfied, and that this supported a showing of nonobviousness. App. 50a-52a.

The En Banc Dissents—All three judges who sat on the unanimous panel filed dissenting opinions. App. 56a-78a (Prost, C.J., dissenting); App. 79a-102a (Dyk, J., dissenting); App. 103a-111a (Reyna, J., dissenting).⁷ All three dissenting opinions expressed “concerns as to the procedural irregularities surrounding this case at the *en banc* stage.” App. 56a (Prost, C.J., dissenting); *see* App. 79a-80a (Dyk, J. dissenting) (calling it “remarkabl[e]” that the court took an obviousness case *en banc* for the first time in 26 years “without further briefing and argument from the parties, amici, or the government, as has been our almost uniform practice in this court’s *en banc* decisions”); App. 104a (Reyna, J., dissenting) (noting that the majority opinion, contrary to Rule 35, “reverses the panel ... based on a belief that the panel’s decision was wrong”).

As to whether the ’721 and ’172 patent claims are nonobvious, all three panel members dissented. App. 58a-78a (Prost, C.J., dissenting); App. 82a-102a (Dyk, J., dissenting); App. 103a-111a (Reyna, J., dissenting). The dissents by Chief Judge Prost and Judge Dyk concluded that both patent claims are clearly obvious

⁷ Judge Hughes concurred in the result without opinion. App. 2a. Judge Taranto did not participate. App. 2a.

under this Court’s precedents. As to the ’721 “slide to unlock” patent, the dissents reasoned that “a skilled artisan, starting with the portable phone of Neonode, would have seen a benefit to adding Plaisant’s sliders to solve the accidental activation problem described by the ’721 patent.” App. 63a (Prost, C.J., dissenting); *see* App. 84a, 90a, 94a (Dyk, J., dissenting) (noting that this case “is not a close one” because the only element missing from Neonode was provided by Plaisant, which is “directed to solving the same problem in the same area”). As to the ’172 patent “autocorrect” patent, the dissents reasoned that autocorrection “was known in the prior art (Robinson),” the “only innovation is displaying contemporaneously the text to be autocorrected,” and “[s]uch text displays have long been known in the prior art” as a “routine feature” well known to “anyone who’s used a computer since the late 1970s.” App. 84a, 88a-89a (Dyk, J., dissenting); *see* App. 74a (Prost, C.J., dissenting) (finding “no evidence” to support any finding that “Robinson and Xrgomics, when combined, would not disclose every limitation of the asserted claim”).

The dissents likewise criticized the *en banc* majority’s use of secondary considerations, noting (App. 65a n.5 (Prost, C.J., dissenting)) that the majority repeatedly relied on hypothesized evidence “that was not presented by Apple to the district court,” faulting the majority (App. 96a (Dyk, J., dissenting)) for failing to require that any secondary considerations result from the claimed invention, and explaining (App. 111a (Reyna, J., dissenting)) that the question who bears the burden on secondary considerations was an important one warranting plenary review.

As Judge Dyk’s dissent summarized (App. 82a-97a), the *en banc* majority decision is “inconsistent with

[this] Court's decisions in *KSR*, *Graham* ... , as well as earlier Supreme Court cases, and will make proof of obviousness far more difficult" (App. 81a) by means of six critical changes it works in the law:

(1) "turn[ing] the legal question of obviousness into a factual issue for a jury to resolve, both as to the sufficiency of the motivation to combine and the significance to be given to secondary considerations," App. 82a;

(2) "lower[ing] the bar for nonobviousness by refusing to take account of the trivial nature of the two claimed inventions," App. 84a;

(3) "conclud[ing] that combinations of prior art used to solve a known problem are insufficient to render an invention obvious as a matter of law" and thus requiring "evidence of a specific motivation to combine," App. 85a;

(4) "cabining the relevant technology in the field of prior art" so narrowly as to dismiss prior art evidence that is directed to solving the same problem "on the theory that it concerns a different device than the patented invention," App. 87a;

(5) "elevating secondary considerations of nonobviousness beyond their role as articulated by [this] Court," App. 91a; and

(6) failing to compare the patent's innovative contribution "to the closest prior art" in assessing secondary considerations, App. 94a.

Samsung petitioned for rehearing *en banc* from the Federal Circuit's *en banc* decision, which the court denied. App. 353a-354a.

REASONS FOR GRANTING THE WRIT**I. THIS CASE RAISES LEGAL ISSUES OF GREAT IMPORTANCE TO PATENT LAW THAT MERIT THIS COURT'S REVIEW**

This Court has long served as the bulwark when the Federal Circuit tips the balance too far in favor of patent-holders' rights at the expense of innovation and competition—as it did for example in *KSR* and *eBay*. Review is warranted here as in those cases, for the Federal Circuit's decisions below threaten to multiply the number of trivially obvious but unreviewable patents in our patent system while inviting a vast resurgence of patent injunctions even for infringement of patents on minor components of multicomponent products. Such consequences will greatly harm competition and innovation. The petition thus raises questions of exceptional importance.

1. The *en banc* decision's changes to obviousness law have critical importance because “[t]he nonobviousness requirement of Section 103 is the most important and most litigated of the conditions of patentability.” App. 80a n.2 (Dyk, J., dissenting) (quoting 2-5 Chisum on Patents § 5.06 (2015)). This Court has held that “[g]ranteeing patent protection to advances that would occur in the ordinary course without real innovation retards progress.” *KSR*, 550 U.S. at 419. But the *en banc* decision makes it virtually impossible to invalidate even the most trivial patents, as illustrated by the patents here.

The '721 patent claim, for example, is so trivial that *every other jurisdiction in the world* to consider it has invalidated it. See App. 84a n.3 (Dyk, J., dissenting). Slide-to-unlock was well known in the prior art (Neonode); Apple added only an image moving with

the user’s finger across the screen, and that trivial addition was also well known in the prior art (Plaisant). App. 58a-59a (Prost, C.J., dissenting); App. 84a (Dyk, J., dissenting).

The ’172 patent claim here is similarly trivial. Autocorrecting proposed text on a screen was well known in the prior art (Robinson); Apple added only the display of the typed text in both a first and second area, and that trivial addition was also well known in the prior art (Xrgomics). App. 71a (Prost, C.J., dissenting); App. 84a (Dyk, J., dissenting).

In order to ensure that such trivial patent claims may be held invalid, *KSR* made clear that obviousness is an objective inquiry that may be decided as a question of law—as the panel merits decision properly did below. But the *en banc* majority treated all obviousness issues as questions of fact for which it could hypothesize jury findings, “dismiss relevant prior art and find almost any patent nonobvious by narrowly defining the relevant technology,” App. 90a (Dyk, J., dissenting), and allow secondary considerations—like acolytes clapping for Steve Jobs’ demonstration of slide-to-unlock—to outweigh evidence that a skilled artisan would find an advancement obvious in light of the prior art.

2. The Federal Circuit panel majority’s injunction decision is also exceptionally important and, if allowed to stand, would create widespread harm to the patent system. As a concurring opinion in *eBay* made clear, “[w]hen the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.”

eBay, 547 U.S. at 396-97 (Kennedy, J., concurring). The panel majority’s decision that Apple was nevertheless entitled to an injunction has implications in countless other cases where minor, patented features represent only insubstantial parts of the product as a whole. Many district courts are already issuing injunctions with seeming ease, as if under the pre-*eBay* standard.⁸

There could hardly be a weaker case for an injunction than this one: the patents covered very specific and limited ways of performing three features out of tens of thousands on a smartphone, the district court found unequivocally that the patented features did not drive sales of smartphones, and Apple has previously licensed the patents-in-suit. App. 319a-320a, 335a-336a. The injunction decision below threatens to cause a resurgence of patent injunctions in such cases and thus merits this Court’s review.

3. The Federal Circuit’s *en banc* infringement decision also raises an important issue worthy of this Court’s review. While the *en banc* majority did not expressly reject this Court’s all-elements rule, it disregarded that rule by holding Samsung liable for nearly \$100 million in damages on the ’647 patent

⁸ See, e.g., *Radware, Ltd. v. F5 Networks, Inc.*, No. 5:13-CV-02024-RMW, 2016 WL 4427490, at *13 (N.D. Cal. Aug. 22, 2016) (finding irreparable harm even though the plaintiff “presented no evidence that patented features ‘drove demand’” because it “presented at least some evidence that customers found link load balancing important generally”); *Dominion Res. Inc. v. Alstom Grid, Inc.*, No. CV 15-224, 2016 WL 5674713, at *12, *16 (E.D. Pa. Oct. 3, 2016); *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, No. 14-CV-02061-H-BGS, 2016 WL 4377096, at *14, *18 (S.D. Cal. Aug. 17, 2016); *Bestop, Inc. v. Tuffy Sec. Prod., Inc.*, No. 13-cv-10759, 2016 U.S. Dist. LEXIS 56965, at *5, *8-9 (E.D. Mich. Apr. 29, 2016).

without considering whether Samsung's smartphones infringed all elements of the '647 patent claim.

This failure to address all elements has broad implications because it is part of a larger trend in which the Federal Circuit enlarges patent claims on outdated technology to cover newer technology. *See, e.g., Innogenetics NV v. Abbott Labs.*, 512 F.3d 1363, 1371-72 (Fed. Cir. 2008) (“Our case law allows for after-arising technology to be captured within the literal scope of valid claims that are drafted broadly enough.”); *Superguide v. DirectTV*, 358 F.3d 870, 880 (Fed. Cir. 2004) (holding a patent on technology for an analog TV signal was infringed by digital TV feeds). Here, the '647 patent employs an antiquated software architecture of a “server” routine that receives data from the application. A597. Only by refusing to consider these limitations of the patent claim could the *en banc* majority hold that the new linking technology used in Android smartphones infringed an old patent from the age of desktop computers. This enlarging of the scope of old patents to cover new inventions warrants this Court's review.

4. The irregular and improper *en banc* procedure here underscores the need for this Court's scrutiny. “[C]ertain fundamental requirements should be observed by the Courts of Appeals” and “the responsibility lies with this Court to define these requirements and insure their observance.” *W. Pac. RR Corp. v. W. Pac. RR Co.*, 345 U.S. 247, 259-60 (1953) (internal quotation marks and citation omitted). “It is essential, of course, that a circuit court, and the litigants who appear before it, understand the practice—whatever it may be—whereby the court convenes itself *en banc*.” *Id.* at 260-61. In addition, “there is no reason to deny

the litigants any chance to aid the court in its effective implementation of the statute.” *Id.* at 262.

The Federal Circuit’s *en banc* decision violates these basic requirements. To begin with, it used the *en banc* process to achieve an impermissible “do over” rather than follow the criteria set forth in Rule 35. App. 107a (Reyna, J., dissenting). Contrary to the *en banc* majority’s suggestion (App. 5a), Rule 35 does not contemplate *en banc* review “to affirm our understanding of our appellate function” or “to apply the governing law.” And the *en banc* majority lacks any plausible basis to suggest (App. 4a-5a) that it needed to overturn the panel decision “to maintain our fidelity to the Supreme Court’s *Teva* decision.” The majority quibbled with the panel’s citation of public records, but *Teva Pharmaceuticals, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015), never mentioned citation of public records and the panel stated that it would fix any supposed *Teva* problem by amending the opinion to omit any such reference as unnecessary, *see* App. 81a (Dyk, J., dissenting). The Federal Circuit’s refusal to allow the panel to amend its opinion to fix any supposed problem betrays that there was no real need for *en banc* review.

Moreover, the Federal Circuit’s refusal to allow any briefing or argument by the parties, *amici*, or the government conflicts with the Federal Rules of Appellate Procedure. There is no plausible way that a case can meet the stringent requirements Rule 35 sets forth for *en banc* review and somehow be so unimportant and clear that no briefing or argument is necessary. Moreover, the refusal to allow for oral argument—even when all three judges on the panel believed it necessary—is in serious tension with Rule 34(a)(2) of the Federal Rules of Appellate Procedure, which requires unanimous agreement of a panel to dispense

with oral argument. The Federal Circuit's approach here also conflicts with its own Internal Operating Procedures and established practice by failing to provide notice of *en banc* review and allow briefing and argument before the *en banc* court. See Fed. Cir. IOP 14.2(f); see also App. 79a-80a & n.1 (Dyk, J., dissenting).

By engaging in unnecessary *en banc* review without the aid of briefing and argument, the Federal Circuit dramatically changed the law of obviousness and inexplicably ignored the all-elements rule. This Court's review is therefore warranted.

II. THE FEDERAL CIRCUIT CREATED NEW AND INCORRECT PATENT LAW ON THE ISSUES OF OBVIOUSNESS, INJUNCTIVE RELIEF, AND INFRINGEMENT

A. The Decision Below Departs From *KSR* And *Graham* By Significantly Raising The Bar For Obviousness

This Court's review is warranted because the *en banc* majority decision made "profound changes in the law of obviousness" that "will have a significant impact on future cases," and "materially raises the bar for obviousness by disregarding Supreme Court precedent." App. 82a, 97a (Dyk, J., dissenting); see App. 64a-67a (Prost, C.J., dissenting) (similar). As one commentator put it, the decision "contradicts almost 200 years of consistent U.S. Supreme Court precedent, up to and including ... *KSR*"⁹

⁹ Mark Hannemann et al., *Fed. Circ. Radically Changes The Law Of Obviousness*, LAW360 (Oct. 19, 2016), available at <https://www.law360.com/articles/853200/fed-circ-radically-changes-the-law-of-obviousness>.

The *en banc* majority found nonobvious two trivial inventions without any real inquiry into whether they in fact represented an advancement over the prior art. Indeed, the supposed advances here—for the ’721 patent, having an image move across the screen; for the ’172 patent, having text appear on the screen as the user types—were well known for many years and certainly do not represent nonobvious inventions. By raising the bar to proving obviousness for such claims, the *en banc* decision threatens to stymie innovation and thwart competition.

1. This Court has long held that “[t]he ultimate judgment of obviousness is a legal determination.” *KSR*, 550 U.S. at 427 (citing *Graham*, 383 U.S. at 17). As *Graham* explained, there are certain “basic factual inquiries” in the obviousness inquiry: “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” 383 U.S. at 17. And *KSR* recognized that “summary judgment is appropriate” where “the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors.” 550 U.S. at 427. But beyond the particular factual issues identified in *Graham* and *KSR*, this Court has not specified which issues relevant to obviousness are factual ones.

The Federal Circuit has explored this question in dozens of post-*KSR* decisions, taking varying approaches. Compare, e.g., *Spine Sols., Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1312 (Fed. Cir. 2010) (Moore, J.) (affirming jury verdict of nonobviousness even where two pieces of prior art “plainly disclose[d]”

all elements of the patent claim because there was still “substantial evidence to support the jury’s implicit findings”), *with W. Union Co. v. MoneyGram Payment Sys., Inc.*, 626 F.3d 1361, 1368-74 (Fed. Cir. 2010) (reversing jury’s implicit factual findings of the scope and content of the prior art, motivation to combine, and evidence of secondary considerations).

Here, in its first *en banc* decision on obviousness in over 26 years, the Federal Circuit issued its definitive decision on the issue, and that decision is wrong. It held that every consideration affecting obviousness—well beyond the three specific ones identified in *Graham* and *KSR*—is a factual issue for a jury that can be supported on review by hypothesized implicit factual findings. The effect, as Judge Dyk explained in dissent, is that “the majority turns the legal question of obviousness into a factual issue for a jury to resolve.” App. 82a.

For example, for the ’721 patent, the Federal Circuit held that “whether a skilled artisan would have been motivated to combine references [is a] question[] of fact.” App. 29a. That cannot be correct. A supposed factual finding on motivation to combine cannot substitute for the legal inquiry into whether the combination resulted in something unexpected. In *KSR*, the Court expressly rejected the patent holder’s argument that its expert affidavit created a material dispute of fact on this issue, instead deciding as a matter of law, on review from a summary judgment decision, that it was obvious to combine prior art references. 550 U.S. at 426-27. Indeed, the evidence of no motivation to combine here was substantially *weaker* than in *KSR*, where the patentee’s expert at least explained his opinion, *see id.* at 425. Here, in contrast, the only evidence Apple offered on the issue

was its expert's response "No, I do not," when asked if he thought there was a motivation to combine the prior art. A12877:17-21; *see* App. 60a-61a (Prost, C.J., dissenting).

Similarly, for the '172 patent, which requires that "the current character string in the first area is replaced with the suggested replacement character string," the Federal Circuit held that whether the prior art disclosed this element was a factual question that was subject to "conflicting expert testimony" and jury "credibility determinations." App. 52a (quotation marks omitted). But there is no dispute that Robinson discloses "replac[ing] with the suggested replacement character string" and Xrgomics discloses a "current character string in the first area." App. 72a-74a (Prost, C.J., dissenting). Thus, the only question is whether the single claim element identified by the court can be satisfied by two pieces of prior art, and that is clearly a question of law. Moreover, even looking at Robinson alone (without Xrgomics), there is a question whether the '172 patent's advancement over Robinson—having the text the user types appear in two areas rather than one—was a significant one. But because the Federal Circuit treated every consideration as factual, it never engaged in any legal inquiry on that critical issue. App. 84a (Dyk, J., dissenting).

By thus treating every consideration affecting obviousness as a factual one (including secondary considerations, as discussed below), the supposedly legal question of obviousness became, in reality, one of fact. But *KSR* made clear that, "when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the

combination is obvious.” *KSR*, 550 U.S. at 417 (quotation marks omitted). This Court should grant review to ensure that this core legal test is not eroded by the Federal Circuit’s treatment of a jury’s implicit factfinding as controlling the obviousness analysis.

2. The Federal Circuit also created a new rule whereby a jury can disregard prior art if it is embodied in a different device. While this Court has not stated precisely when a different device can be disregarded, *Graham* held that a “restricted ... view of the applicable prior art is not justified” and that the field of the prior art in that case could not be narrowly defined as insecticide sprayers rather than liquid containers in general. 383 U.S. at 35; *see, e.g., Hotchkiss v. Greenwood*, 52 U.S. 248 (1851) (holding that the use of porcelain in a different field was sufficiently related to the use of porcelain in door-knobs). And *KSR* held that, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” 550 U.S. at 417; *see id.* at 420 (“Under the correct analysis, any need or problem known in the field ... and addressed by the patent can provide a reason for combining the elements in the manner claimed.”).

As one of the *en banc* dissents explained (App. 87a-91a (Dyk, J., dissenting)), the Federal Circuit departed from this Court’s approach by defining the field of endeavor and the problem to be solved at an unjustifiably narrow and specific level of generality. For the ’721 patent, the Federal Circuit held that the jury could disregard the prior art in *Plaisant* because it was directed to wall-mounted rather than portable

devices. App. 31a-32a. But Plaisant and the '721 patent both concern the same field of endeavor—unlocking user interfaces—and Apple presented no evidence (or argument at trial) that those skilled in the art would find this distinction important. *See* App. 61a & n.2 (Prost, C.J., dissenting). Similarly, for the '172 patent, the Federal Circuit held that the jury could disregard the prior art in Xrgomics because it concerns word completion, not word correction. App. 50a. Once again, there is no evidentiary or logical basis for treating this distinction as a different field of endeavor or as important to those skilled in the art.

3. The *en banc* majority further created new law warranting this Court's review by elevating secondary considerations like commercial success and industry praise into a principal role. *See* App. 91a-96a (Dyk, J., dissenting). This Court has long held that secondary considerations have a limited role in the legal analysis of obviousness: "The Court of Appeals and the respondent both lean heavily on evidence that this device filled a long-felt want and has enjoyed commercial success. But commercial success without invention will not make patentability." *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 153 (1950); *see Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 278 (1976) (same); *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 567 (1949) (similar). *KSR* and *Graham* likewise gave little weight to secondary considerations. *See KSR*, 550 U.S. at 426; *Graham*, 383 U.S. at 36. But this Court has not addressed the question of precisely when and how to use secondary considerations.

The Federal Circuit has taken varying approaches to that question. *Compare Transocean Offshore Deep-water Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1347, 1349 (Fed. Cir. 2012) (Moore, J.)

(holding that secondary considerations showed nonobviousness even where the prior art “teach[es] every limitation of the asserted claims” and “evidence rising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness”) (quotation marks omitted), *with Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (agreeing with the district court’s conclusion that even “substantial evidence” of various secondary considerations was “inadequate to overcome” obviousness as a matter of law).

But the Federal Circuit’s *en banc* decision now definitively answers the question for that court and all district courts, and does so in a manner that defies this Court’s admonition that secondary considerations should be given little weight.

To begin with, the *en banc* decision holds that secondary considerations “must be considered in every case where present,” that they “may often be the most probative and cogent evidence in the record,” and that they “may often establish that an invention appearing to have been obvious in light of the prior art was not.” App. 22a-23a, 32a-33a (quotation marks omitted). This treatment of secondary considerations as always relevant and often the most important evidence contradicts this Court’s repeated statements that they tip the balance only in a case where (unlike here) the obviousness question is very close.

Moreover, the *en banc* decision treats the weight to be given to secondary considerations itself as a factual issue on which the court must defer to implicit factual findings. But in both *Graham* (after a trial court ruling of nonobviousness) and *KSR* (on summary judgment),

this Court decided the weight of secondary considerations as a legal matter—and that such weight did not suffice to show nonobviousness. *See Graham*, 383 U.S. at 36; *KSR*, 550 U.S. at 426. Indeed, the Court noted that secondary considerations are “more susceptible of judicial treatment than are the highly technical facts often present in patent litigation,” because they “focus attention on economic and motivational rather than technical issues.” *Graham*, 383 U.S. at 35-36. The *en banc* majority here, in contrast, “presume[d] the jury found that the evidence was sufficient to establish each” possible secondary consideration, and that these implicit findings “powerfully weigh in favor of validity.” App. 33a, 45a. This reliance on implicit jury findings of the strength of secondary considerations departs from the principles of *Graham* and *KSR*.

Finally, the *en banc* decision relies on secondary factors in relation to an overall product and not to the specific invention claimed in the patent. *None* of the evidence of secondary considerations here considered the value of the improvement over the prior art. Rather, “[t]he majority’s secondary considerations analysis repeatedly compares the ’721 and ’172 patents to inferior or non-existent prior art, rather than to the relevant, closest prior art.” App. 94a (Dyk, J., dissenting); *see* App. 67a, 75a (Prost, C.J., dissenting). Indeed, no evidence at all suggested that the use of a moving image in a slide-to-unlock mechanism (the only supposed improvement of the ’721 patent over Neonode) or the use of a first area that shows what the user is typing in an autocorrect mechanism (the only supposed improvement of the ’172 patent over Robinson) met a long-felt need or had any value to anyone. If commercial success or long-felt need could prove patent claims nonobvious without any showing that the success or need was due to the particular

patented improvement over the prior art, it would turn obviousness analysis on its head and render even the most trivial inventions nonobvious.

For all these reasons, the *en banc* obviousness decision warrants review.

B. The Decision Below Departs From *eBay* By Significantly Lowering The Bar For Patent Injunctions

In *eBay*, this Court rejected any “categorical” rule requiring that injunctions shall issue for patent infringement and held that the test for injunctions in patent cases must be the same four-factor test used to decide an injunction in any other case: (1) irreparable injury; (2) inadequacy of monetary damages; (3) balancing of hardships; and (4) public interest. 547 U.S. at 391. This test “appl[ies] with equal force to disputes arising under the Patent Act” because “a major departure from the long tradition of equity practice should not be lightly implied” and “the Patent Act expressly provides that injunctions ‘may’ issue ‘in accordance with the principles of equity.’” *Id.* at 391-92 (quoting 35 U.S.C. § 283). This Court did not expressly address how the four factors should be applied in the patent context, instead remanding for the district court to apply them in the first instance. *Id.* at 394.

The Federal Circuit has taken that as license to now create new special patent injunction sub-rules that contradict those applied to injunctions in all other contexts. Here, the injunction panel majority held that infringement must have only “some connection” to irreparable harm, and need not be proven to actually cause that harm. App. 170a & n.1. But there is no

doubt that actual causation (and not a mere “connection”) is required to show irreparable harm in other injunction contexts.

For instance, this Court has recognized that plaintiffs must “demonstrate that irreparable injury is *likely* in the absence of an injunction,” and “a possibility of irreparable harm” is not enough. *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7, 22 (2008). And this harm must be caused by the specific challenged conduct, not by the defendants’ conduct generally. *Id.* at 22-23 (“irreparable harm from sonar-training exercises generally” does not suffice for an injunction where “the Navy challenged only two of six restrictions imposed by the court”); *see, e.g., Parker v. Winnipiseogee Lake Cotton & Woollen Co.*, 67 U.S. 545, 551 (1862) (“A Court of Equity will interfere when the *injury by the wrongful act* of the adverse party will be irreparable”) (emphasis added). Indeed, the causation requirement is a logical necessity because, if the harm is not caused by the violation, then an injunction will not remedy the violation, and there is no basis for injunction. *See, e.g., Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 108-09 (1998). This Court’s precedents make clear that the only irreparable harm that matters is the harm *caused* by the legal violation that is the basis for an injunction.

Sharply departing from these precedents, the panel majority would make patent injunctions available even in the absence of a causal nexus to irreparable harm. The panel majority identified no case in all of American jurisprudence stating that irreparable harm supports an injunction if it has “some connection” to the legal violation. Rather, this appears to be a new, special rule for patent injunctions, contrary to *eBay*’s

teaching that such injunctions must follow the same rules as in any other area of law. 547 U.S. at 394.

Moreover, if *any* connection suffices to create a causal nexus to irreparable harm, then the panel majority's approach would give rise to an injunction in virtually any case involving a competitor's infringement of a patented feature. *eBay* rejected any such categorical rule. *eBay* also rejected reliance on the "right to exclude"—which the panel majority relied on heavily (App. 171a, 181a), notwithstanding that it exists in every patent case—as the basis for an injunction. 547 U.S. at 392.

As Chief Judge Prost thoroughly demonstrated in dissent (App. 207a-215a), the evidence below cannot possibly satisfy any traditional requirement to show actual causal nexus to irreparable harm. Here, that would require a showing that "quick links," "slide to unlock," or "autocorrect" features drove consumer demand for smartphones containing tens of thousands of other features—a showing the district court found nonexistent. The panel majority thus directed entry of an injunction here only by creating a special patent sub-rule for irreparable harm, which cannot be reconciled with *eBay*.

Finally, the panel majority created a second such patent-only sub-rule by holding that that the public interest "generally" favors injunctions in "every case," and that it "nearly always" favors injunctions in patent cases. App. 181a. *eBay* rejected any such "general rule, unique to patent disputes," reversing the Federal Circuit's holding there that injunctions should be denied only "in rare instances ... to protect the public interest." *eBay*, 547 U.S. at 393-94 (internal citations omitted). Just as the Federal Circuit could not create a categorical rule rather than apply the

four-factor test, it cannot create a categorical rule for the public-interest factor. This aspect of the injunction decision below reinforces the need for this Court's review.

**C. The Decision Below Conflicts With The
Warner-Jenkinson All-Elements Rule For
Patent Infringement**

If this Court grants certiorari as to either of the issues discussed above, it should also grant certiorari to address the Federal Circuit's decision that Samsung infringed the '647 patent and was liable for nearly \$100 million in damages on that patent, without consideration of whether all claim elements were infringed. In the alternative, if this Court does not grant certiorari on the other issues, the error on infringement is so blatant that this Court should summarily reverse or vacate the Federal Circuit's judgment as to infringement.

This Court has long held that a patent is infringed only if the infringing product meets each and every element of the asserted patent claim. *See, e.g., Water-Meter Co. v. Desper*, 101 U.S. 332, 335-37 (1879). If this rule is ignored, then the scope of the patent monopoly will improperly extend beyond what was actually invented and claimed. In recent years, the Federal Circuit has attempted to create exceptions to this rule, and each time this Court has granted review and forbidden the exception. *See Warner-Jenkinson*, 520 U.S. at 29, 40 (doctrine of equivalents must be determined "on an element-by-element basis" because "[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention"); *Limelight Networks, Inc. v. Akamai Techs. Co.*, 134 S. Ct. 2111, 2117 (2014) (induced infringement requires that someone has infringed all elements

because “a patentee’s rights extend only to the claimed combination of elements, and no further”).

The *en banc* majority’s decision that the ’647 patent was infringed conflicts with those precedents. Undertaking *en banc* review without briefing or argument, the Federal Circuit refused to consider—even after Samsung pointed out this omission in a further *en banc* petition that was denied—two required elements of the patent claim: whether there was a “server” routine and whether the accused routine “receives data.”

1. Both parties agreed to the Federal Circuit’s construction of the ’647 “analyzer server” limitation in *Motorola* as “a server routine separate from a client that receives data having structures from the client.” 757 F.3d at 1304. The Federal Circuit’s *en banc* infringement holding addressed only one element of ’647 patent’s “analyzer server” limitation—the “separateness” of the accused code from the client application. The court ignored two other elements—the existence of a “server” routine and that this server routine “receives data ... from the client.” And there is no doubt that Samsung extensively argued that both elements were not satisfied.¹⁰ Moreover, the record

¹⁰ On the “server” routine requirement, see *Apple Inc. v. Samsung Elec. Co.*, Nos. 2015-1171, 2015-1195, 2015-1994 (Fed. Cir.), Samsung Opening Br. (Dkt. 39) at 24 (“The district court did not cite *any* testimony for the proposition that, *separate or not*, the code from a shared library is a ‘server.’” (second emphasis added)); see also *id.*, Samsung Reply Br. (Dkt. 55) at 12-14 (“**There Is No Evidence That The Accused Code Is A ‘Server’**”). On the “receives data” element, see *id.*, Samsung Opening Br. 18-19, 21-24; see also *id.*, Samsung Reply Br. 14-15 (entitled “**Shared Libraries Cannot Be Analyzer Servers Because They Never Receive Data**”).

clearly fails to support infringement of either of these two elements.

First, Apple's *only* evidence on the "server" element would render that term meaningless and plainly conflicts with the construction in *Motorola*. Apple's expert, Dr. Mowry, testified that the "server" requirement was met because there were "program routines, meaning it's software, and the software detects structures in the data and links actions to the detected structures." A12800. But *Motorola* expressly *rejected* that exact construction, holding that construing "analyzer server" as merely *any* software "program routine[]" that performs the detecting and linking functions would read the term "server" out of the claim. 757 F.3d at 1304-05; *see* App. 76a (Prost, C.J., dissenting) ("[T]he majority also fails to give effect to the requirement under our construction that the routine is a *server* routine, not any piece of code."). Moreover, the unrebutted fact testimony of one of the Google engineers responsible for the accused code made clear that the code (developed for the Android platform on mobile phones) does not adopt the antiquated technology of a "server" (an artifact of the 1990's when Apple filed its patent). A11591-92. The *en banc* majority did not consider this evidence and did not address this alternative, sufficient ground for reversing the judgment of infringement on the '647 patent. *See* App. 76a-78a (Prost, C.J., dissenting).

Second, Apple's *only* evidence that the supposed analyzer server "receives data ... from the client," as required by the *Motorola* construction, is the very definition of conclusory. The entirety of Apple's expert Dr. Mowry's testimony on this issue was answering "Yes, they do" when asked if the routines receive data. A13032, A13035. Apple's conclusory expert testimony,

with no supporting evidence, does not suffice to prove infringement. *See, e.g., Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567-68 (Fed. Cir. 1996); *see also KSR*, 550 U.S. at 418 (rejecting “conclusory” statement of expert as insufficient in the context of obviousness).

2. Here as in *Limelight* and *Warner-Jenkinson*, this Court should review the Federal Circuit’s refusal to determine whether the accused products met each and every element of the claim, in conflict with this Court’s all-elements rule. The need for review is further supported by the improper *en banc* procedure, with no briefing or argument, which likely led to the Federal Circuit’s error. For these reasons, and because the error is part of a troubling trend of Federal Circuit enlargement of old patents to cover new technology (*see supra* at 18), this Court should grant certiorari for plenary review of this issue alongside the obviousness and/or injunction issues. In the alternative, because the error is so clear, this Court should summarily reverse or vacate the judgment.

CONCLUSION

The petition should be granted and the case set for briefing and argument. Alternatively, the judgment affirming infringement of the '647 patent should be summarily reversed or vacated.

Respectfully submitted,

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March 10, 2017

APPENDIX

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APPENDIX A

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1171, 2015-1195, 2015-1994

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Cross-Appellant,

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellants.

Appeals from the United States District Court for the
Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

Decided: October 7, 2016

WILLIAM F. LEE, Wilmer Cutler Pickering Hale
and Dorr LLP, Boston MA, argued for plaintiff-cross-
appellant. Also represented by DANA OLCOTT BURWELL,
ANDREW J. DANFORD, MARK CHRISTOPHER FLEMING,
LAUREN B. FLETCHER, SARAH R. FRAZIER, RICHARD
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THOMAS GREGORY SPRANKLING, Washington, DC;

RACHEL KREVANS, Morrison & Foerster LLP, San Francisco, CA; ERIK JEFFREY OLSON, Palo Alto, CA.

KATHLEEN M. SULLIVAN, Quinn Emanuel Urquhart & Sullivan, LLP, New York, NY, argued for defendant-appellants. Also represented by WILLIAM ADAMS, DAVID MICHAEL COOPER; BRIAN COSMO CANNON, KEVIN P.B. JOHNSON, VICTORIA FISHMAN MAROULIS, Redwood Shores, CA; JOHN B. QUINN, SCOTT L. WATSON, MICHAEL THOMAS ZELLER, Los Angeles, CA.

Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK, MOORE, O'MALLEY, REYNA, WALLACH, CHEN, HUGHES, and STOLL, *Circuit Judges*.*

Opinion for the court filed by *Circuit Judge* MOORE, in which NEWMAN, LOURIE, O'MALLEY, WALLACH, CHEN, and STOLL, *Circuit Judges*, join.

Concurring in the result without opinion
Circuit Judge HUGHES.

Dissenting Opinion filed by *Chief Judge* PROST.

Dissenting Opinion filed by *Circuit Judge* DYK.

Dissenting Opinion filed by *Circuit Judge* REYNA.
MOORE, *Circuit Judge*.

I. INTRODUCTION

The current appeal results from a patent infringement suit and countersuit between Apple Inc. (“Apple”) and Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, “Samsung”). Relevant to this en banc decision, the district court granted

* *Circuit Judge* Taranto did not participate.

summary judgment that Samsung's accused devices infringe the asserted claim of U.S. Patent No. 8,074,172 ("the '172 patent"). After a thirteen day trial, the jury found the asserted claim of U.S. Patent No. 5,946,647 ("the '647 patent") infringed, and the district court denied Samsung's requested judgment as a matter of law ("JMOL"). The jury also found the asserted claim of U.S. Patent No. 8,046,721 ("the '721 patent") infringed and not invalid and the asserted claim of the '172 patent not invalid. The district court later denied Samsung's requested JMOL and entered judgment accordingly.¹ Samsung appealed the district court's grant of summary judgment of infringement as to the '172 patent, denial of JMOL of non-infringement as to the '647 patent, and denial of JMOL of obviousness as to the '721 and '172 patents.

II. PROCEDURAL PROGRESS

A. The Decision to Grant En Banc Review

On February 26, 2016, a panel of this court reversed the denial of JMOL with regard to the jury verdict of infringement as to the '647 patent and non-obviousness as to the '721 and '172 patents. Apple filed a petition for rehearing en banc. Apple's petition argued that the panel reversed the jury's finding of infringement of the '647 patent by relying on extra-record evidence "none of which was of record and that the

¹ Separately, the jury found that Samsung had not infringed the asserted claims of Apple's '414 or '959 patents. Additionally, the jury found that Apple had infringed the asserted claim of Samsung's '449 patent but had not infringed the asserted claim of Samsung's '239 patent and awarded Samsung \$158,400 in damages. We reinstate the panel decision as to the appeals relating to these issues.

panel appears to have located only through independent research.” Apple Pet. 2. Apple argued that this extra-record extrinsic evidence was used to modify the agreed to and unappealed claim construction. *See, e.g., id.* at 8 (“The panel looked to [this extra-record evidence] to create its own plain meaning of ‘server’ as requiring a ‘stand alone’ program.”). Apple also argued that this extra-record evidence was used in “considering the factual question whether Samsung’s phones met the ‘analyzer server’ limitation.” *See id.* at 6, 8 (“The panel also relied on dictionary and encyclopedia entries to inform its understanding of how the shared library code *in Samsung’s phones* work.” (emphasis in original)). Apple also argued that the case should be taken en banc because “in an unprecedented decision,” the panel reversed nearly every fact finding by the jury which favored Apple. *Id.* at 1.

We granted Apple’s en banc petition to affirm our understanding of the appellate function as limited to deciding the issues raised on appeal by the parties, deciding these issues only on the basis of the record made below, and as requiring appropriate deference be applied to the review of fact findings. There was no need to solicit additional briefing or argument on the question of whether an appellate panel can look to extra-record extrinsic evidence to construe a patent claim term. “The Supreme Court made clear that the factual components [of claim construction] include ‘the background science or the meaning of a term in the relevant art during the relevant time period.’” *Teva Pharms., Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1342 (Fed. Cir. 2015) (quoting *Teva Pharms., Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015)). After *Teva*, such fact findings are indisputably the province of the district court. We did not need to solicit additional briefing or argument to conclude that the appellate court cannot

rely on extra-record extrinsic evidence in the first instance or make factual findings about what such extrinsic evidence suggests about the plain meaning of a claim term in the art at the relevant time or how such extra record evidence may inform our understanding of how the accused device operates. We likewise did not need additional briefing or argument to determine that the appellate court is not permitted to reverse fact findings that were not appealed or that the appellate court is required to review jury fact findings when they are appealed for substantial evidence. The panel reversed nearly a dozen jury fact findings including infringement, motivation to combine, the teachings of prior art references, commercial success, industry praise, copying, and long-felt need across three different patents. It did so despite the fact that some of these findings were not appealed and without ever mentioning the applicable substantial evidence standard of review. And with regard to objective indicia, it did so in ways that departed from existing law.

The dissents, and Judge Dyk's dissent in particular, raise big questions about how aspects of the obviousness doctrine ought to operate. But no party—at the panel or the petition for rehearing en banc stage—invited this court to consider changing the existing law of obviousness. We did not take this case en banc to decide important legal questions about the inner workings of the law of obviousness. We have applied existing obviousness law to the facts of this case. We took this case en banc to affirm our understanding of our appellate function, to apply the governing law, and to maintain our fidelity to the Supreme Court's *Teva* decision.

B. The En Banc Decision

We affirm and reinstate the district court's judgment as to the '647, '721, and '172 patents. We conclude that the jury verdict on each issue is supported by substantial evidence in the record and that the district court did not err when denying Samsung's respective JMOLs. Accordingly, we vacate the panel opinion and affirm the district court's judgment with respect to these patents. We reinstate the panel opinion regarding U.S. Patent Nos. 6,847,959, 7,761,414, 5,579,239, and 6,226,449. In all other respects, the panel decision is vacated. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

III. DISCUSSION

We review a district court's order granting or denying JMOL under the standard applied by the regional circuit. In the Ninth Circuit, JMOL "is proper when the evidence permits only one reasonable conclusion and the conclusion is contrary to that of the jury." See *Monroe v. City of Phoenix*, 248 F.3d 851, 861 (9th Cir. 2001). The Ninth Circuit explains that "[t]he evidence must be viewed in the light most favorable to the nonmoving party, and all reasonable inferences must be drawn in favor of that party." *Id.* The Ninth Circuit reviews a district court's decision to grant or deny JMOL de novo. *Id.*

A. The '647 Patent

Apple asserted infringement of claim 9 of the '647 patent. The jury found that Samsung infringed and awarded Apple \$98,690,625. J.A. 40869–79. The district court denied JMOL of non-infringement. J.A. 40–48. Samsung argues the district court erred in not granting its motion for JMOL of non-infringement. Because there was substantial evidence to support the

jury's verdict, we affirm. "Substantial evidence . . . means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consol. Edison Co. of N.Y. v. N.L.R.B.*, 305 U.S. 197, 229 (1938).

Infringement is a question of fact. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1309 (Fed. Cir. 2009). Our review on appeal is limited to whether there was substantial evidence in the record to support the jury's verdict. *Id.* We presume the jury resolved all underlying factual disputes in favor of the verdict. *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1082 (Fed. Cir. 2014).

The '647 patent discloses a system and method for detecting structures such as phone numbers, addresses, and dates in documents, and then linking actions or commands to those structures. When the system detects a structure in a document, an "analyzer server" links actions to that detected structure. Actions include things such as placing a phone call or adding an address to an electronic address book. *See* '647 patent at 2:21–41. Apple asserted claim 9, which depends from claim 1:

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 at 7:9–55 (emphasis added).

Samsung contends no reasonable jury could have found infringement based on our constructions of “analyzer server” and “linking actions to the detected structures.” We previously addressed the constructions of both terms in *Apple, Inc. v. Motorola, Inc.*, 757 F.3d 1286 (Fed. Cir. 2014) (“*Motorola*”), a separate litigation involving the '647 patent. Our *Motorola* opinion issued on the parties' final day for presenting evidence at trial in this case. J.A. 42. During the *Markman* hearing, neither Apple nor Samsung had sought a construction of “analyzer server” or “linking actions,” and instead sought to rely on the plain and ordinary meanings of those terms. After *Motorola* issued, the parties agreed to give the *Motorola* constructions to the jury and reopen evidence to give both sides an opportunity to present expert testimony about the impact of the *Motorola* constructions on '647 infringement. J.A. 43. The jury was instructed as follows:

The term “analyzer server” means “a server routine separate from a client that receives data having structures from the client.”

The term “linking actions to the detected structures” means “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.”

Final Annotated Jury Instrs., No. 22, *Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv-00630-LHK, (N.D. Cal. Apr. 28, 2014), ECF No. 1848. Neither side objected to the jury instruction and neither side has appealed the constructions given to the jury. We address Samsung’s arguments for each term separately.

1. Analyzer Server

The only issue on appeal relating to the “analyzer server” limitation is whether there was substantial evidence to support the jury’s fact finding that Samsung’s accused devices satisfy this limitation under our *Motorola* construction. In *Motorola*, we construed “analyzer server” as “a server routine separate from a client that receives data having structures from the client.” *Motorola*, 757 F.3d at 1304. In *Motorola*, the court explained:

We agree with the district court’s construction of “analyzer server.” As the district court recognized, the plain meaning of “server,” when viewed from the perspective of a person of ordinary skill in the art, entails a client-server relationship. Consistent with this perspective, the specification discloses an analyzer server that is separate from the application it

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serves. The analyzer server is part of the “program 165 of the present invention.” ’647 patent at col. 3, ll. 38–39. Fig. 1 shows the program 165 and the application 167 as separate parts of a random-access memory (RAM):

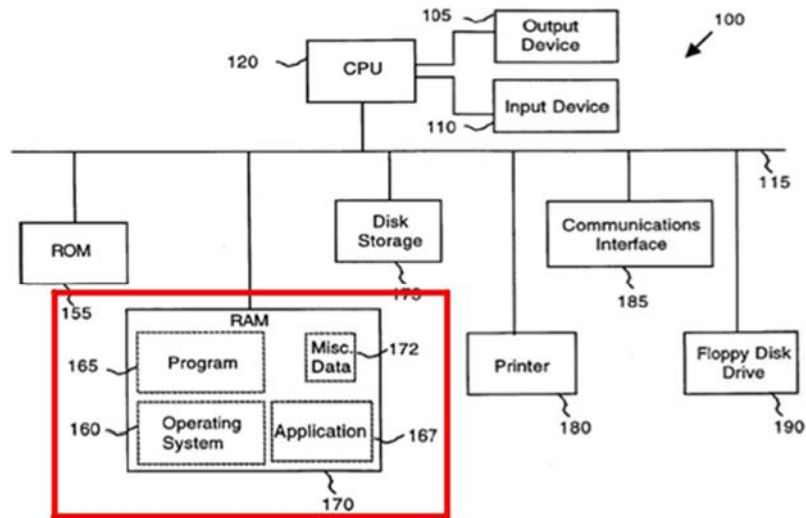


FIG. 1

Id. at Fig. 1. Further, the specification states that “the program 165 of the present invention is stored in RAM 170 and causes CPU 120 to identify structures in data presented by the application 167.” *Id.* at col. 3, ll. 37–41. Thus, the specification describes the analyzer server and the application, which it serves, as separate structures.

Id. at 1304–05 (red box annotation to figure added).² This court explained that the ’647 patent’s separate

² The district court opinion in *Motorola*—which we affirmed—likewise based its determination of “separate” on the fact that the

requirement for the analyzer server is met when the “program 165” and “application 167” are stored in “separate parts of random access memory.” *Id.* As we explained, Figure 1 of the patent “shows the program 165 and the application 167 as separate parts of a random-access memory (RAM)” and they are thus “separate structures.” *Id.* Under the *Motorola* claim construction, the program and application satisfied the separate requirement because they were structurally separate, i.e., located in different parts of the RAM. In this case, the parties agreed that the *Motorola* construction be given to the jury, and neither party appealed that construction.

The panel, however, used extra-record extrinsic evidence to modify the agreed upon and unappealed construction of “analyzer server.”³ Panel Op. at 8,

client and analyzer server are located in different parts of the memory, also citing Figure 1 of the patent: “Had the patent intended the analyzer server to be integrated into the application, rather than separate, the program box would logically appear inside the application box in Figure 1.” *Apple Inc. v. Motorola Inc.*, No. 1:11-cv-08540, 2012 WL 12537293, at *6 (N.D. Ill. Mar. 19, 2012).

³ The panel opinion also used the extra-record evidence to understand the operation of the accused products. *See, e.g.*, Panel Op. at 9 (“In other words, the software library program runs as part of the client program. *See Program library (software library)*, Dictionary of Computing 391 (4th ed. 1996) (“Usually it is only necessary to reference the library program to cause it to be automatically *incorporated in* a user’s program.”) (emphasis added).”); *id.* at 10–11 n.5 (“A client/server relationship assumes a ‘clean separation of functions’—both the client and the server are independently operating programs, each performing separate functions. *See, e.g.*, Stephen L. Montgomery, Object-Oriented Information Engineering: Analysis, Design, and Implementation 265 (1994).”). Apple argues that portions of the same extra-record

10 n.5. It held that Samsung’s accused systems did not infringe because “the Samsung software library programs are not ‘standalone’ programs that run separately.” Panel Op. at 13. Neither party asked for this changed construction.⁴ And there is no foundation in *Motorola* for it.

The dissents claim that Apple agreed to a new construction during oral argument.⁵ The dissents take Apple’s statement out of context. When Apple’s counsel stated that the analyzer server runs separately, he was explaining that the analyzer server runs in its own location in memory; the shared library code is not copied into and run as part of the client application. See Oral Arg. at 29:15–30:25. “The big fight was this, this was the big fight, does the code from the analyzer server get copied and become part of the analyzer server where it is run, or is there one copy of the code, and it is run at the analyzer server separately at the analyzer server as a part of a separate routine.” *Id.* at 44:55. Apple’s counsel repeatedly and clearly rejected the panel’s suggestion that “separate” means

evidence not cited by the panel support Apple’s position. We make no findings regarding the teachings of the extra-record evidence.

⁴ Samsung did not argue that the *Motorola* construction should be expanded or modified to require that the “analyzer server” “run separately” or “stand alone” from the client application. The only instances where *Motorola* uses the word “separate” are when describing locations, such as “separate parts of a random-access memory (RAM)” or describing the analyzer server and client application as “separate structures.” *Motorola*, 757 F.3d at 1304–05. Both parties tried the case and presented appellate arguments based on this understanding.

⁵ Two of the dissents argue Apple agreed to the panel’s construction that the analyzer server must “run on its own.” Prost Dissent at 21–22; Dyk Dissent at 22. We note that Judge Reyna’s dissent does not address this issue.

a standalone program which runs separately. “There is no requirement in the claim interpretation that it run as a standalone program.” Oral Arg. at 34:55.⁶ Apple argued that the panel’s proposed interpretation of “separate” was “a new claim construction that’s actually more specific and different than the jury charge. No one has urged you to do that. There is no suggestion that the claim interpretation is wrong.” *Id.* at 45:45.⁷ Apple reiterated its objection to the panel’s modified construction in its Petition for Rehearing.⁸

⁶ See also Oral Arg. at 28:45 (“There is no requirement that it be stand alone.”); *id.* at 33:15 (“There is nothing in the claim interpretation that says it has to be stand alone. It says it has to be a separate routine.”); *id.* at 40:15 (“The question is . . . does the claim require a completely standalone, separate routine, and this court’s *Motorola* interpretation doesn’t require it, and the claim doesn’t require it, but it does require a separate routine.”); *id.* at 44:00 (“There is no requirement legally that it be a standalone program.”).

⁷ Apple’s counsel explained that to require the analyzer server to be a standalone program “would be taking the claim interpretation that was given in the *Motorola* case and reinterpreting it to require something more specific.” *Id.* at 44:00; see *id.* at 46:05–46:25 (“Court: The question is what does the claim interpretation mean? Apple: No your honor, they haven’t raised that issue. There is no issue of claim interpretation, there is no issue of whether it was incorrect, there is no issue of whether it was given. The only question is, on that charge, was there substantial evidence to support the jury’s decision.”).

⁸ See Apple Pet. 6 (“[T]he panel relied on non-record sources to make its own finding as to [server’s] plain meaning. Specifically, the panel ruled that ‘servers’ must be ‘standalone programs’ that run separately.”); *id.* at 7 n.4 (“But Apple’s counsel was clear that ‘[t]here is no requirement that [the analyzer server] be standalone. The requirement is that it be a separate routine.’”) (alterations in original).

Claim construction was not appealed and we do not agree that Apple agreed to the panel’s change to the construction of analyzer server. Even Samsung’s counsel agreed, “[Apple] is correct that we are not disputing the claim construction.” Oral Arg. at 1:12:40. We thus return to our *Motorola* construction which was agreed upon by the parties in this case, given to the jury, and not appealed: “analyzer server” is “a server routine separate from a client that receives data having structures from the client.” We evaluate whether there is substantial evidence for the jury’s finding of infringement under that construction.⁹

On appeal, Samsung argues no reasonable jury could have found its accused devices meet the “analyzer server” limitation because the accused devices do not contain a server routine “separate” from the client application. Samsung Br. 16–25. It argues that “the uncontested evidence at trial showed that the Browser and Messenger applications each contain their own routines *within the application* for analyzing the data (*i.e.*, performing the detecting and linking functions)

⁹ Two of the dissents allege that the library programs cannot satisfy the analyzer server limitation despite the fact that they are separate programs which perform detecting and linking actions in response to a client request as required by the claims. Prost Dissent at 21–22; Dyk Dissent at 20–21. The claim language plainly indicates that the client application uses the analyzer server to perform the linking and detecting functions. See ’647 patent claim 1. Samsung argued it did not infringe because of *where* the shared library code was used (whether it was copied into the client application before use), not whether it was used by the client application. See, *e.g.*, Samsung Br. 17, 18, 19, 21–22, 24. The concept that the analyzer server must be “standalone” or “run on its own” or run in isolation apart from a client request has no foundation in the ’647 patent, in our prior *Motorola* decision, or in the parties briefs on appeal to this court.

and do not rely on a separate server.” *Id.* at 18 (emphasis in original). It argues that in its accused devices, when a client application needs shared library code, “it will copy it from the library and it will run as part of the application.” *Id.* at 19. It cites the testimony of its expert, Dr. Jeffay, that “[y]ou go to the library, you take code out of the library, you integrate it in your application, and at that point the library code is no different than any other code in the application.” *Id.* at 21.

There is no real dispute regarding whether the shared library code in the accused devices performs all the claimed functionality—the dispute is where it performs those functions. Samsung contends the shared library code in its devices is copied and incorporated into the client application, so when the code is run, it runs as part of the client application. Therefore, its shared library code is not “separate” from the client application.

Apple contends the shared library code in Samsung’s accused devices is never copied but rather remains at the library. It contends that, when a client application wishes to use Samsung’s shared library code, the application goes to the shared library and uses the code there. Therefore, Samsung’s shared library code is “separate” from the client.

We limit our appellate review to the evidence of record before the district court. On this record, we hold that substantial evidence supports the jury’s finding that Samsung’s accused devices contain “a server routine separate from a client that receives data having structures from the client.” *See Motorola*, 757 F.3d at 1304.

Apple's expert, Dr. Mowry, testified that the "analyzer server" in the accused devices is shared library code, and the client applications are the Browser and Messaging applications. J.A. 13030:4–22. He testified that Samsung's shared library code and client applications are "separate" because they are located in separate parts of memory: "the shared libraries are developed independently of the application" and are "designed to be reused across different applications." J.A. 13035:12–18, 13036:13–20. He explained that "there's only one copy of the shared library code," and when client applications in Samsung's accused devices wish to use the library code, "those applications go to that code and use it where it is each time they want to access that code." J.A. 13035:22–25. He testified that, in the accused devices, one copy of shared library code may be shared by "20 or 100" different applications, J.A. 13036:13–20, and that, in order for an application to use the library code, the application must "go to the shared library code in the one place that exists in the computer memory hardware to use it." *Id.*; *see also* J.A. 13037:1–6 ("It has access to the code and it goes to the code where it is and uses it there, and it does that each time that it accesses the code."). Dr. Mowry also testified that the client applications and shared library code in the accused devices are stored "in a different part of the address base." J.A. 13036:1–2. He concluded that the shared library code and client programs in the accused devices are "definitely separate." J.A. 13036:20.

On this record, this is substantial evidence to support the jury's finding that the accused devices meet the "analyzer server" limitation. Dr. Jeffay provided contrary testimony to Dr. Mowry, but the jury was in the best position to determine whether it found Dr. Mowry or Dr. Jeffay more persuasive. *See, e.g.,*

MobileMedia Ideas LLC v. Apple Inc., 780 F.3d 1159, 1168 (Fed. Cir. 2015) (“[W]hen there is conflicting testimony at trial, and the evidence overall does not make only one finding on the point reasonable, the jury is permitted to make credibility determinations and believe the witness it considers more trustworthy.”).¹⁰ We see no error in the district court’s conclusion that substantial evidence supported the jury verdict with respect to this limitation.

2. Linking Actions

Samsung also appealed the district court’s denial of JMOL of non-infringement based upon the “linking actions” limitation. We hold that there was substantial evidence to support the jury’s finding that the accused devices meet the “linking actions” limitation under our construction in *Motorola*.

¹⁰ We leave credibility issues to the jury. We note that the district court repeatedly mentioned that Samsung’s expert Dr. Jeffay gave inconsistent testimony about a particular limitation. *See, e.g.*, 4/28/14 Tr. at 3058:6–10 (“[Dr. Jeffay has] been all over the map about what the plain and ordinary meaning of this term is . . . He’s been all over the map.”); *id.* at 3059:2–3 (“He’s all over the map on plain and ordinary meaning of analyzer server.”); *id.* at 3063:17 (“I think that is contrary to how he just testified.”); *id.* at 3072:17–18 (“What’s been testified to thus far is misleading.”); *id.* at 3073:13–17; *id.* at 3076:7–9 (“He was all over the map, he didn’t give an opinion on plain and ordinary meaning of analyzer server, he’s very inconsistent throughout.”). The district court also scolded Dr. Jeffay in its JMOL order for “misleadingly” attempting to argue he had used the *Motorola* constructions “since the very first day I worked on this case.” J.A. 43. A reasonable jury could have concluded that such inconsistencies negatively impacted the persuasiveness of Dr. Jeffay’s opinions.

In *Motorola*, we construed “linking actions to the detected structures” as “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 1307. On appeal, Samsung argues there is no “specified connection” in the accused devices between a user’s request to perform some action and the application that ultimately performs the requested action. More specifically, Samsung argues the “startActivity()” subroutine—the accused “computer subroutine” in Samsung’s products—does not satisfy the specified connection requirement. Samsung Br. 27. It argues startActivity() merely determines which application will perform the requested action rather than performing the task itself. *Id.* at 29. Thus, a “specified connection” to the startActivity() subroutine would not infringe because there is no connection to the application that ultimately performs the task. *Id.*

This argument can be illustrated through an example. Android (the operating system run on the accused phones) phones typically contain multiple applications capable of sending emails. When a user inputs a command to send an email, the phone prompts the user to select an available application to send the email. There may be two or three available applications; the user selects which application to use. Samsung contends this is not a “specified connection” because the user’s command is not tied to a particular application that performs the command. *See* Samsung Br. 28; J.A. 11586:1–11587:6 (trial testimony of Dianne Hackborn, Google engineer). It argues there is “no evidence of any specified connection between detected structures and *actions*,” Samsung Br. 26 (emphasis added).

Our claim construction, however, does not require a specified connection between detected structures and the applications that perform operations on them. It requires a specified connection between detected structures and *the computer subroutine that causes the CPU to perform the operations*. The district court made this observation in its JMOL order: “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.” J.A. 45 (emphasis in original). The court quoted and rejected Samsung’s argument 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.* (quoting Dr. Jeffay).

We agree with the district court that Apple presented substantial evidence that the accused devices contain a specified connection between a detected structure and a computer subroutine that causes the CPU to perform a sequence of operations. In the accused devices, the detected structure is an object in the data, such as a phone number or email address. J.A. 10854:11–25, 10858:3–12. And the computer subroutine is a method called “startActivity(.” J.A. 13040:25–13041:4. Dr. Mowry testified that the phone numbers and email addresses form part of an Intent object. J.A. 10858:3–12. When a user wishes to perform some action in the accused devices (such as place a phone call or send an email), a method called setIntent() passes the Intent object to the startActivity() subroutine. J.A. 13040:6–23.¹¹ Dr. Mowry explained that

¹¹ Dr. Mowry testified that “the names [of the subroutines] are a little different” depending on the version of the accused product. J.A. 10862:16–20.

if a “program wants to open another program, it uses an Intent object.” J.A. 10861:4–6. He described `startActivity()` as the “launcher” that launches other programs to perform the requested action. J.A. 10858:13–20. For example, if a user wishes to make a phone call, the `startActivity()` subroutine launches the user’s selected dialing application. *See* J.A. 10861:4–10.

According to Dr. Mowry, `startActivity()` is “the computer subroutine that causes the CPU to perform a sequence of operations on that detected structure,” as our construction requires. J.A. 13040:25–13041:4. Dr. Mowry testified that `startActivity()` is “necessarily” called when a user selects a particular action. J.A. 13040:6–23, 13041:7–16. He explained that “if the user picks a particular option, that information will be passed to another procedure shown on the bottom, which is called Start Activity, and that is the launcher.” J.A. 10858:13–20. He testified that “you get different behaviors from Start Activity based on how you fill in the fields in the Intent object. So that causes the different actions to occur.” J.A. 13042:25–13043:2. A reasonable jury could have relied on this testimony to find that Samsung’s accused devices meet the linking actions limitation. *See* J.A. 45 (“[T]he jury could have determined that `startActivity()` satisfies this limitation because it is admittedly a linked subroutine that causes performance of an action.”).¹²

¹² Samsung also argues the “specified connection” must be in place before the user selects a command to begin operations on a detected structure. Samsung Br. 31–32. This timing argument is premised on Samsung’s contention that `startActivity()` does not satisfy the specified connection limitation. Because we conclude that there is substantial record evidence for this jury finding, the timing argument necessarily fails. Regardless, we see no timing

In the Ninth Circuit, JMOL “is proper when the evidence permits only one reasonable conclusion and the conclusion is contrary to that of the jury.” *Monroe*, 248 F.3d at 861. Dr. Mowry’s testimony provided substantial evidence of infringement. In light of Dr. Mowry’s testimony, we cannot conclude that the evidence permits only one reasonable conclusion which is contrary to the jury verdict. We see no error in the district court’s denial of JMOL of non-infringement.

The judgment of validity of the ’647 patent was not appealed. We affirm the district court’s denial of JMOL as to this patent.

B. The ’721 Patent

Apple asserted infringement of claim 8 of the ’721 patent. The jury entered a verdict that claim 8 was infringed and would not have been obvious. J.A. 40872, 40874. Samsung challenges the district court’s denial of JMOL that claim 8 would have been obvious. We agree with the district court that there was substantial evidence to support the jury’s underlying fact findings and that these fact findings supported the conclusion that Samsung failed to establish by clear and convincing evidence that claim 8 would have been obvious.

Obviousness is a question of law based on underlying facts. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1356–57 (Fed. Cir. 2012). When reviewing a denial of JMOL of obviousness, where there is a black box jury verdict, as is the case here, we presume the jury resolved underlying factual disputes in favor of the verdict winner and leave those

limitation in the claim, and construction of this claim was not appealed.

presumed findings undisturbed if supported by substantial evidence. *Id.* We then examine the legal conclusion de novo in light of those facts. *Id.* at 1357.

In *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966), and *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007), the Supreme Court set out the framework for the obviousness inquiry under 35 U.S.C. § 103:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

A determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1075–76 (Fed. Cir. 2012) (citing *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1483 (Fed. Cir. 1997)).¹³ Objective indicia of non-obviousness must be considered in every

¹³ Even though no secondary considerations were argued to the Supreme Court in *KSR* with regard to obviousness, the Court explains: “*Graham* sets forth a broad inquiry and invited courts, where appropriate, to look at any secondary considerations that would prove instructive.” *KSR*, 550 U.S. at 415.

case where present. See, e.g., *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (“[E]vidence rising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness.” (quoting *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)); *Simmons Fastener Corp. v. Illinois Tools Works, Inc.*, 739 F.2d 1573, 1575 (Fed. Cir. 1984) (“The section 103 test of nonobviousness set forth in *Graham* is a four part inquiry comprising, not only the three familiar elements (scope and content of the prior art, differences between the prior art and the claims at issue, and level of ordinary skill in the pertinent art), but also evidence of secondary considerations when such evidence is, of course, present.”). This requirement is in recognition of the fact that each of the *Graham* factors helps inform the ultimate obviousness determination. *Kinetic Concepts*, 688 F.3d at 1360; *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1340 (Fed. Cir. 2016) (holding that evidence of secondary considerations must be examined to determine its impact on the first three *Graham* factors).

The ’721 patent discloses a portable device with a touch-sensitive display that can be “unlocked via gestures” performed on the screen. ’721 patent at Abstract. The patent teaches that a “problem associated with using touch screens on portable devices is the unintentional activation or deactivation of functions due to unintentional contact with the touch screen.” *Id.* at 1:38–40. “Unintentional activation or deactivation of functions due to unintentional contact with the touch screen” is commonly referred to as “pocket dialing.” See, e.g., J.A. 10638:9–13 (Andrew Cockburn) (describing the “pocket dial problem”); Apple Br. 25 (“Apple’s ’721 patent discloses a user-friendly solution to the

problem of accidental activation of mobile touchscreen devices (e.g., ‘pocket dialing’).”). Greg Christie, an inventor of the ’721 patent, described the problem he and his colleagues set out to solve:

[W]e were worried about accidental use, pocket dialling [sic], the phone getting shut down accidentally, or since we were going to have all these features on the phone, like e-mail and messaging, we were worried that, you know, mail could be sent accidentally or deleted accidentally or the phone would answer itself simply because the touch surface – you know, if it was like, like, the touch surface against your leg in your pocket, we were worried that just, like, you know, jostling around, moving around would trigger things on the screen.

J.A. 10601:4–13.

The ’721 patent also describes the importance of making phone activation as “user-friendly” and “efficient” as possible. It teaches:

Accordingly, there is a need for more efficient, user-friendly procedures for unlocking such devices, touch screens, and/or applications. More generally, there is a need for more efficient, user-friendly procedures for transitioning such devices, touch screens, and/or applications between user interface states (e.g., from a user interface state for a first application to a user interface state for a second application, between user interface states in the same application, or between locked and unlocked states). In addition, there is a need for sensory feedback to the

user regarding progress towards satisfaction of a user input condition that is required for the transition to occur.

'721 patent at 1:56–67. Mr. Christie testified that the ease of the user interface was a central design consideration when developing the slide to unlock feature:

[W]e thought to introduce some sort of definite gesture. We knew we wanted to have some instruction. We knew we wanted the interface to be obvious to the customer. It would be possibly the first experience even in a retail environment. They're deciding whether they want to buy it. They pick up this iPhone, you know, it would be very bad if they looked at the phone that they had heard so much about and they look at it and say "I can't figure out how to use this. I don't know how to unlock it. It's locked." At the same time, we knew that people would be unlocking their phone, you know, tens or hundreds of times a day, so we didn't want the instruction to be, you know, insulting or talk down to the customer. We didn't want it to be cumbersome, something that they would grow tired of after a while.

J.A. 10602:6–20. Apple's expert, Dr. Cockburn, explained that there was a tension between preventing pocket dialing and ease of use: ". . . [I]t has to work. It has to succeed in preventing accidental activation by mistake. But yet it needs to be something that's easy to do, but not so easy that it can occur by accident, and it succeeds in that." J.A. 10639:19–23.

Apple asserted claim 8, which depends from claim 7, against several Samsung devices. These claims recite:

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 the 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.

The jury found that Samsung's accused devices infringed claim 8 of the '721 patent. J.A. 40872. Samsung does not appeal this aspect of the verdict. The jury also found that Samsung's infringement was willful and that Samsung failed to prove by clear and convincing evidence claim 8 is invalid. J.A. 40874. Following the verdict, Samsung moved for JMOL that, *inter alia*, claim 8 would have been obvious and Samsung did not willfully infringe the claim. The district court denied Samsung's motion as to obviousness but granted the motion as to willfulness.

Samsung argues claim 8 would have been obvious in light of the combination of Neonode and Plaisant. "Neonode" refers to the Neonode N1 Quickstart Guide. J.A. 20713. Neonode discloses a mobile device with a touch-sensitive screen. It explains that a user may unlock the device by pressing the power button. After the user presses the power button, text appears instructing the user to "Right sweep to unlock." Sweeping right then unlocks the unit. J.A. 20725.

"Plaisant" refers to a video and corresponding two-page paper published in 1992 titled "Touchscreen Toggle Design" by Catherine Plaisant and Daniel Wallace. J.A. 20742. The authors of the paper conducted an experiment to determine which controls ("toggles") users prefer on wall-mounted controllers for "entertainment, security, and climate control systems." *Id.* These controllers were intended to be installed "flushmounted into the wall or the cabinetry." *Id.* The authors presented six alternative unlocking

mechanisms to a group of fifteen undergraduate students, including a “slider toggle” where a user could activate the controller by “grab[bing] the pointer and slid[ing] it to the other side.” J.A. 20743. The students preferred “toggles that are pushed” over “toggles that slide,” and generally ranked the slider fifth of the six alternatives. *Id.* The paper also notes that sliders “were not preferred,” “sliding is a more complex task than simply touching,” and that “sliders are more difficult to implement than buttons.” *Id.*

On appeal, Apple does not contest that, together, Neonode and Plaisant disclose all the elements of claim 8.¹⁴ Rather, the parties dispute whether a person of ordinary skill in the art would have been motivated to combine one of the unlocking mechanisms disclosed in Plaisant with Neonode. Samsung argues “there was no evidence of any kind suggesting that Plaisant’s application to a wall-mounted device would lead inventors not to combine Plaisant with Neonode.” Samsung Resp. Br. 19–20. Its expert, Dr. Greenberg, testified that a person of ordinary skill “would be highly interested” in both references because “they both deal with touch base systems, they both deal with user interfaces.” J.A. 11982:13–17. Dr. Greenberg testified that “a person looking at this would just think it natural to combine these two, as well taking the ideas in Plaisant, the slider, and putting them on the Neonode is, is just a very routine thing to think about

¹⁴ There does not appear to be a dispute between the parties over whether the two references are prior art and within the analogous arts. Of course, concluding that the references are within the scope and content of the prior art to be considered for obviousness does not end the inquiry. *Graham* makes clear that the obviousness inquiry requires a determination whether the claimed invention would have been obvious to a skilled artisan.

in terms of interaction design.” J.A. 11982:23–11983:2. Samsung points to the Plaisant reference which states that sliding movement “is less likely to be done inadvertently.” Samsung Br. 35–36 (quoting J.A. 20743).

Apple counters that a skilled artisan designing a mobile phone would not have been motivated to turn to a wall-mounted air conditioning controller to solve the pocket dialing problem. Apple Br. 26–27. Its expert, Dr. Cockburn, testified that a person of ordinary skill would not have been naturally motivated to combine Neonode and Plaisant. J.A. 12877:17–21. Dr. Cockburn testified that the way the Plaisant controllers “were intended to be used was the touch screen would be mounted into a wall or into cabinetry and it would be used to control, for remote control, office or home appliances, like air conditioning units or heaters.” J.A. 12876:20–23. He also explained to the jury that Plaisant itself discloses that sliding toggles were less preferred than the other switches disclosed. J.A. 12877:7–16. Apple points to Plaisant’s teachings that “sliders were not preferred,” “sliding is a more complex task,” and “sliders are more difficult to implement.” Apple Br. 27–28. Apple argues there was substantial evidence for the jury to conclude that there would not have been a motivation to combine Plaisant and Neonode to arrive at the claimed invention.

What a prior art reference teaches and whether a skilled artisan would have been motivated to combine references are questions of fact. *See Par Pharm., Inc. v. TWi Pharms., Inc.*, 773 F.3d 1186, 1196–97 (Fed. Cir. 2014); *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1303 (Fed. Cir. 2010). “Before *KSR*, we had also consistently treated the question of motivation to combine prior art references as a question of fact. . .

KSR did not change this rule” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238–39 (Fed. Cir. 2010); *id.* at 1237 (“[W]hether there was sufficient motivation to combine the references” is a “factual issue[]”). The district court determined that a reasonable jury could have found that a person of ordinary skill would not have been motivated to combine Plaisant and Neonode:

A reasonable jury could infer from [Dr. Cockburn’s] 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.

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.”

J.A. 55 (citations omitted).¹⁵ After noting that what a reference teaches is a question of fact, the district court discussed the various statements in Plaisant about sliding toggles and concluded that substantial evidence supports the jury’s fact findings that Samsung failed to establish a motivation to combine. J.A. 55–56. We agree with the district court that on

¹⁵ The district court denied JMOL on two discrete bases. J.A. 54–56. Because we find substantial evidence support for the jury’s fact finding regarding motivation to combine, we need not reach the issue of whether Plaisant teaches away from the combination. We note, however, that, even if Plaisant does not teach away, its statements regarding users preferring other forms of switches are relevant to a finding regarding whether a skilled artisan would be motivated to combine the slider toggle in Plaisant with the mobile phone in Neonode.

this record, the jury’s implicit fact findings that Plaisant would not have provided a skilled artisan with a motivation to combine its slider toggle switch with Neonode is supported by substantial evidence. In addition to the statements in Plaisant, the court explained:

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. 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.” 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.

J.A. 54–55 (citations omitted).

We agree with the district court’s analysis. Because the jury found the issue of validity in favor of Apple, we presume it resolved the conflicting expert testimony and found that a skilled artisan would not have been motivated to combine the slider toggle in Plaisant with the cell phone disclosed in Neonode. The question for our review is whether substantial evidence supports this implied fact finding. We conclude that it does. Neonode discloses a mobile phone. Plaisant discloses a wall-mounted air conditioning controller. The

jury had both references before it. Although Samsung presents arguments for combining the two references, these arguments were before the jury. Our job is not to review whether Samsung's losing position was also supported by substantial evidence or to weigh the relative strength of Samsung's evidence against Apple's evidence. We are limited to determining whether there was substantial evidence for the jury's findings, on the entirety of the record. And under the Ninth Circuit standard, we cannot conclude that the evidence affords only one reasonable conclusion and that it is contrary to that of the jury. *See Monroe*, 248 F.3d at 861. We agree with the district court: "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." J.A. 55.

1. The Objective Indicia of Non-Obviousness

The Supreme Court explained that various factors "may also serve to 'guard against slipping into use of hindsight,' and to resist the temptation to read into the prior art the teachings of the invention in issue." *Graham*, 383 U.S. at 36 (citation omitted). These factors are commonly known as secondary considerations or objective indicia of non-obviousness. These include: commercial success enjoyed by devices practicing the patented invention, industry praise for the patented invention, copying by others, and the existence of a long-felt but unsatisfied need for the invention. As this court held in *Stratoflex*:

Indeed, evidence of secondary considerations may often be the most probative and cogent

evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not. It is to be considered as part of all the evidence, not just when the decisionmaker remains in doubt after reviewing the art.

713 F.2d at 1538–39. Apple introduced evidence of industry praise, copying, commercial success, and long-felt need. We presume the jury found that the evidence was sufficient to establish each by a preponderance of the evidence. We find substantial evidence in the record to support each of those findings.

a. Industry Praise

Evidence that the industry praised a claimed invention or a product that embodies the patent claims weighs against an assertion that the same claimed invention would have been obvious. Industry participants, especially competitors, are not likely to praise an obvious advance over the known art. Thus, if there is evidence of industry praise of the claimed invention in the record, it weighs in favor of the non-obviousness of the claimed invention. *See, e.g., Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1347 (Fed. Cir. 2013) (“[I]ndustry praise . . . provides probative and cogent evidence that one of ordinary skill in the art would not have reasonably expected [the claimed invention].”); *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1352 (Fed. Cir. 2010) (noting that industry praise, and specifically praise from a competitor, tends to indicate that the invention would not have been obvious).

Samsung’s entire appeal regarding the jury’s fact finding that industry praise weighed in favor of non-

obviousness is contained in one half of one sentence: “Indeed, the district court relied solely on generic praise not linked to the actual subject matter of the claim” Samsung Br. 37. The district court rejected Samsung’s argument on this issue, determining that substantial evidence supports the jury’s underlying findings in favor of “industry praise specifically for Apple’s slide to unlock invention.” J.A. 56. It cited numerous internal Samsung documents that both praised Apple’s slide to unlock feature and indicated that Samsung should modify its own phones to incorporate Apple’s slide to unlock feature:

- PTX 119 at 11: presentation prepared by Samsung’s European design team in June 2009 with a picture of the iPhone stating that Apple’s slide to unlock invention is a “[c]reative way[] of solving UI complexity” and that “swiping unlock on the screen allows to prevent erroneous unlock,” J.A. 50950;
- PTX 121 at 100: Samsung software verification group document with a picture of the iPhone noting that unlike Samsung’s “Victory” phone, the 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, [and] clarify the unlocking standard by sliding,” J.A. 51289;
- PTX 157 at 19–20: Samsung document with a picture of the iPhone recommending improving the Samsung phone by making it “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, J.A. 57 (JMOL Order citing PTX 157);

- PTX 219 at 14: Samsung document with a picture of the iPhone noting that the iPhone "intuitively indicate[s] the direction and length to move when unlocking on the lock screen," J.A. 51603;
- PTX 120 at 28, 84: Samsung document with a picture of an iPhone that describes the "Direction of Improvement" as using a defined bar to unlock the phone, as is done on the iPhone. The same document describes the "Direction of Improvement" as displaying the unlock instruction on the screen, as is done on the iPhone. J.A. 51028, 51084.

See J.A. 56–57 (JMOL Order citing several Samsung documents). Such internal documents from the patentee's top competitor represent important admissions, acknowledging the merits of the patented advance over the then state of the art and can be used to establish industry praise. Dr. Cockburn, Apple's expert, testified "these various Samsung documents recognized the advantages of claim 8." J.A. 57 (citing J.A. 10640–52).

The court also explained that Apple presented a video at trial showing Steve Jobs unveiling the slide to unlock feature at an Apple event. When Mr. Jobs swiped to unlock the phone, "the audience burst into cheers." J.A. 12879–80 (Andrew Cockburn). The video was shown to the jury, and Apple's expert, an inventor, and Apple's Vice President of Marketing all referenced the video in their testimony. *See* J.A. 57 (JMOL Order citing 4/4/14 Tr. at 603:6–11 (Greg Christie)); J.A.

12879:17–12880:2 (Andrew Cockburn); 4/1/14 Tr. at 428:12–17 (Phillip Schiller) (“There were many press in attendance at the event, and the reaction was enormous.”).

Samsung does not discuss any of this evidence on appeal. In light of this evidence, we find its argument that the district court cited only generic praise of the iPhone, and not praise tied to the claimed slide to unlock feature, is without merit. The jury was presented with substantial evidence of praise in the industry that specifically related to features of the claimed invention, thereby linking that industry praise with the patented invention.

b. Copying

Samsung does not dispute in its briefing that the jury heard substantial evidence that it copied the iPhone’s claimed features. In other words, Samsung does not challenge on appeal that substantial evidence exists in the record that Samsung copied Apple’s slide to unlock feature, nor does it challenge on appeal that this evidence of copying supports a conclusion that claim 8 would not have been obvious. Apple cites the same Samsung internal documents for both industry praise and copying, as they show evidence of both. The record contains multiple internal Samsung presentations given by different Samsung groups at different times stating that the iPhone’s slide to unlock feature is better than the various Samsung alternatives. *See supra* J.A. 50950 (PTX 119); J.A. 51028, 51084 (PTX 120); J.A. 51289 (PTX 121); J.A. 57 (JMOL Order citing PTX 157); J.A. 51603 (PTX 219). And many of these same presentations conclude that the direction for improvement is for Samsung to modify its unlocking mechanism to be like the iPhone. *See id.* This is substantial evidence of copying by Samsung, and it

supports the jury's verdict that the claimed invention would not have been obvious.

c. Commercial Success

In its opening appellate brief, Samsung also glosses over commercial success, giving it one sentence: "Apple made no effort to establish a nexus between commercial success and the subject matter of claim 8." Samsung Br. 37. Commercial success requires a nexus to the claimed invention. *Transocean*, 699 F.3d at 1350. We look to the record to ascertain whether there is substantial evidence for the jury's fact finding that Apple established a nexus between commercial success and the invention in claim 8.

At trial, Apple's expert, Dr. Cockburn, testified that the iPhone practiced the asserted claim of the '721 patent, and "clearly there's been commercial success of the iPhones that use this invention." J.A. 12879:20–22; *see also* J.A. 11984:24–25 ("[T]here's no question that the Apple iPhone was a commercial success.") (Saul Greenberg, Samsung's expert). Critically, Apple presented survey evidence that customers would be less likely to purchase a portable device without the slide to unlock feature and would pay less for products without it, thus permitting the jury to conclude that this feature was a key driver in the ultimate commercial success of the products.¹⁶ J.A. 21066, 21108.

¹⁶ In its reply brief, Samsung argues that Apple's survey evidence "did not even test the '721 patent for smartphones." Samsung Resp. Br. 21. The claims of the '721 patent, however, are not directed to a smartphone, but rather to a "hand-held electronic device." J.A. 685. Apple's survey evidence tested tablets with 7" screens. No one argued that a 7" tablet was not a "hand-held electronic device," nor does this distinction have anything to do with the slide to unlock feature. The dissents suggest that the survey evidence should be rejected because the survey only

Apple's Senior Vice President of Worldwide Marketing testified that slide to unlock was the very first feature shown in Apple's original iPhone TV commercial, 4/1/14 Tr. at 433:16–434:18 (Phillip Schiller) (citing PTX 180), and the jury saw that commercial during the trial. *Id.* A reasonable jury could have found evidence that Apple's marketing experts elected to emphasize the claimed feature as evidence of its importance. It is likewise reasonable to conclude that advertising that highlights or focuses on a feature of the invention could influence customer purchasing decisions. And an inventor of the '721 patent—an Apple Vice President—confirmed that slide to unlock was important because it “would possibly be [a customer's] first experience even in a retail environment” when the customer was “deciding whether they want to buy it.” J.A. 10601:25–10602:22 (Greg Christie).¹⁷ Mr. Schiller explained the importance of the slide to unlock feature in great detail:

establishes that customers would prefer to purchase a device with a slide-to-unlock feature and that such evidence does not demonstrate a nexus to Apple's particular slide-to-unlock mechanism. We decline to reach this argument because it was never made in this appeal.

¹⁷ We have previously recognized that a finding of nexus between the commercial success of a product and the merits of the patented invention embodied in that product can be undermined by factors external to the patented invention, such as marketing and advertising. *See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1129–30 (Fed. Cir. 2000); *In re Paulsen*, 30 F.3d 1475, 1482 (Fed. Cir. 1994). Unlike the present facts, however, those cases did not involve an advertising campaign that specifically stressed and highlighted the patented feature as a way to introduce a new, complex product to the public.

When this ad ran, people hadn't had the opportunity yet to actually use an iPhone for themselves, and so they've never used at this point in time a device anything like it. The challenge is how do you show people, in a simple, 30-second ad, something that gives them a feel for what it's like to use this new generation of Apple's smartphone. And we started the ad with something you're going to be doing every day, many, many times a day, which is to unlock the screen, and to do that, you use a simple gesture, slide to unlock. And that one gesture, having seen that one thing first, you get an instant idea of how multi-touch works so that you're doing a gesture on the screen, and it does something simple and useful to you, and that it's easy to use. You don't need a manual to figure it out. And that one starting point was a great beginning to your understanding of what an iPhone is and what this kind of device can do.

4/1/14 Tr. at 433:1–18. Finally, the video of the crowd “burst[ing] into cheers” when Steve Jobs demonstrated the slide to unlock feature supports a conclusion that consumers valued this particular feature. J.A. 12879:20–12880:2 (Andrew Cockburn). It is the fact finders' job to assess the probative value of the evidence presented. *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1574 (Fed. Cir. 1996) (“It is within the province of the fact-finder to resolve these factual disputes regarding whether a nexus exists between the commercial success of the product and its patented features, and to determine the probative value of Pro-Mold's evidence of secondary considerations . . .”).

This record overall contains substantial evidence of a nexus between the slide to unlock feature and the iPhone's commercial success, and we are required to give this jury fact finding deference. It is not our role to reweigh the evidence or consider what the record might have supported. This commercial success evidence supports the jury's verdict that the claimed invention would not have been obvious.

d. Long-Felt Need

Evidence of a long-felt but unresolved need can weigh in favor of the non-obviousness of an invention because it is reasonable to infer the need would not have persisted had the solution been obvious. There is substantial evidence for the jury to have found that there was a long-felt but unresolved need for a solution to the pocket dialing problem until Apple's claimed invention, with its slide to unlock feature, solved that problem. Samsung's appeal of the jury's fact finding of long-felt need was limited to a single sentence, which was itself simply a quote from *George M. Martin Co. v. All. Mach. Sys. Int'l LLC*, 618 F.3d 1294, 1304 (Fed. Cir. 2010): "[w]here the differences between the prior art and the claimed invention are as minimal as they are here, . . . it cannot be said that any long felt need was unsolved." Samsung Br. 37 (alteration in original). In its brief, there was no application to this case, no analysis of the issue of long-felt need, and no citation to any record evidence.

To the extent that Samsung's quote should be interpreted as precluding a jury finding of long-felt need favoring non-obviousness when the difference between the prior art and the claimed invention is small, we reject such a categorical rule. This type of hard and fast rule is not appropriate for the factual issues that are left to the province of the jury. There

could be a long-felt need for what might be considered a relatively small improvement over the prior art—it all depends upon the evidence, and it is up to the fact finder to assess that evidence.

Moreover, we do not understand the quote from *George M. Martin* to be a proclamation of law but instead simply an application to the particular facts of that case. The quoted language makes clear that the court was evaluating the facts in that particular case regarding the claimed advances over the prior art, “as minimal as they are here.” *George M. Martin*, 618 F.3d at 1304. And importantly, the *George M. Martin* court explains that the “need” had already been met by the prior art devices that already solved the problem at issue. *Id.* at 1305. Thus, in *George M. Martin*, not only was the difference between the prior art and the claimed invention minimal, but the prior art had already solved the problem for which the patentee claimed there was a long-felt need. *Id.* Samsung’s sole argument on long-felt need is thus based on a misreading of *George M. Martin*.

In this case, there is substantial evidence for the jury’s finding that long-felt need supported the non-obviousness of the claimed invention. Denying JMOL on this issue, the district court cited testimony from Apple’s expert: “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.” J.A. 57 (quoting J.A. 10638–39). While the expert discusses particular examples in the first person: “I have been very frustrated with [the prior art options],” the jury could still reasonably find that this testimony was probative of a long-felt need. *See* J.A. 10638:17–19.

The district court also cited the testimony of one of the inventors, where he discussed concerns over pocket dialing.¹⁸ In addition to the portion of Dr. Cockburn's testimony cited by the district court, there are other portions of his testimony upon which the jury fact finding could be predicated. The record contained a document (PTX 55) in which Samsung listed all the alternatives to the iPhone slide to unlock. *See* 4/4/14 Tr. at 680:10–687:15 (Andrew Cockburn). Apple's expert went through several of the alternatives, including the Ripple unlock, the glass unlock, and the circle unlock, and explained how each of these failed to solve the accidental activation problem. *Id.* The jury could have reasonably found that this testimony established long-felt unresolved need.

In addition, the jury could have found that the same internal Samsung documents Apple relied upon for industry praise and copying demonstrate that Samsung compared four of its own rejected alternative

¹⁸ This is how the inventor described the problem to be solved:

Q: What was the problem that you guys were working on at the time that you came up with the '721 invention?

A: . . . We were worried about accidental use, pocket dialling [sic], the phone getting shut down accidentally, or since we were going to have all these features on the phone, like e-mail and messaging, we were worried that, you know, mail could be sent accidentally or deleted accidentally or the phone would answer itself simply because the touch surface—you know, if it was like, like, the touch surface against your leg in your pocket, we were worried that just, like, you know, jostling around, moving around would trigger things on the screen.

J.A. 10600:17–10601:13 (Greg Christie).

unlock mechanisms (Kepler, Victory, Behold, & Amythest) to the iPhone slide to unlock mechanism, and that Samsung concluded the iPhone slide to unlock was better. *See, e.g.*, J.A. 51028 (PTX 120 at 28 (“Behold3: Unintentional unlock occurs . . . iPhone Lock undone only when sliding action is applied to a specific button”)); J.A. 51289 (PTX 121 at 100 (“Victory: The Screen Lock gets unlocked with a slight flick motion”; “iPhone Unlocking standard is precise as it is handled through sliding, and it allows prevention of any wrong motion”). The jury could have found that these Samsung documents show that Samsung, Apple’s fiercest competitor, was unsuccessfully trying to solve the same problem. All of this evidence was presented to the jury during the trial in this case. This evidence constitutes substantial evidence for the jury fact finding that there was a long-felt but unresolved need, which Apple’s ’721 patented invention solved. This evidence weighs in favor of non-obviousness.

2. Conclusion on Obviousness of the ’721 Patent

Acknowledging that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does,” the Supreme Court cautioned that “[h]elpful insights, however, need not become rigid and mandatory formulas.” *KSR*, 550 U.S. at 418–19. The Supreme Court explained:

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits

and of modern technology counsels against limiting the analysis in this way.

Id. at 419. “Rigid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it.” *Id.* at 421. With these principles in mind, we review de novo the ultimate legal determination and conclude that it would not have been obvious to a skilled artisan to combine the prior art to arrive at the claimed invention.

Common sense and real world indicators indicate that to conclude otherwise would be to give in to hindsight, to allow the exact ex post reasoning against which the Supreme Court cautioned in *Graham* and *KSR*. The record includes *Plaisant* and *Neonode* and all that these references teach, including *Plaisant*’s reference to inadvertent activation, complexity, difficult implementability, and that users do not prefer sliders. Though the prior art references each relate to touchscreens, the totality of the evidence supports the conclusion that it would not have been obvious for a skilled artisan, seeking an unlock mechanism that would be both intuitive to use and solve the pocket dialing problem for cell phones, to look to a wall-mounted controller for an air conditioner. The two-page *Plaisant* paper published in 1992 reported the results of a user-preference survey of fifteen undergraduates on six different computer-based switches. That a skilled artisan would look to the *Plaisant* paper directed to a wall-mounted interface screen for appliances and then choose the slider toggle, which the study found rated fifth out of six options in usability, to fulfill a need for an intuitive unlock mechanism that solves the pocket dialing problem for cell phones seems far from obvious.

We have considered the jury’s implicit fact findings about the teachings of Plaisant and Neonode. We have also considered the objective indicia found by the jury which are particularly strong in this case and powerfully weigh in favor of validity. They include copying, industry praise, commercial success, and long-felt need. These real world indicators of whether the combination would have been obvious to the skilled artisan in this case “tip the scales of patentability,” *Graham*, 383 U.S. at 36, or “dislodge the determination that claim [8 would have been] obvious,” *KSR*, 550 U.S. at 426. Weighing all of the *Graham* factors, we agree with the district court on the ultimate legal determination that Samsung failed to establish by clear and convincing evidence that claim 8 of the ’721 patent would have been obvious. We affirm the district court’s denial of JMOL.

3. Willfulness

Apple appealed the district court’s grant of JMOL that Samsung did not willfully infringe claim 8 of the ’721 patent. The district court’s decision was solely based on its determination that Samsung’s defenses were objectively reasonable under the standard from *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007). J.A. 63–66. Given the Supreme Court’s recent willfulness decision in *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923 (2016), we remand the willfulness issue for the district court to consider under the new standard in the first instance.

C. The ’172 Patent

Apple moved for summary judgment of infringement of claim 18 of the ’172 patent, which the district court granted. The jury entered a verdict that claim 18 of the ’172 patent would not have been obvious. Samsung

challenges the district court's judgment of infringement which was based on the court's construction of the term "keyboard." It also challenges the district court's denial of JMOL that claim 18 would have been obvious. We affirm both the judgment relating to infringement and that relating to invalidity.

The '172 patent is directed to a method, system, and interface for providing "autocorrect" recommendations to users inputting text into a portable electronic device. '172 patent at Abstract. Claim 18, the only asserted claim, recites a graphical user interface comprising "a first area" and "a second area" of a touchscreen. The "first area" displays the text, or "current character string," input by the user. The "second area" displays both the "current character string" and a suggested replacement. Claim 18 provides a user with the option to accept the suggested replacement or keep the text as inputted. The user can accept the suggested replacement by activating a key on the keyboard (such as a spacebar) or by performing a gesture on the suggested replacement in the second area. The user can keep its inputted text by performing a gesture on the "current character string" in the second area. Claim 18 is recited below.

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.

Before trial, Apple moved for summary judgment that Samsung's accused devices infringe claim 18 of the '172 patent. In response, Samsung disputed only whether its accused devices satisfy claim 18's requirement of a "keyboard." The district court granted Apple's motion, determining that Apple had shown infringement and that no reasonable jury could find that Samsung's accused devices fell outside the court's construction of "keyboard." J.A. 164.

The jury trial proceeded on the issues of validity and damages. The jury found claim 18 of the '172 patent was not invalid and awarded Apple \$17,943,750 for infringement by Samsung's accused devices. J.A.

40874–76. Samsung moved for JMOL, arguing that no reasonable jury could find that claim 18 of the '172 patent is not invalid. In its motion, Samsung argued that claim 18 would have been obvious over the combination of U.S. Patent No. 7,880,730 (“Robinson”) and International Publication No. WO 2005/008899 (“Xrgomics”). The district court denied Samsung’s motion, determining that substantial evidence supported the jury’s fact findings related to obviousness and concluding that these fact findings supported the conclusion that Samsung had failed to prove by clear and convincing evidence that the '172 patent was invalid. J.A. 67–69.

On appeal, Samsung argues the district court erred by denying its motion for JMOL that the '172 patent would have been obvious over Robinson and Xrgomics. Samsung also argues the district court erred in construing “a keyboard and a touchscreen display” to encompass both physical and virtual keyboards, resulting in the district court’s erroneous grant of summary judgment that Samsung’s devices infringe claim 18 of the '172 patent. We consider each argument in turn.

1. Obviousness

Robinson, titled “Keyboard system with automatic correction,” is directed to “an enhanced text entry system that uses word-level disambiguation to automatically correct inaccuracies in user keystroke entries.” Robinson at 3:24–26 (J.A. 20910). Xrgomics, titled “Letter and word choice text input method for keyboards and reduced keyboard systems,” is directed to a “method for entering text efficiently by providing letter or word choices.” Xrgomics at Abstract (J.A. 21000). The parties presented the jury with expert

testimony on both references and on objective indicia of non-obviousness.

Samsung's expert, Dr. Wigdor, testified that Robinson discloses every limitation of claim 18 of the '172 patent except the limitation requiring a "current character string in the first area." J.A. 12024:5–12025:9. Dr. Wigdor further testified that "anyone who's used a computer since the 1970s would be familiar with this idea that . . . as you type, the text shows up at your cursor." J.A. 12025:1–9. He testified that one example of prior art that discloses the limitation missing from Robinson, a "current character string in the first area," is Xrgomics. J.A. 12025:1–11. Dr. Wigdor stated that Figure 5 of Xrgomics, like claim 18, displays the inputted text "deva" both where the user is typing and in the suggestions bar. J.A. 12026:3–19. He also testified that a person of ordinary skill in the art would have combined Robinson with Xrgomics to render claim 18 obvious. J.A. 12027:1–21.

Apple's expert, Dr. Cockburn, disagreed on the scope and content of the prior art. He testified that Robinson fails to disclose "a series of elements" in addition to lacking the "current character string in the first area" limitation. J.A. 12915:24–12916:15. According to Dr. Cockburn, because Robinson does not display the text when the user types the characters in the first area, Robinson fails to disclose any of claim 18's options for replacing or keeping the "current character string." In particular, he testified that Robinson does not disclose that the "current character string in the first area is replaced," either by activating a key on the keyboard or by performing a gesture on the suggested replacement, because in Robinson, "there was no text there to be replaced." J.A. 12916:6–13. Likewise, Dr. Cockburn testified that "because the current character string is

not there [in Robinson], it can't be kept if the user performs a gesture." J.A. 12916:14–15.

Dr. Cockburn testified that Xrgomics does not disclose these missing elements. He testified that Xrgomics is not directed to spelling correction, but is a "word completion patent," where a user can "type a series of characters and Xrgomics offers alternative words that complete that word." J.A. 12916:22–25. Using the same example as Samsung's expert, Dr. Cockburn testified that Xrgomics does not teach correcting the spelling of "deva," but suggests the words "devastating, devalue, devastate, all of which are completions of what the user has already typed." J.A. 12917:11–15. He testified that Xrgomics, like Robinson, therefore does not disclose "the current character string in the first area is replaced with the suggested replacement string," because "[i]n Xrgomics, if the user presses the space bar . . . D-E-V-A is kept. There's no replacement." J.A. 12917:18–12918:2.

On objective indicia of non-obviousness, Samsung's expert testified, "it's clear to me that none of those secondary considerations were met." J.A. 12032:14–15. Dr. Wigdor testified that, while the iPhone is commercially successful, it does not have the user interface specifically recited in claim 18. J.A. 12032:17–24. Apple's expert, Dr. Cockburn, disagreed, stating there was "clearly" commercial success, testifying that "Samsung has sold over 7 and a half million devices that use this technique." J.A. 12918:6–9. Apple introduced survey evidence comparing the willingness of users to buy devices containing the patented feature versus those without. J.A. 51440. This survey indicated a heightened willingness to buy devices with the '172 patent's patented feature. Dr. Cockburn also testified that Samsung's internal documents and

comments from carriers were evidence of industry praise. J.A. 12918:10–13. Dr. Cockburn testified that one such internal Samsung document, J.A. 51488, reflected T-Mobile’s request that Samsung modify its autocorrect technology to adopt the functionality of claim 18. J.A. 68 (citing 4/4/14 Tr. at 698–700). A reasonable jury could have construed evidence that Samsung’s carrier customer requested Samsung adopt the claimed technology as praise of the claimed feature.

The jury determined that Samsung did not prove by clear and convincing evidence that claim 18 was invalid. J.A. 40874. The district court determined that substantial evidence supported the jury’s implicit fact findings on each *Graham* factor and that “[i]n 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.” J.A. 69. The district court reasoned that the jury impliedly found Dr. Cockburn’s testimony that Robinson and Xrgomics did not disclose all the elements of claim 18 more credible than Dr. Wigdor’s opinion, and the jury impliedly accepted Apple’s evidence of objective indicia of non-obviousness over Dr. Wigdor’s testimony that no such evidence existed. J.A. 67–68. The district court held that these presumed fact findings were supported by substantial evidence and denied Samsung’s motion for JMOL. *Id.* We see no error in the district court’s weighing of the *Graham* factors.

Samsung does not appeal the jury’s finding that Apple’s evidence of objective indicia supports non-obviousness. Samsung’s only mention of the objective indicia with regard to the ’172 patent in its opening brief appears in a footnote which in its entirety reads:

“For the same reasons discussed with respect to the ’721 patent (*see supra* at 37), secondary indicia of non-obviousness are likewise inapplicable to the ’172 patent.” Samsung Br. 45 n.5. Samsung’s passing reference to its arguments for an entirely different patent, claiming an entirely different invention, and concerning different evidence, is hardly enough to constitute a meaningful dispute regarding the weight of Apple’s evidence of objective indicia of non-obviousness or the jury’s fact findings in favor of Apple. Apple presented evidence of commercial success and industry praise for the ’172 patented invention, which supports non-obviousness. Samsung did not dispute this evidence or the jury fact findings related to them on appeal.

Apple also presented substantial evidence on which a reasonable jury could find that the combination of Robinson and Xrgomics failed to disclose every claimed element. Apple’s expert, Dr. Cockburn, testified that neither Robinson nor Xrgomics disclose that “the current character string in the first area is replaced with the suggested replacement character string,” and that Robinson does not disclose replacing text at all. *See* J.A. 12915:24–12916:15 (testifying that Robinson does not disclose a “current character string in the first area,” replacing text in the first area, or keeping text in the first area); J.A. 12916:19–12917:17 (testifying that Xrgomics does not disclose text *replacement* at all, but teaches text *completion*). While Samsung’s expert provided contrary testimony, as the district court observed, with conflicting expert testimony before it, “the jury was free to ‘make credibility determinations and believe the witness it considers more trustworthy.’” J.A. 68 (quoting *Kinetic Concepts*, 688 F.3d at 1362 (citation omitted)). By finding in favor of Apple, the jury impliedly found Apple’s expert’s testimony

more credible and persuasive than the testimony proffered by Samsung. *Kinetic Concepts*, 688 F.3d at 1362; *MobileMedia*, 780 F.3d at 1168. This evidence, together with Apple's evidence of objective indicia of non-obviousness, weigh in favor of the legal conclusion that Samsung did not prove by clear and convincing evidence that claim 18 would have been obvious to a skilled artisan.

Even in cases in which a court concludes that a reasonable jury could have found some facts differently, the verdict must be sustained if it is supported by substantial evidence on the record that was before the jury. But as an appellate court, it is beyond our role to reweigh the evidence or consider what the record might have supported, or investigate potential arguments that were not meaningfully raised. Our review is limited to whether fact findings made and challenged on appeal are supported by substantial evidence in the record, and if so, whether those fact findings support the legal conclusion of obviousness. We agree with the district court that there is substantial evidence for a reasonable jury to have found that there was a gap in the prior art that was not filled by the combination of Robinson and Xrgomics, and that the entirety of the evidence weighs in favor of non-obviousness. We cannot conclude that the evidence affords only one reasonable conclusion contrary to that of the jury. *See Monroe*, 248 F.3d at 861. Weighing the *Graham* factors, we agree with the district court that Samsung failed to establish by clear and convincing evidence that claim 18 of the '172 patent would have been obvious. We thus affirm the district court's denial of Samsung's motion for JMOL.

2. Claim Construction & Infringement

In a single page in its opening brief, Samsung argues that the district court erred when it construed the term “a keyboard and a touchscreen display” in claim 18 to encompass both physical and virtual keyboards. We disagree. The district court determined that the plain and ordinary meaning of the term “keyboard” as used in claim 18 and throughout the specification included both physical and virtual keyboards. J.A. 162–63. The specification of the ’172 patent discloses graphical user interfaces containing both virtual and physical keyboards. *See* ’172 patent at 7:13–15, 7:33–35 (describing embodiments containing “a virtual or soft keyboard” or “physical keyboard”). The specification expressly contemplates keyboards that are part of the touchscreen. *See, e.g., id.* at 4:11–12 (“The user interfaces may include one or more keyboard embodiments displayed on a touch screen.”); *id.* at 5:38–39 (“The touch screen 112 may be used to implement virtual or soft buttons and/or one or more keyboards.”); *id.* at 7:10–15 (describing a touch screen containing a virtual or soft keyboard). As recognized by the district court, every figure in the ’172 patent that depicts a portable electronic device, as recited in the preamble of claim 18, includes a virtual keyboard. J.A. 162 (citing ’172 patent at figs. 2, 4A–4I, 5A–5B). And the specification describes Figure 2, which has a virtual keyboard, as “a portable electronic device having a touch screen *and* a soft keyboard.” ’172 patent at 3:15–17 (emphasis added). We see no error in the district court’s construction.

Because Samsung concedes that its accused devices contain a virtual keyboard and does not otherwise dispute infringement of claim 18, we affirm the court’s

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grant of summary judgment that Samsung's accused devices infringe claim 18 of the '172 patent.

IV. CONCLUSION

We affirm and reinstate the district court judgment as to the '647, '721, and '172 patents. We reinstate the portions of the panel decision that pertain to the '959, '414, '239, and '449 patents, for which the panel decision affirmed the district court's rulings on all issues of those patents. We thus reinstate the district court's award of costs which the panel had vacated. We remand the willfulness issue for the district court to consider under the Supreme Court's *Halo* standard in the first instance.

AFFIRMED

COSTS

No costs on this appeal.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1171, 2015-1195, 2015-1994

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Cross-Appellant,

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellants.

Appeals from the United States District Court for the
Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

PROST, *Chief Judge*, dissenting.

At the outset, I share Judge Dyk's and Judge Reyna's concerns as to the procedural irregularities surrounding this case at the en banc stage. There was no need to take this case en banc. However, having done so, the en banc court would certainly have benefited from our normal practice of allowing further briefing and argument from the parties and from hearing the views of amici, such as the government.

On the merits, I agree with Judge Dyk that *KSR International Co. v. Teleflex Inc.* significantly reduced

the evidentiary burden necessary to establish a motivation to combine prior art references and held that motivation to combine can be found in “any need or problem known in the field of endeavor,” not just the problem faced by the inventor. 550 U.S. 398, 420 (2007). I also agree with his concerns regarding the majority’s elevation of secondary considerations beyond their historic role, which is that secondary considerations take on less importance when there is little doubt as to obviousness. See *Dow Chem. Co. v. Halliburton Oil Well Cementing Co.*, 324 U.S. 320, 330 (1945) (“But these considerations are relevant only in a close case where all other proof leaves the question of invention in doubt.”); *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 279 (1944) (“These factors were entitled to weight in determining whether the improvement amounted to invention and should, in a close case, tip the scales in favor of patentability.”).

Aside from these broader legal principles, though, I write separately to express concern that the majority misapplies the substantial evidence standard of review with respect to the invalidity analysis, finding evidence in the record when there is none to support the jury’s implicit factual findings. With respect to the ’647 patent, the majority goes too far by implicitly modifying our prior claim construction that is binding on and agreed upon by the parties.

In the majority’s view, the existence of *any* evidence that could theoretically support a jury verdict would seem to end our substantial evidence review on appeal. *But see Consol. Edison Co. of N.Y. v. Nat’l Labor Relations Bd.*, 305 U.S. 197, 229 (1938) (“Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept

as adequate to support a conclusion.”). Indeed, as Judge Reyna forcefully articulates in his dissent today, the majority has abdicated its role in substantial evidence review. For the additional reasons discussed below, I respectfully dissent.

DISCUSSION

I

A

Under the majority’s analysis, the question with respect to the validity of claim 8 of the ’721 patent is straightforward: whether there is substantial evidence to support the jury’s implicit finding that there was no motivation to combine Neonode and Plaisant. The en banc majority relies on the testimony of Apple’s expert, Dr. Cockburn, to say that a skilled artisan would not be motivated to combine Neonode and Plaisant. In support, the en banc majority cites only one fact (that is self-evident from the face of the references themselves): Neonode concerns a portable telephone and Plaisant concerns wall-mounted touchscreen devices. That lone statement does not rise to the level of substantial evidence.

Neonode describes a portable phone that may be activated by “[s]weep[ing] right” on the screen. J.A. 20725. Plaisant discloses a toggle device for use on a touch screen, referred to as a “[s]lider toggle,” which requires a user to slide a pointer from one side of the toggle to the other in order to activate it. J.A. 20743. Plaisant also teaches that an “advantage of the sliding movement is that it is less likely to be done inadvertently therefore making the toggle very secure (the finger has to land on and lift off the right locations).” *Id.* It is undisputed that Neonode and Plaisant are analogous art references that together disclose all of

the limitations of claim 8. The relevant question is whether a skilled artisan would be motivated to combine the references to solve the problem addressed by the '721 patent, namely “the unintentional activation or deactivation of functions due to unintentional contact with the touch screen.”¹ '721 patent col. 1 ll. 38–40. *See KSR*, 550 U.S. at 420 (noting that a motivation to combine may be found in “any need or problem known in the field of endeavor at the time of invention and addressed by the patent”).

The majority holds that there is no motivation to combine Neonode with Plaisant because a person of ordinary skill would not turn to Plaisant’s wall-mounted

¹ Apple also argued at the district court and on appeal that Plaisant teaches away from using sliders because they were “not preferred” over other toggle devices. Apple Br. 27. The majority declined to address teaching away, focusing instead on motivation to combine. The majority states, however, that “even if Plaisant does not teach away, its statements regarding users preferring other forms of switches are relevant to a finding regarding whether a skilled artisan would be motivated to combine the slider toggle in Plaisant with the mobile phone in Neonode.” Majority Op. at 22 n.13. This rationale is new. It was never before the jury, *see* J.A. 12876–78, and even Apple does not assert that rationale.

In any event, there is no teaching away here. Though Plaisant notes that sliders may not be preferred, it also describes advantages that sliders have over other toggle methods. J.A. 20743. As a matter of law, “the mere disclosure of more than one alternative does not amount to teaching away from one of the alternatives where the reference does not criticize, discredit, or otherwise discourage the solution” presented by the disclosure. *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1320 (Fed. Cir. 2015) (internal quotation marks omitted) (citation omitted); *see also Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 964 (Fed. Cir. 2014) (stating that “mere disclosure of alternative preferences” does not teach away).

touchscreen to solve the “unintentional activation” problem of a portable phone. The problem with that conclusion is that Apple did not present any evidence to support it. Indeed, a review of the entirety of Dr. Cockburn’s testimony on motivation to combine reveals the striking absence of any evidence that a skilled artisan would not look to Plaisant simply because it discloses wall-mounted touchscreens:

Q. And can you show us, please, using some graphics, remind us what the Plaisant application is.

A. Sure. Quickly I’ve got a few slides on Plaisant, this is the paper, the two-page paper, it describes touch screen toggle designs, so these are on/off switches.

And the way they were intended to be used was the touch screen would be mounted into a wall or into cabinetry and it would be used to control, for remote control, office or home appliances, like air conditioning units or heaters.

The publication itself and the video that accompanies it both teach away from the use of sliding. . . . [Plaisant] 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.

And the figure at the top shows those results for user preference indicating that both of the two designs that they considered, levers and sliders, was the least preferred, that’s the slider highlighted in red and the lever.

Q. [Samsung's expert] told this jury that a person of ordinary skill in the art would have been naturally motivated to combine the Neonode guide with the Plaisant article.

Did you agree with that opinion?

A. *No, I do not.*

Q. And why do you say that?

A. The patent office, the patent examiner, had all of the Neonode guide available to them.

They also had Plaisant, in its complete form, available to them, and they commented extensively on Plaisant. There was an extensive discussion of Plaisant, and at the end of that discussion, they conclude that Plaisant does not, or none of the prior art discloses continuous movement of the unlock image to order to unlock the device.

J.A. 12876–78 (emphases added to denote portions of the testimony relied on by the majority).²

Dr. Cockburn's statement concerning wall-mounted touchscreens did not concern whether a person of ordinary skill would look to Plaisant to solve the problem of "unintentional activation"; it was merely a restatement of Plaisant's express disclosure. *See* J.A. 20742 ("Users see the screen flushmounted into the wall or the cabinetry").³ Indeed, leaving aside his

² Apple never even argued to the jury that Plaisant's disclosure being a wall-mounted device had any bearing on motivation to combine. *See Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv-630, Trial Tr. of Apr. 29, 2014 at 3212–14, ECF No. 1929.

³ The majority only cites Dr. Cockburn's statement that he did not believe there was a motivation to combine Neonode with Plaisant but not his subsequent explanation. A court may not

reference to the entirely discrete issue of teaching away, Dr. Cockburn’s only purported rationale for a lack of motivation to combine was that both Neonode and Plaisant were before the Patent Office during prosecution—a fact that Apple does not rely on before us with respect to motivation to combine.

In stark contrast, the jury heard compelling evidence that a skilled artisan would be motivated to combine the references to solve the problem of unintentional activation. Most importantly, Plaisant itself expressly teaches that an “advantage of the sliding movement is that it is less likely to be done inadvertently.” J.A. 20743. Indeed, this disclosure alone does more than motivate the combination of Plaisant with Neonode—it actually teaches and suggests it.

Samsung’s expert, Dr. Greenberg, explained this to the jury when asked whether a skilled artisan would be motivated to combine the references:

They both specifically describe how a sliding action is used to prevent accidental activation.

So this is – you know, a person looking at this would just think it natural to combine these two, as well taking the ideas in Plaisant, the slider, and putting them on the Neonode is, is just a very routine thing to think about in terms of interaction design.

J.A. 11982–83. By the end of trial, the jury had thus heard from Samsung’s expert, who articulated a

treat a conclusory answer without any context as evidence. *See Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) (holding that conclusory statements offered by experts are not evidence).

specific motivation to combine based on the explicit disclosure of Plaisant itself, and from Apple’s expert, who gave no explanation as to why a skilled artisan would not be so motivated.

Nonetheless, the majority finds that there is substantial evidence of a lack of motivation to combine. But a reviewing court in our situation must “review the record as a whole,” crediting not only evidence favoring the nonmovant but also “evidence supporting the moving party that is uncontradicted and unimpeached, at least to the extent that that evidence comes from disinterested witnesses.” *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 151 (2000) (internal quotation marks omitted). Here, the record as a whole makes clear that a skilled artisan, starting with the portable phone of Neonode, would have seen a benefit to adding Plaisant’s sliders to solve the accidental activation problem described by the ’721 patent.⁴ *See KSR*, 550 U.S. at 424. A straightforward evaluation of the entire record compels only one reasonable conclusion—there is a motivation to combine Neonode with Plaisant.

In sum, there is no support in the record for the majority’s conclusion that substantial evidence supports the jury’s implicit factual finding that a person of ordinary skill in the art would not be motivated to combine Neonode and Plaisant. Substantial evidence

⁴ Because it is undisputed that Plaisant is analogous art, a hypothetical person of ordinary skill would be aware of it. *See Mast, Foos, & Co. v. Stover Mfg. Co.*, 177 U.S. 485, 494 (1900) (“[I]n determining the question of invention, we must presume the patentee was fully informed of everything which preceded him, whether such were the actual fact or not.”); *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1449–54 (Fed. Cir. 1984) (collecting cases).

may be a lenient standard, but it is a standard nonetheless that cannot be met with the stark absence of evidence. Therefore, no rational jury could find that a motivation to combine the references to arrive at the claimed invention was lacking.

B

Despite the majority's statement that there is no motivation to combine, the majority does not appear to rest its conclusion on that basis. *See* Majority Op. at 30. Instead, the majority goes on to state that it considers Plaisant's teachings, including the reference to "inadvertent activation," against the evidence of secondary considerations. *Id.* at 42–43. It is unclear what analytical framework the majority has adopted in its analysis and whether this goes to the question of motivation to combine. We have only weighed the teachings of a prior art reference related to motivation to combine against each other in the teaching away context. *See, e.g., Galderma Labs., L.P. v. Tolmar, Inc.*, 737 F.3d 731, 739 (Fed. Cir. 2013) (a teaching that a concentration of 0.1% was optimal did not weigh against a teaching that 0.3% concentration was possible); *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (a teaching expressing a "general preference for an alternative" did not weigh against a teaching). Doing so as part of the ultimate legal question of obviousness, as the majority does now, is a new approach that neither we nor the Supreme Court has sanctioned.

Given the majority's conclusion (with which I disagree) that there was no motivation to combine references in this case, there is no reason for the majority to go on to opine on the question of secondary

considerations at all that discussion is arguably dicta.⁵ See, e.g., *Allergan, Inc. v. Sandoz Inc.*, 796 F.3d 1293, 1304–07 (Fed. Cir. 2015) (affirming a nonobvious determination based only on issues of teaching away and unexpected results); *Stryker Corp. v. Zimmer, Inc.*, No. 2013-1668, 2016 WL 4729504, at *7 (Fed. Cir. Sept. 12, 2016) (declining to reach secondary considerations in reaching a determination of nonobviousness), *vacated and remanded on other grounds sub nom. Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923 (2016); *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (same).

In my analysis, however, I conclude that no reasonable jury could find a lack of motivation to combine, so I am obligated to consider Apple’s proffered evidence of secondary considerations. *Nike, Inc. v. Adidas AG*, 812 F.3d 1326, 1339 (Fed. Cir. 2016).

In the history of our court, we have only once held that evidence of secondary considerations outweighs strong evidence of obviousness. See *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340 (Fed. Cir. 2012). In that case, the jury, in view of “compelling” evidence, made express findings that seven types of secondary considerations

⁵ The majority’s assessment of secondary considerations also relies on additional evidence that was not presented by Apple to the district court or to us on appeal in opposition to Samsung’s obviousness evidence, and relies on theories that appear nowhere in Apple’s briefs. Compare Majority Op. at 31–43 with Apple’s Opp’n to Samsung’s Mot. for J. as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) & Mot. to Am. the J. at 18, *Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv-630, ECF No. 1908–03 (“Apple JMOL Opposition”); Apple Br. 29.

supported nonobviousness. *Id.* at 1349, 1354. However, we acknowledged that “[f]ew cases present such extensive objective evidence of nonobviousness, and thus we have rarely held that objective evidence is sufficient to overcome a prima facie case of obviousness.” *Id.* at 1354. This is not a case where evidence of secondary considerations is so “extensive.” *See KSR*, 550 U.S. at 426 (“Like the District Court, finally, we conclude Teleflex has shown no secondary factors to dislodge the determination that claim 4 is obvious.”).

When examining evidence of secondary considerations, “courts must exercise care in assessing proffered evidence of objective considerations, giving such evidence weight only where the objective indicia are attributable to the inventive characteristics of the discovery as claimed in the patent.” *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1079 n.6 (Fed. Cir. 2012) (internal quotation marks omitted) (citations omitted). The proponent of such evidence of secondary considerations, in this case Apple, “bears the burden of showing that a nexus exists between the claimed features of the invention and the objective evidence offered to show non-obviousness.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999). Though the existence of such a nexus is a question of fact, which we review for substantial evidence, the consideration of objective indicia is part of the ultimate determination of obviousness which we review de novo. *See Agrizap, Inc. v. Woodstream Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008) (“Even when we presume the jury found that the objective evidence of nonobviousness favored [the patentee], this evidence is insufficient to overcome the overwhelming strength of [the alleged infringer’s] prima facie case of obviousness.”); *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485

F.3d 1157, 1162 (Fed. Cir. 2007) (agreeing with the district court’s conclusion that even substantial evidence of various secondary considerations was “inadequate to overcome” obviousness as a matter of law). The mere existence of evidence of secondary considerations does not control the obviousness determination. *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1483 (Fed. Cir. 1997).

In this case, Apple presented evidence that it contends shows there was commercial success, long-felt need, industry praise, and copying. However, Apple’s evidence of commercial success does not establish a nexus with the patented feature, and the remaining evidence, even if a nexus is assumed, is not sufficient to “tip the scales of patentability.” *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966).

1

To argue commercial success on appeal, Apple only relies on a portion of a survey introduced to establish the value of the “patent-related” slide-to-unlock feature on tablets with screens larger than 7 inches, J.A. 21066, 21108, coupled with Dr. Greenberg’s statement that “there’s no question that the Apple iPhone was a commercial success.” J.A. 11984; *see* Apple Br. 29. This evidence does not establish a nexus for commercial success.⁶

⁶ To find a nexus for commercial success, the majority also relies on testimony by Apple’s Senior Vice President of Worldwide Marketing, a television commercial shown to the jury, and additional testimony from Apple’s witness, Mr. Christie. Majority Op. at 35–38. Apple did not rely on any of that evidence before the district court in its JMOL opposition or before us on appeal to support a showing of commercial success. *See* Apple JMOL Opposition 18; Apple Br. 29. These rationales are new. There is

With respect to the survey, it did not ask about the slide-to-unlock feature on smartphones, which in the survey had screens no larger than 5.5 inches (smaller than the surveyed tablet screens). J.A. 21076, 21108. Apple does not point to any separate evidence regarding the sales of those tablets. As for the success of the iPhone device, there is no evidence tying that success specifically to the features embodied in the claimed invention. To establish the requisite nexus, there needs to be some record evidence to tie the commercial success of a product to the slide-to-unlock feature of that product embodying the claimed invention. Here, there is none.

In addition, although Dr. Greenberg testified that the iPhone was commercially successful, he continued: “[b]ut I’ve seen no evidence that says that that commercial success was due to the lock screen.” J.A. 11985. No reasonable juror could conclude that Dr. Greenberg’s statement that he had seen no evidence of a nexus was somehow evidence of a nexus.⁷

2

The remainder of Apple’s secondary consideration arguments consists of long-felt need, industry praise,

no need to reach these arguments because they were never made in this appeal.

⁷ Apple also argued before the district court, but not on appeal, that Dr. Cockburn’s testimony was evidence of commercial success for the ’721 patent. *See* Apple JMOL Opposition 18. But Dr. Cockburn only testified that the iPhone was commercially successful, not that the iPhone was commercially successful because of the slide-to-unlock feature. *See* J.A. 12879 (“Well, clearly there’s been commercial success both of the iPhones that use this invention, and for the devices that have copied the technique.”). This testimony is also insufficient to establish nexus.

and copying. To show long-felt need, Apple relies on the testimony of Dr. Cockburn, who provided a single example of a portable phone that he characterized as “entirely unintuitive.” J.A. 10638–39. For industry praise, Apple relies upon the audience reaction at the first public unveiling of the iPhone. J.A. 12879–80. Finally, Apple relies on internal Samsung documents that it argues show both copying and industry praise. *See, e.g.*, J.A. 51289.⁸

Even assuming that the jury implicitly found a nexus between Apple’s evidence and the claimed invention, this evidence is insufficient in the face of the strong evidence of obviousness. The testimony of an expert testifying as to a single example of unsatisfactory prior art is, at best, weak. *Cf. Cyclobenzaprine*, 676 F.3d at 1083 (testimony regarding an expert’s experience over ten years). Similarly, Apple’s evidence of applause at its own press event is also weak evidence of nonobviousness. *See In re Cree*, 818 F.3d 694, 702 (Fed. Cir. 2016) (finding a company’s press release unpersuasive evidence of non-obviousness). Finally, though Samsung’s internal documents are probative of copying (and industry praise), they do not move the needle in this case. *See Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1370 (Fed. Cir. 2011) (finding evidence of copying unpersuasive evidence of non-obviousness).

⁸ In addition to the evidence cited by Apple and the district court, the majority also relies on additional documentation and testimony regarding alternatives to the iPhone slide-to-unlock feature to support its conclusion on long-felt need. Majority Op. at 40–41. There is no need to reach this argument because Apple never cited that evidence before the district court or before us on appeal.

Considering the totality of the evidence, Apple’s evidence relating to secondary considerations does not “tip the scales of patentability.” *Graham*, 383 U.S. at 36; *see also Leapfrog Enters.*, 485 F.3d at 1162 (finding substantial evidence of commercial success, industry praise, and long-felt need insufficient to overcome strong evidence of obviousness); *Richardson-Vicks*, 122 F.3d at 1483 (“Evidence of secondary considerations . . . are but a part of the ‘totality of the evidence’ that is used to reach the ultimate conclusion of obviousness.”). The asserted claim of the ’721 patent is therefore obvious as a matter of law.⁹

II

With respect to the ’172 patent, the majority also errs in finding substantial evidence in support of the jury determination that the ’172 patent is nonobvious. Specifically, the majority’s conclusion regarding the scope and content of the prior art relies entirely on out-of-context statements by Dr. Cockburn.

⁹ As a basis for affirmance, the majority implies that it would be inappropriate to “reverse nearly a dozen fact findings.” *See* Majority Op. at 5. The number of underlying findings to a legal conclusion is irrelevant in a legal analysis. Reversal of a jury finding of nonobviousness, which we have done not infrequently, usually requires by its very nature the explicit or implicit reversal of multiple fact findings. *See, e.g., W. Union Co. v. MoneyGram Payment Sys., Inc.*, 626 F.3d 1361, 1368–1374 (Fed. Cir. 2010) (reversing jury’s implicit factual findings of the scope and content of the prior art, motivation to combine, and evidence of secondary considerations); *Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335, 1348–50 (reversing a jury determination of nonobviousness and, implicitly, the underlying factual findings); *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360–67 (Fed. Cir. 2007) (reversing a jury’s implicit factual findings regarding the scope and teaching of the prior art, expectation of success, and secondary considerations).

The '172 patent is directed to methods of automatically correcting typographical errors as the user is typing on the keyboard of a portable device. In essence, asserted claim 18 of the '172 patent requires that a current "character string," or text, be displayed in a "first area;" that the text, as typed, and suggested "replacement" text be displayed in a second area; and that the replacement text be automatically entered in the first area if a certain key, such as the space bar, is pressed or if the user touches the suggested replacement. Additionally, the user can choose to use the current text (as typed) if he touches that option in the second area.

Samsung presented evidence at trial through its expert, Dr. Wigdor, that claim 18 of the '172 patent is obvious in light of the Robinson and Xrgomics prior art references. Robinson describes a touchscreen keyboard that can automatically correct incorrectly typed text. Dr. Wigdor opined that Robinson discloses every aspect of the invention except for displaying incorrectly typed text in a "first area." For that missing limitation, he explained that "anyone who's used a computer since the late 1970s would be familiar with this idea that . . . as you type, the text shows up at your cursor." J.A. 12025. In addition, he pointed to Xrgomics, which describes a text-entry system in which the current character string is displayed in a first area. J.A. 21049.

The majority does not point to any evidence that Xrgomics fails to disclose displaying current text in a first area, nor could it because Xrgomics plainly discloses that limitation. *See* J.A. 12025–26. Rather, the majority concludes, based on Dr. Cockburn's testimony, that there is substantial evidence that neither Robinson nor Xrgomics discloses the text

replacement recited by the asserted claim, as distinguished from text *completion*. That is demonstrably incorrect, at least with respect to Robinson.

Dr. Cockburn testified primarily that Robinson fails to disclose displaying current text in a “first area.” He then used that statement to conclude that Robinson also lacks “a series of [other] elements” recited by the asserted claim, namely replacing or keeping current text in a first area. J.A. 12915–16. In context, Dr. Cockburn’s testimony about Robinson’s missing elements was entirely premised on the absence of a single element—i.e., no text being displayed in a first area:

[B]ecause the current character string is not in the first area, it is not replaced with the suggested replacement character when the user presses a delimiter.

As you saw, there was no text there [in the first area] to be replaced when a delimiter was pressed.

Similarly, the character – current character string is not in the first area, so it can’t be replaced when the user selects a suggested replacement string.

And, again, because the current character string is not there [in the first area], it can’t be kept if the user performs a gesture.

J.A. 12916 (emphases added). To be clear, he did not testify that Robinson fails to disclose replacing or keeping text per se, but only that it fails to disclose replacing or keeping text *in a first area*.

Indeed, there can be no genuine dispute that Robinson discloses replacing or keeping, in a different

area of a display, text that the user has input. Robinson is titled “Keyboard System with Automatic Correction.” J.A. 20885 (emphasis added). And, as explained by Dr. Wigdor, Figure 1B of the patent shows that a pop-up menu includes the text as typed and suggested replacement text:

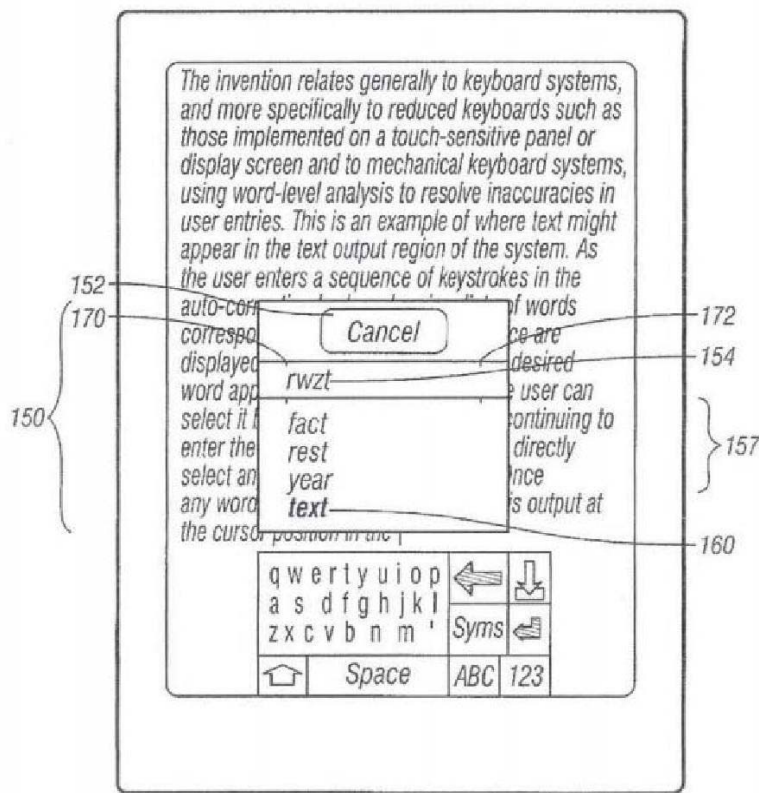


FIG. 1B

J.A. 20890. Robinson states that “[t]he space key acts to accept the default word . . . and enters the [default] word . . . in the text output region.” J.A. 20925 (col. 33

ll. 12–14). In addition, it is possible to “[s]elect[] the [text as typed] for output.” *Id.* (col. 18 l. 10).

Again, Xrgomics plainly supplies Robinson’s missing limitation of displaying current text in a first area. In light of the record evidence, a reasonable jury would only be able to conclude that taking Robinson and supplying that limitation from Xrgomics would result in the claimed invention. Contrary to the majority’s conclusion, there is no evidence—let alone substantial evidence—to support the jury’s finding that Robinson and Xrgomics, when combined, would not disclose every limitation of the asserted claim.

Although the majority does not address motivation to combine with respect to the ’172 patent, I also find no substantial evidence upon which a reasonable jury could decide that motivation was lacking. Samsung’s expert gave un rebutted testimony that “the person of ordinary skill in the art, seeing all of the behaviors in Robinson and understanding how they work, and then seeing how Xrgomics works, would certainly recognize this one missing element that what they type shows up where their cursor is. I believe they would combine it.” *Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv-630, Trial Tr. of Apr. 15, 2014 at 2019, ECF No. 1717. Apple offered no expert testimony to the contrary. *See id.* at Trial Tr. of Apr. 25, 2014 at 2902–06, ECF No. 1927. There is no question that Robinson and Xrgomics address the same problems that arise from typing on a relatively small keyboard. And there is nothing to indicate that the asserted combination does more than yield predictable results. Therefore, the only evidence of record demonstrates that all of the limitations of claim 18 of the ’172 patent were known in the prior art, and combining those features to solve a known problem yielded no more than a predictable result. *See*

KSR, 550 U.S. at 416 (“[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.”).

With respect to secondary considerations, Apple argues that the success of the accused Samsung devices, coupled with survey evidence that consumers are more likely to buy smartphones with “automatic word correction,” J.A. 21108, is evidence of commercial success. Apple also asserts that an internal Samsung document describing an alternative approach as “jarring,” J.A. 51488, is evidence of industry praise. However, as with the ’721 patent, Apple cites no expert or other testimony connecting the survey results to the obviousness inquiry. Furthermore, the survey evidence does not speak to whether a consumer would be more or less likely to buy a device with the specific combination of features recited in claim 18 of the ’172 patent. That is, this evidence does not show the required nexus between the patented feature and Samsung’s commercial success. As with the ’721 patent, any remaining evidence of secondary considerations here is not sufficient to “tip the scales of patentability.” *Graham*, 383 U.S. at 36.

Accordingly, the asserted claim of the ’172 patent is obvious as a matter of law.

III

As for the ’647 patent, the crux of the parties’ dispute is the proper application of our construction of the “analyzer server” limitation. We had construed this limitation in another case concerning the same patent to mean “a server routine separate from a client that receives data having structures from the client.”

Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1304 (Fed. Cir. 2014). Our previous construction of “analyzer server” is not at issue on appeal, and the parties agree that it applies in this case. Samsung does not dispute the construction, and, even if Apple had disagreed with our construction, it is bound by it. See *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 328–29 (1971). The question is whether substantial evidence supports the jury’s finding that, under our construction, the accused instrumentalities meet the requirement for a “server routine separate from a client.”

In addition to Judge Dyk’s analysis with respect to the ’647 patent in section VIII parts A and B of his dissent, I would add the following.

The majority asserts that, in light of the specification, a program that is “structurally separate,” without more, satisfies the “separate’ requirement.” Majority Op. at 10. We did not so cabin the word “separate” in our *Motorola* construction. Because no two program routines may physically occupy the same memory at the same time (i.e., any two separate program routines are, by definition, separate in storage), the majority’s interpretation effectively and erroneously reads “separate” out of our construction. Relatedly, the majority also fails to give effect to the requirement under our construction that the routine is a *server* routine, not any piece of code. That is significant because we relied in *Motorola* on the plain meaning of “server,” which entailed a client-server relationship. See *Motorola*, 757 F.3d at 1304–05.

As applied to the facts of this case, no reasonable juror could conclude that Samsung’s devices embody the “analyzer server” limitation. Apple asserted that pieces of software code stored in “shared libraries” are

the “analyzer server” that performs the “detecting” and “linking” functions.¹⁰ Notably, even Apple does not advocate for the majority’s view that our construction merely requires the shared library code to be “structurally separate.” Apple contends that the accused code is “separate” not only in its location but also in its development and design to be reused across different applications. *See* Apple Opening & Response Br. 16; Oral Argument at 29:21–30:25, 33:35–34:59, *available at* http://www.cafc.uscourts.gov/oral-argument-recordings?title=Apple&field_case_number_value=2015-1171&field_date_value2%5Bvalue%5D%5Bdate%5D.

Crucially, the record lacks substantial evidence that the shared library code of the accused instrumentalities meets our *Motorola* construction requiring a separate server routine. Regarding the “separate” requirement, there is nothing in our *Motorola* construction to indicate that the independent development of a program routine or reuse across different applications, relied on by Apple, is relevant. The only arguably relevant evidence that Apple relies on is that the accused applications use the shared library code at a separate location, which, as noted above, is not the only requirement of our construction. Because Apple has not offered sufficient evidence to meet our claim

¹⁰ According to the parties’ experts, a shared library is a collection of code that can be accessed by other applications. J.A. 13054 (Apple’s expert); J.A. 11792 (Samsung’s expert). At oral argument, Samsung analogized the difference between a server and a shared library to the difference between a client asking a reference librarian (the server) to perform a task and a client going to the library and performing a task by following instructions from a book in the library (the shared library). Oral Argument at 9:24–10:15.

construction, that alone is sufficient to find noninfringement as a matter of law.

To be sure, Samsung also affirmatively argued why the shared library code is not “separate.” Contrary to the majority’s assertion, Samsung proffered evidence that the code “does not run on its own.”¹¹ Samsung Br. 19. Indeed, Apple’s expert admitted that the shared library code is incapable of running “outside of the client application.” J.A. 13054. And, as Samsung points out, Apple did not explain why the shared library code is a “server” routine. *See* Samsung Br. 18–19, 24. There is simply no evidence that the accused instrumentalities rely on a client-server architecture.

In sum, Apple’s evidence only shows, in relevant part, that the shared library code is a piece of code located in a separate part of memory that is used by other applications. That is not sufficient under our previous construction of “analyzer server” to prove infringement of the ’647 patent as a matter of law. No reasonable jury could conclude otherwise.

CONCLUSION

For the foregoing reasons, no jury could rationally conclude that the ’721 and ’172 patents were not obvious, or that Samsung infringed the ’647 patent. Therefore, I respectfully dissent.

¹¹ The majority argues that the jury could have found Samsung’s expert testimony regarding the meaning of “analyzer server” inconsistent, citing the district court’s criticism of the expert. Majority Op. at 16–17 n.10. The court’s remarks, however, were not made in front of the jury, and Apple did not argue in its appeal briefing that the expert’s testimony was inconsistent. Therefore, there is no need to address this point. Regardless of the credibility of Samsung’s expert, Apple’s evidence under our previous construction of “analyzer server” is insufficient.

79a

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1171, 2015-1195, 2015-1994

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Cross-Appellant,

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellants.

Appeals from the United States District Court for the
Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

DYK, *Circuit Judge*, dissenting.

I

For the first time in 26 years, this court has taken an obviousness case en banc. *See In re Dillon*, 919 F.2d 688 (Fed. Cir. 1990) (en banc). Remarkably, the majority has done so without further briefing and argument from the parties, amici, or the government, as has been our almost uniform practice in this court's en

banc decisions.¹ Failure to ask for the government’s views is particularly significant given the ramifications of this issue for the U.S. Patent and Trademark Office (“PTO”). This has deprived the parties and amici of the opportunity to express their views on these important issues, and has deprived this court of the opportunity to consider these issues in light of those views.

Obviousness is the most common invalidity issue in both district court and post-grant proceedings before the PTO.² The importance of our obviousness jurisprudence to the intellectual property community is evidenced by, for example, the 38 amicus briefs filed in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), including an amicus brief by the government, and the multiple amicus briefs filed in our last obviousness en banc case. The present en banc decision will have a significant and immediate impact on the future resolution of obviousness issues. While purporting to apply established circuit law, the majority is in fact making significant changes to the law as articulated by the Supreme Court. Indeed, as Judge Reyna convincingly points out, it is difficult to understand how this case would satisfy the requirements for en banc review if the majority’s purpose were not to clarify the law.

The majority states that it takes this case en banc to correct the original panel’s reliance on extra-record

¹ Over the last 10 years, the court extended supplemental briefing or argument from parties in 36 en banc cases; in only three cases did we not do so.

² See 2-5 CHISUM ON PATENTS § 5.06 (2015) (“The nonobviousness requirement of Section 103 is the most important and most litigated of the conditions of patentability.”).

evidence. Maj. Op. at 3–5. This could hardly be the reason the majority has granted en banc review, since the panel has continually expressed willingness, and indeed desire, to eliminate references to any extra-record evidence because of concerns raised in Apple’s petition for rehearing and because they were unnecessary to the panel opinion.

While for the most part the majority does not express its shifts in obviousness principles explicitly, an examination of the majority’s opinion makes clear its substantial impact on the law of obviousness. And that impact will not be a positive one, for the principles that the majority announces are inconsistent with the Supreme Court’s decisions in *KSR*, *Graham v. John Deere Co.*, 383 U.S. 1 (1966), as well as earlier Supreme Court cases, and will make proof of obviousness far more difficult.

The majority complains that the parties themselves did not “raise big questions about how aspects of the obviousness doctrine ought to operate.” Maj. Op. at 5. But that is exactly the point. The majority makes significant changes to the law of obviousness even though these important issues are raised by the court sua sponte without the opportunity by the parties and amici to address them, or the majority adopts previous panel decisions on obviousness that the parties could address only at the en banc level.

I agree with Chief Judge Prost’s dissent, which ably points out that even under the majority’s view that the issues are factual rather than legal, there is not substantial evidence to support the result the majority reaches on the issue of obviousness. The flimsy nature of the evidence found by the majority to support the jury verdict emphasizes the dangers of inviting fact-finding to dominate the obviousness determination.

Quite apart from the question whether the jury's factfinding was supported by substantial evidence, is the fact that these asserted factfindings are largely irrelevant to the legal question of obviousness.

I write separately to point out the profound changes in the law of obviousness that the majority creates and to point out the majority's errors in its approach to claim construction of the '647 patent.

II

First, the majority turns the legal question of obviousness into a factual issue for a jury to resolve, both as to the sufficiency of the motivation to combine and the significance to be given to secondary considerations.

KSR explicitly rejected the contention that obviousness is always a matter of fact requiring jury resolution. In *KSR*, the patentee argued that the question of motivation to combine was for the jury. See Brief for Respondents, *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) (No. 04-1350), 2006 WL 2989549, at *45. The Supreme Court rejected this contention, holding that this question was properly resolved on summary judgment because “[t]he ultimate judgment of obviousness is a legal determination. Where, as here, the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors, summary judgment is appropriate.” *KSR*, 550 U.S. at 427 (internal citations omitted). Thus, while “the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art” potentially present fact issues, the *KSR* Court determined that the sufficiency of the motivation to combine was not a

factual issue, and that in the particular case “it was obvious to a person of ordinary skill to combine” the prior art. *Id.* at 424.

Here too, “the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute,” *id.* at 427, and there is no indication that the combination of the relevant prior art does more than yield a predictable result. Yet the majority holds that the question of the sufficiency of the motivation here was a jury question. This is inconsistent with *KSR*.

For secondary considerations, *Graham* and *KSR* explained that both the significance and the weighing of secondary considerations are for the court. Secondary considerations “focus attention on economic and motivational rather than technical issues and are, therefore, more susceptible of judicial treatment than are the highly technical facts often present in patent litigation.” *Graham*, 383 U.S. at 35–36. The specific holdings in *Graham* and *KSR* themselves demonstrate that both the significance and the weighing of secondary considerations are legal issues for the court. Even as an appellate court, the Supreme Court in *Graham* determined that “these [secondary] factors do not, in the circumstances of this case, tip the scales of patentability.” 383 U.S. at 36. Similarly, the *KSR* Court “conclude[d] [that] Teleflex has shown no secondary factors to dislodge the determination that claim 4 is obvious.” 550 U.S. at 426. Again, the majority’s approach—turning the significance of secondary considerations into a factual question—is contrary to *Graham* and *KSR*.

Second, the majority lowers the bar for nonobviousness by refusing to take account of the trivial nature of the two claimed inventions. With respect to the '721 patent, the slide to unlock feature was known in the prior art (Neonode) and the only innovation is an image associated with the sliding gesture from fixed starting to ending points.³ *See* Maj. Op. 25–27. With respect to the '172 patent, the autocorrect feature was known in the prior art (Robinson), and the only innovation is displaying contemporaneously the text to be autocorrected. *See* Maj. Op. 44–47. Such text displays have long been known in the prior art (though not specifically in connection with autocorrect display).

Treating such minimal advances over the prior art as nonobvious is contrary to *KSR*, where the Supreme Court confirmed that the obviousness doctrine is designed to ensure that “the results of ordinary innovation are not the subject of exclusive rights under the patent laws.” *KSR*, 550 U.S. at 427. On the face of these patents, only ordinary, indeed trivial, innovation is involved. The majority’s holding that these trivial features can render a patent nonobvious will have a significant impact on future cases.

³ Courts in other countries have uniformly found the '721 patent invalid. *See* Oral Argument 18:48–19:05 (“All the other jurisdictions of the world who have considered the '721 patent . . . have invalidated it . . . based on obviousness from these references.”); *HTC Eur. Co. v. Apple Inc.*, [2013] EWCA (Civ) 451 (Eng.); The Hague District Court, 24 Aug. 2011, *Apple v. Samsung*, Docket Nos. 396957/KG ZA 11-730 and 396959/KG ZA 11-731; Bundesgerichtshof [BGH] [Federal Court of Justice] Aug. 25, 2015, X ZR110/13 (Ger.).

Third, the majority concludes that combinations of prior art used to solve a known problem are insufficient to render an invention obvious as a matter of law. According to the majority, there must be evidence of a specific motivation to combine. *See* Maj. Op. at 28–31. Both aspects of these conclusions are contrary to *KSR*.

Under *KSR*, the existence of each patented feature in the prior art is alone not sufficient to establish obviousness. *See KSR*, 550 U.S. at 418. There must be a reason to make a combination. But *KSR* holds that the reason may be found as a matter of law in the solution to a known problem. *KSR* was quite clear that the existence of a known problem suffices: “[o]ne of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution” *KSR*, 550 U.S. at 419–20. “[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.” *Id.* at 417 (internal quotations omitted). “[T]he simple substitution of one known element for another” makes the claimed invention obvious. *Id.*

In holding that the existence of a known problem is sufficient reason to combine prior art references, the Court specifically rejected our court’s holding in *KSR* that the existence of a known problem was insufficient. *Teleflex, Inc. v. KSR Int’l Co.*, 119 F. App’x 282, 288 (Fed. Cir. 2005) (requiring that in addition to noting “the problem to be solved, . . . the district court was [also] required to make specific findings as to whether there was a suggestion or motivation to combine the teachings of [the prior art addressed to

the same problem] in the particular manner claimed”), *rev’d*, 550 U.S. 398 (2007).

KSR also held, contrary to the majority, that evidence of a specific motivation to combine is not required. The Court rejected our court’s approach in requiring a “specific understanding or principle” that creates a specific motivation to combine. *See* 550 U.S. at 414. In *KSR* itself, the combination was held obvious despite no “precise teachings” to combine the previous references. *See id.* at 418.

Earlier decisions of the Supreme Court relied on by *KSR* reflect the same approach. First, *KSR* explained that *United States v. Adams* taught that “when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *Id.* at 416 (citing 383 U.S. 39, 40 (1966)). Second, *KSR* explained that *Anderson’s–Black Rock v. Pavement Salvage Co.* taught that when “two [prior art references] in combination d[o] no more than they would in separate, sequential operation . . . , while the combination of old elements perform[s] a useful function, it add[s] nothing to the nature and quality of the . . . already patented, and the patent fail[s] under § 103.” *Id.* at 417 (internal quotation marks omitted) (citing 396 U.S. 57, 60–62 (1969)). Finally, *KSR* explained that *Sakraida v. Ag Pro, Inc.* taught that “when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.” *Id.* (internal quotation marks omitted) (citing 425 U.S. 273, 282 (1976)). The *KSR* Court held that the “principles underlying these cases are instructive

when the question is whether a patent claiming the combination of elements of prior art is obvious. . . . *Sakraida* and *Anderson's-Black Rock* are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* Thus, under *KSR*, the existence of a known problem solved by the combination can render that combination obvious as a matter of law and without further evidence of a specific motivation to combine.

Here, the inventions combine features known in the prior art. With respect to the '721 patent, Apple does not dispute, and the majority agrees, that the combination of the prior art Neonode and Plaisant references produces the claimed invention. Maj. Op. at 27. As discussed below, the same is true with respect to the '172 patent (combining the Robinson, Xrgomics, and other prior art references). There is no claim that either combination yielded unpredictable results. Both of the patents also address a known problem. With respect to the '721 patent, the problems are ease-of-use and avoidance of inadvertent activation. With respect to the '172 patent, the problem is the need to see text entries. Contrary to *KSR*, the majority now holds that a known problem is not sufficient and that there must be evidence of a specific motivation.

V

Fourth, the majority errs in cabining the relevant technology in the field of prior art. The majority invites the factfinder to dismiss prior art evidence on the theory that it concerns a different device than the patented invention, even if the references are directed to solving the same problem and pertain to a related device. For example, with respect to the '721 patent, the majority holds that the jury could dismiss the

Plaisant reference because it was directed to wall-mounted rather than portable devices. Maj. Op. at 28–29. With respect to the '172 patent, the majority makes much of the distinction between word correction versus word completion, rejecting Xrgomics as relevant prior art on that basis, and ignoring the extensive prior art showing text display as a routine feature. Maj. Op. at 47–48.

The Supreme Court in *KSR* rejected the theory that prior art addressing the same problem can be dismissed because it concerns a different device. “[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. In other words, the question is not whether the art involves precisely the same device. The question is whether it addresses the same problem within the same general field. “Under the correct analysis, any need or problem known in the field . . . and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR*, 550 U.S. at 420.

For example, in *Graham*, the patentee argued that prior art disclosing a container for other liquid sprayers was in a different field of art than the patented insecticide sprayer. The Court held that a “restricted . . . view of the applicable prior art is not justified. The problems confronting [the patentee] and the insecticide industry were not insecticide problems; they were mechanical closure problems. Closure devices in such a closely related art as pouring spouts for liquid containers are at the very least pertinent references.” 383 U.S. at 35. In fact, this

principle dates as far back as *Hotchkiss v. Greenwood*, 52 U.S. 248 (1851). In that case, the use of porcelain in a different field was held to be sufficiently related to the use of porcelain in doorknobs. *Id.* at 254.

In short, the proper inquiry is whether the prior art references address the same problem in a related area. The '172 patent involves text display for word correction. There is no question that the prior art also addresses the problem of displaying a typed text so that it can be viewed by the user; Xrgomics concerns the related art of text completion. The majority concludes that the missing element is not present in the prior art Xrgomics device because the art is in a different technology, specifically text completion as opposed to text correction. Maj. Op. at 47–48. However, Samsung presented uncontroverted evidence, quite apart from Xrgomics, that “anyone who’s used a computer since the late 1970s would be familiar with this idea” of displaying the full text of what a user is typing. J.A. 12024–25. The '172 patent itself recognizes this relatively broad field of prior art, as its specification states that the disclosed invention “relate[s] generally to text input on portable electronic devices.” '172 Patent, col. 1 ll. 15–16.

The '721 patent concerns unlocking touchscreen devices. Here, the prior art dismissed by the majority is, by the majority’s own admission, art that concerns the general field of touchscreen devices. *See* Maj. Op. at 42. Thus, there is no question that the two prior art references address the same problem in related areas. Nonetheless, the majority urges 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.” Maj. Op. at 31 (quoting the District Court’s analysis). The majority errs in two respects. First, the ’721 patent is not limited to cell phones or to the cell phone pocket-dialing problem, and indeed makes no reference to a pocket-dialing problem. The ’721 patent is directed to portable devices generally, and to ease of use and inadvertent activation with respect to all such devices. Second, the Plaisant prior art was concerned with the same problems as the ’721 patent in the field of touch screen devices. Plaisant indicated that the study’s “focus is on providing . . . systems that are easy for the home owner to use.” J.A. 20742. Plaisant also indicated that an “advantage of the sliding movement is that it is less likely to be done inadvertently.” J.A. 20743. Plaisant was thus directed to solving the same problem in the same area as the patented invention.⁴

The majority’s approach will create significant opportunities to dismiss relevant prior art and find almost any patent nonobvious by narrowly defining the relevant technology. In this respect, the en banc decision will work a significant change on future cases in the district courts and the PTO.

This change is evident from comparing the majority’s holding here to our past jurisprudence. We have previously held that “[a] reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, . . . [it] logically would have commended itself to an inventor’s attention

⁴ Even if the ’721 patent had identified the pocket-dialing problem, the Supreme Court in *KSR* made clear that the prior art need not solve all problems or even address the specific problems that motivated the patentee. 550 U.S. at 420. Here, moreover, the pocket dialing problem would provide an additional reason to combine, not a reason not to combine.

in considering his problem.” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). “We therefore have concluded, for example, that an inventor considering a hinge and latch mechanism for portable computers would naturally look to references employing other housings, hinges, latches, springs, etc., which in that case came from areas such as a desktop telephone directory, a piano lid, a kitchen cabinet, a washing machine cabinet, a wooden furniture cabinet, or a two-part housing for storing audio cassettes.” *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1380 (Fed. Cir. 2007) (internal quotation marks omitted). Even if cited prior art references “are not within the same field of endeavor . . . , such references may still be analogous if they are reasonably pertinent to the particular problem with which the inventor is involved.” *In re Paulsen*, 30 F.3d 1475, 1481 (Fed. Cir. 1994) (internal quotation marks omitted).

Not only does the majority alter our jurisprudence with respect to district court proceedings, its approach would affect patent examiners who are currently instructed that analogous prior art “does not require that the reference be from the same field of endeavor as the claimed invention.” Manual of Patent Examination Procedure § 2141.01(a).

VI

Fifth, the majority errs in elevating secondary considerations of nonobviousness beyond their role as articulated by the Supreme Court. Secondary considerations “without invention[] will not make patentability.” *Sakraida*, 425 U.S. at 278 (internal quotation marks omitted). Thus, when, as here, a patent is plainly not inventive, that is, when the prima facie case of obviousness is strong, secondary considerations carry little weight.

The majority holds that secondary considerations must “always” be considered and that even a strong case of obviousness involving small advances in the prior art can be outweighed by secondary considerations. Maj. Op. at 22. Here, the majority is quite explicit. It concludes that “[t]o the extent that Samsung’s [arguments] should be interpreted as precluding a jury finding of long-felt need favoring non-obviousness when the difference between the prior art and the claimed invention is small, we reject such a categorical rule. This type of hard and fast rule is not appropriate for the factual issues that are left to the province of the jury.” Maj. Op. at 39. In this respect, the majority effectively overrules our earlier decision in *George M. Martin Co. v. Alliance Machine Systems International LLC*, which held that “[t]he district court correctly concluded as a matter of law that the differences between the prior art and the claimed improvement were minimal,” 618 F.3d 1294, 1302 (Fed. Cir. 2010), and that “[w]here the differences between the prior art and the claimed invention are as minimal as they are here, . . . it cannot be said that any long-felt need was unsolved,” *id.* at 1304. The majority’s approach to other secondary considerations mirrors its discussion of long-felt need. But under Supreme Court authority, secondary considerations are insufficient to outweigh a strong case of obviousness involving small advances over the prior art.

KSR and *Graham* assigned a limited role to secondary considerations. *KSR* required inquiry into secondary considerations only “*where appropriate.*” 550 U.S. at 415 (emphasis added). In *Graham*, secondary considerations are referred to as factors that “*might be* utilized to give light to the circumstances.” 383 U.S. at 17 (emphasis added). For example, the *Graham* Court weighed (in evaluating the Scoggin insecticide sprayer

patent) that despite the presence of “long-felt need in the industry” and “wide commercial success” of the patentee, “these factors do not, in the circumstances of this case, tip the scales of patentability.” 383 U.S. at 35–36. This was so because in that case the invention “rest[ed] upon exceedingly small and quite non-technical mechanical differences in a device which was old in the art.” *Id.* at 36. Similarly, even though the patentee in *KSR* introduced evidence of commercial success, 550 U.S. at 413, the Court dismissed it because it “conclude[d] Teleflex has shown no secondary factors to dislodge the determination that claim 4 is obvious.” *Id.* at 426.

Before *Graham*, the Supreme Court repeatedly held that courts should give secondary considerations limited weight in the ultimate legal determination of obviousness and that the courts need not consider them where the claimed invention represents a small advance and there is a strong case for obviousness. For example, *Jungersen v. Ostby & Barton Co.* taught that “[t]he fact that this process has enjoyed considerable commercial success . . . does not render the patent valid. It is true that in cases where the question of patentable invention is a close one, such success has weight in tipping the scales of judgment toward patentability. Where, as here, however, invention is plainly lacking, commercial success cannot fill the void.” 335 U.S. 560, 567 (1949) (citations omitted). Similarly, in *Dow Chemical Co. v. Halliburton Oil Well Cementing Co.*, the Court explained that “petitioner claims that the Grebe-Sanford process has filled a long-felt want and has been a commercial success. But these considerations are relevant only in a close case where all other proof leaves the question of invention in doubt. Here the lack of invention is beyond doubt and cannot be outweighed by such factors.” 324 U.S.

320, 330 (1945) (citations omitted). *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.* cautioned that “[t]hese factors [are] entitled to weight in determining whether the improvement amounted to invention and should, in a close case, tip the scales in favor of patentability.” 321 U.S. 275, 279 (1944).⁵ These pre-*KSR* “decisions remain binding precedent until [the Supreme Court] see[s] fit to reconsider them” *Hohn v. United States*, 524 U.S. 236, 252–53 (1998).

This case also is not a close one. The combination of references, the known problem, the predictable results, and the exceedingly small differences from the prior art make the combination evident and secondary considerations insufficient as a matter of law.

VII

Finally, even if secondary considerations in this case were legally relevant, the majority fails to compare to the closest prior art to properly assess the innovation over the prior art. Secondary considerations must be directed to what is claimed to be inventive, because secondary considerations “without invention[] will not make patentability.” *Sakraida*, 425 U.S. at 278 (internal quotation marks omitted). It requires comparison

⁵ *Anderson’s–Black Rock* taught that although “[i]t is . . . fervently argued that the combination filled a long felt want and has enjoyed commercial success[,] . . . those matters without invention will not make patentability.” 396 U.S. at 61 (internal quotation marks omitted) (citations omitted). *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.* similarly taught that “[t]he Court of Appeals and the respondent both lean heavily on evidence that this device filled a long-felt want and has enjoyed commercial success. But commercial success without invention will not make patentability.” 340 U.S. 147, 153 (1950). These cases are cited with approval in *KSR* or *Graham*. See 550 U.S. at 416–17; 383 U.S. at 6.

to prior art that reflects known advances. In other words, there must be a demonstrated nexus to the claimed invention—a nexus to what is new in comparison to the prior art. Furthermore, the proponent of such evidence of secondary considerations, in this case Apple, “bears the burden of showing that a nexus exists between the claimed features of the invention and the objective evidence offered to show non-obviousness.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999).

Our court has previously adopted the closest prior art as the relevant comparison for secondary considerations. In *Bristol-Myers Squibb Co. v. Teva Pharmaceuticals USA, Inc.*, we noted that “the district court found evidence of some secondary considerations of nonobviousness To be particularly probative, evidence of [secondary considerations] must establish that there is a difference between the results obtained and those of the *closest prior art*” 752 F.3d 967, 977 (Fed. Cir. 2014) (emphasis added) (internal quotation marks omitted). In another example, in *Kao Corp. v. Unilever United States, Inc.*, we observed that while the “district court . . . concluded . . . that secondary considerations . . . were sufficient to rebut the prima facie case, . . . the district court failed to use the *closest prior art*.” 441 F.3d 963, 969 (Fed. Cir. 2006) (emphasis added). Thus, ascertaining the significance of the innovative leap over the prior art using secondary considerations requires a comparison to the closest prior art. This framework no longer governs under the majority’s approach.

The majority’s secondary considerations analysis repeatedly compares the ’721 and ’172 patents to inferior or non-existent prior art, rather than to the relevant, closest prior art. Specifically, the evidence

relied upon by the majority with respect to the secondary considerations makes no comparison, with respect to the '721 patent, to Neonode and the claimed innovation of the image associated with the slide to unlock feature, and with respect to the '172 patent, to Robinson and the claimed innovation of displaying the currently typed string of text.

For example, for commercial success, Apple and the majority rely on survey evidence developed for Apple's damages case that consumers are more likely to purchase (and pay more for) a phone with a slide to unlock feature and an autocorrect function than a phone without these features. Maj. Op. at 35–36, 48. However, this is an irrelevant comparison because Neonode provides a slide-to-unlock feature and Robinson provides an autocorrect function. There was no showing of nexus between the inventive steps (over the closest prior art) disclosed by the '721 and '172 patents and the surveyed consumer demand. For long-felt but unresolved need, the majority compares to an older Nokia device with a very different non-touchscreen, button-based unlocking feature, Maj. Op. at 40, as well as to Samsung touchscreen unlocking mechanisms that do not have the slide-to-unlock feature of Neonode, Maj. Op. at 40–41. The majority also cites Steve Job's unveiling of the slide to unlock feature at an Apple event and the audience's cheers as evidence of industry praise for the '721 patent. Maj. Op. at 34. Again, however, Apple provides no evidence that this praise was specifically for the '721 patent's innovative step beyond Neonode or even that the audience was comprised of industry experts. The majority thus errs in elevating such irrelevant comparisons as providing "particularly strong" and "powerful[]" evidence of nonobviousness. Maj. Op. at 43.

In summary, the majority decision here materially raises the bar for obviousness by disregarding Supreme Court precedent.

VIII

A

Finally, I address the '647 patent which presents issues of infringement rather than obviousness. The “analyzer server” limitation requires that the analyzer server “run” separately, and there is no substantial evidence that Samsung’s devices embody the “analyzer server” limitation because the shared library code does not run separately. That the majority substitutes its own claim construction (requiring only separate storage) for the parties’ agreed construction that the analyzer server must “run” separately is both improper and unwise.

In *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, the Supreme Court made clear the principle “that a judge, in construing a patent claim, is engaged in much the same task as the judge would be in construing other written instruments, such as . . . contracts.” 135 S. Ct. 831, 833 (2015). In the contract area, it is established that the parties’ interpretation of the contract’s terms is generally entitled to significant if not dispositive weight.⁶ The same should be

⁶ “Where the parties have attached the same meaning to a promise or agreement or a term thereof, it is interpreted in accordance with that meaning.” Restatement (Second) of Contracts §201(1) (1981). In contract interpretation, “it [is] clear that the primary search is for a common meaning of the parties, not a meaning imposed on them by the law.” *Id.* cmt. c. “[A]uthority . . . supports giving effect to a common meaning shared by both parties in preference to” a meaning imposed by the courts. 2 FARNSWORTH ON CONTRACTS (3d) § 7.9 (2004). *See also* 5 CORBIN ON CONTRACTS (Rev.) § 24.5 (1998) (When “the

true where the parties agree as to the meaning of technical terms in infringement litigation, where the outcome affects only the particular parties to the dispute. The majority here inappropriately declines to give the parties' agreed claim construction any weight, much less significant or dispositive weight.

B

In the original *Motorola* claim construction, an “analyzer server” must be a “server routine,” consistent with the “plain meaning of ‘server.’” 757 F.3d at 1304. That is, the analyzer server must run separately from the client application it serves. *Id.* Both parties agreed at oral argument to this construction. Apple’s counsel stated that “we agree actually that [the analyzer server] has to be run separately from the client.” Oral Argument at 29:29–35. Samsung’s counsel likewise agreed that the analyzer server “must run” separately from the client. *Id.* at 7:25–26. This agreed-upon construction was reiterated by the parties on their petitions for rehearing. Apple argued that Samsung’s shared library code is an analyzer server because it “runs separately from the client applications it serves.”⁷ Samsung responded that Apple

parties attach the same meaning to a contract term . . . , the contract is enforceable in accordance with that meaning.”). This principle has been applied as well by the Courts of Appeals. *See Ahmad v. Furlong*, 435 F.3d 1196, 1203 (10th Cir. 2006) (recognizing the impropriety of “a court’s resolving a contractual ambiguity contrary to the intent of both contracting parties.”); *James v. Zurich-Am. Ins. Co. of Ill.*, 203 F.3d 250, 255 (3d Cir. 2000) (“[T]he consistent practical construction given to that provision by the parties to the contract controls its terms.”).

⁷ Apple Inc.’s Corrected Combined Petition for Panel Rehearing and Rehearing En Banc 5, ECF No. 93.

had failed to show infringement of “an analyzer server that ran separately from the program it serves.”⁸

Running separately is indeed the only construction which is consistent with an “analyzer server” program that “receives data having structures from the client,” processes the data, and then returns it to the client. *Motorola*, 757 F.3d at 1304–05.⁹ The so-called “library program” present in the accused Samsung device cannot be an “analyzer server” and thus cannot satisfy the claim limitation. The parties’ experts agreed that a library program is a collection of code that can be accessed by other applications in the accused Samsung device.¹⁰ As the name implies, a client application can go to the software library and “borrow” (i.e., use) code from the library to perform a specific needed task rather than having to program that functionality into the client application. As we held in *Motorola*, in the required client-server implementation, the client sends information to an independent server which then performs a task using that information and sends information back to the client application. *See* 757

⁸ Response to Combined Petition for Panel Rehearing and Rehearing En Banc 6, ECF No. 97 (internal quotation marks omitted).

⁹ This is consistent with the district court’s finding that an analyzer server is “a server routine separate from a client that receives data having structures from the client,” and is “definitely separate from the [client] applications.” J.A. 46–47 (internal quotation omitted).

¹⁰ *See* J.A. 13054 (Apple expert testifying that software library code is “written as software that any program can go and access and execute”); J.A. 11792 (Samsung expert testifying that software libraries are “bits of code that exist so that all programmers can use them”).

F.3d at 1304–05. That is not what a library program does.

The majority explicitly rejects the parties’ agreed construction and affirms the infringement verdict on the basis of its own claim construction that an “analyzer server” requires only separate storage. Maj. Op. at 9–10, 15. Something which is “stored” separately is not “run” separately. The majority’s approach is inconsistent with our appellate function.

The majority claims that the dissent takes Apple’s concession that the analyzer server must run separately “out of context.” Maj. Op. at 12. Apple’s statement as to claim scope was no slip of the tongue. It was repeated four times at the oral argument,¹¹ and reiterated explicitly in the Apple petition for rehearing.

The majority also makes much of Apple’s insistence that there is no claim construction requirement that the analyzer server be a “standalone” program, and that the panel erred in equating running separately with a standalone program. Running separately and being standalone may indeed be different concepts (because standalone implies that no assistance is provided by other hardware or software), but that makes no difference to this case. Even if the claim construction does not require a standalone program, the analyzer server still “must run separately from the program it serves.” Panel Op., 816 F.3d 788, 796.

¹¹ Oral Arg. at 29:30–35 (“We agree that it has to be run separately from the client.”); 30:28–39 (Q: “Did [the Apple expert] say it was run separately from the client program?” A: “Yes.”); 45:09–11 (“it’s run at the analyzer server separately”); 45:27–33 (Q: “[T]he question is whether it runs separately.” A: “And Dr. Mowry [Apple expert] said it was.”).

Separate storage is not separate running. Crucially, there is no evidence in the record that shared library code runs separately, or is capable of running separately. Apple's expert only testified that the accused code uses the shared library code; he admitted that the shared library code was incapable of running separately. *See* J.A. 13054 (testifying that the shared library code could not run "outside of the client application"); *Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv-630, Trial Tr. of Apr. 28, 2014 at 3052, ECF No. 1928 (agreeing that the accused code "can't run on its own"); J.A. 13035 (testifying that the Samsung applications "go to that code and *use it* where it is each time they want to access that code" (emphasis added)); J.A. 13036 ("And all those applications go to the shared library code in the one place that exists in the computer memory hardware to *use it.*" (emphasis added)); J.A. 13037 (testifying that Samsung application software "has access to the code and it goes to the code where it is and *uses it there*" (emphasis added)). In other words, it is the client, not the analyzer server, that runs the library program. The library program is not run separately by the analyzer server as required by the claim.

C

There are important reasons why an appellate court should not reject the parties' agreed claim construction. In this case as in other patent cases, we are dealing with complex technology that is beyond the knowledge of lay judges. "[T]he judiciary . . . is most ill-fitted to discharge the technological duties cast upon it by patent legislation." *Graham*, 383 U.S. at 36. "[C]onsciousness of their limitations should make [the courts] vigilant against importing their own notions of the nature of the creative process" *Marconi*

Wireless Tel. Co. v. United States, 320 U.S. 1, 61–62 (1943) (Frankfurter, J., dissenting). Substituting the views of lay judges for the agreement of the parties, who are intimately familiar with the technology, risks getting the construction quite wrong. This is exactly what happened here. The majority got the claim construction wrong, as a result of its freelance reinterpretation of “analyzer server” which departs from the parties’ agreed-upon construction. It is difficult enough for the court to arrive at a claim construction when the parties disagree. Courts should be very wary to override the parties’ agreement as to claim construction when the parties are the experts in the technical matters.

For all these reasons, I respectfully dissent.

103a

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1171, 2015-1195, 2015-1994

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Cross-Appellant,

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellants.

Appeals from the United States District Court for the
Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

REYNA, *Circuit Judge*, dissenting.

The court should not have granted en Banc review in this case. En Banc review is disfavored and granted only when necessary to secure or maintain uniformity of the court's decisions or when the proceeding involves a question of exceptional importance. Fed. R. App. Proc. 35(a); *Missouri v. Jenkins*, 495 U.S. 33, 46 n.14 (1990). This case meets neither requirement. The en Banc decision neither resolves a disagreement among the court's decisions nor answers any exceptionally important question.

Applying Rule 35, this court has found a variety of grounds to support an en banc review. One reason we take cases en banc is to overrule precedent. *See, e.g., In re Tam*, 808 F.3d 1321, 1330, n.1 (Fed. Cir. 2015), *as corrected* (Feb. 11, 2016); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015). Another is to consider whether prior decisions remain sound in light of later Supreme Court decisions. *See, e.g., Lexmark Int’l, Inc. v. Impression Prod., Inc.*, 816 F.3d 721, 726 (Fed. Cir. 2016); *SCA Hygiene Prod. Aktiebolag v. First Quality Baby Prod., LLC*, 807 F.3d 1311, 1315 (Fed. Cir. 2015). We also take cases en banc to review whether a panel properly interpreted a statute, such as in a case of first impression. *See, e.g., Suprema, Inc. v. Int’l Trade Comm’n*, 796 F.3d 1338, 1344–45 (Fed. Cir. 2015). We have also taken cases en banc to “set forth the law” on an issue the Supreme Court has invited us to revisit. *See, e.g., Akamai Techs., Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015). The majority opinion today does not purport to do any of these.¹

Instead, the majority opinion reverses the panel based on its disagreement on extremely narrow questions—the claim construction of a single patent, whether substantial evidence exists to support certain jury factual findings, and the ultimate determination of obviousness for two patents. The majority opinion is based on a belief that the panel’s decision was wrong in its application of existing law to the facts of the case,

¹ I agree with Chief Judge Prost’s and Judge Dyk’s dissents in that the majority’s application of law to the facts of this case seems inconsistent with Supreme Court precedent on obviousness and substantial evidence.

and in its understanding of the facts of the case. Neither reason justifies en banc review.

Granting en banc review merely because the panel allegedly reached the incorrect result “reduces the ‘exceptional importance’ test” to one based on “result-oriented criteri[a].” *Bartlett ex rel. Neuman v. Bowen*, 824 F.2d 1240, 1242 (D.C. Cir. 1987) (Edwards, J., joined by Wald, C.J. and Circuit Judges R. B. Ginsburg, Mikva, and Robinson, concurring in denials of rehearing en banc). “The fact that 6 of 11 judges agree with a particular result does not invest that result with any greater legal validity than it would otherwise have.” *Id.* at 1243.

Judges on this court have explained that en banc review should be reserved for matters of exceptional importance or to maintain uniformity in our precedent. When a panel opinion “is not viewed as having changed the law,” disagreement with the panel’s decision “is not a sufficient reason for en banc review.” *Dow Chem. Co. v. Nova Chems. Corp. (Canada)*, 809 F.3d 1223, 1227–28 (Fed. Cir. 2015) (Moore, J., joined by Newman, O’Malley, and Taranto, JJ., concurring in denial of rehearing en banc). En banc intervention should be reserved for actual conflicts between precedential cases and for cases of exceptional importance. *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1311 (Fed. Cir. 2006) (Michel, C.J. and Mayer, J., concurring).²

² A survey of this issue shows that judges on every circuit have agreed that en banc review should be reserved for such circumstances. For example, “if the legal standard is correct, then the full court should not occupy itself with whether the law has been correctly applied to the facts.” *Watson v. Geren*, 587 F.3d 156, 160 (2d Cir. 2009) (per curiam). “If that were the appropriate course, then our dockets would be overloaded with *en banc* polls contesting a panel’s examination of particular sets of facts.” *Id.*

The role of an en banc court is “not simply to second-guess the panel on the facts of a particular case.” *In re Dillon*, 919 F.2d 688, 700 n.3 (Fed. Cir. 1990) (Newman, J., joined by Cowen and Mayer, JJ., dissenting). Not every error by a panel is “enbancable,” and “[a] panel is entitled to err without the full court descending upon it.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039, 1043 (Fed. Cir. 2006) (Lourie, J., concurring in denial of rehearing en banc).

Under principles of judicial economy, the Federal Rules of Appellate Procedure instruct us to limit our en banc review to cases presenting important issues meriting the court’s full resources and careful attention. Fed. R. App. P. 35.

The decision to grant *en banc* consideration is unquestionably among the most serious non-merits determinations an appellate court can make, because it may have the effect of vacating a panel opinion that is the product of a substantial expenditure of time and effort by three judges and numerous counsel. Such

Even if a panel allegedly errs, en banc review is not warranted when “the error would at most amount to one of misapplication of precedent to the facts at hand.” *United States v. Nixon*, 827 F.2d 1019, 1023 (5th Cir. 1987) (per curiam).

Disagreement with a panel decision is not a sufficient ground for an en banc rehearing. *Mitchell v. JCG Indus., Inc.*, 753 F.3d 695, 699 (7th Cir. 2014) (Posner, J., concurring in denial of rehearing en banc). “[T]here are standards for granting rehearing en banc, and for obvious reasons they do not include: ‘I disagree with the panel majority.’” *Id.* “In considering rehearing requests, the inquiry should not be, ‘would I have voted differently than the panel majority,’ but rather, ‘is the issue this case presents particularly important or in tension with precedent.’” *United States v. Foster*, 674 F.3d 391, 409 (4th Cir. 2012) (Wynn, J., dissenting from denial of rehearing en banc).

a determination should be made only in the most compelling circumstances.

Bartlett, 824 F.2d at 1242.

The issues the majority opinion addresses are not such issues, as it claims to apply existing law to the facts of the case. The majority opinion does not explore the applicability of existing law, or the first interpretation of a statute. The opinion does not claim to change the law or lead to a greater understanding of the law as its result. In sum, the majority's en banc review is simply a do over.

My concern here is that we have made exceptional something that is unexceptional. I see lurking in this matter potential for damage to our system of justice. I agree with Justice Cardozo that law should be "uniform and impartial," and that "[t]here must be nothing in its action that savors of prejudice or favor or even arbitrary whim or fitfulness." Benjamin N. Cardozo, *The Nature of the Judicial Process* 112 (1921). En banc reviews undertaken on bases that are not of exceptional importance or to maintain uniformity in the court's decisions will create jurisprudence based on arbitrary whim and fitfulness.

The majority opinion is not a response to specific legal questions, as is typically the case for an en banc review. Indeed, en banc questions were not presented to the public, new or supplemental briefing was not ordered, and additional oral argument was not held. The majority based its "substantial evidence" review on the original briefs and record before the court.

Yet, I discern certain legal issues that I believe the court could or should have explicitly addressed. I address two such issues below: substantial evidence and objective indicia of nonobviousness.

1. SUBSTANTIAL EVIDENCE

The en banc court reverses the panel’s decision because it disagrees with the panel about whether substantial evidence supports the jury’s implicit factual findings underlying its obviousness and infringement verdicts. As Chief Judge Prost’s dissent explains, the majority opinion misapplies the substantial evidence standard of review.

It is not apparent what type of substantial evidence review standard—if any—the majority opinion applies. Merely reciting all of the evidence that arguably tangentially relates to the factual findings at issue is not consistent with the Supreme Court’s case law on substantial evidence. *See, e.g., Con. Edison Co. v. Nat’l Labor Relations Bd.*, 305 U.S. 197, 229–30 (1938).

In reviewing a jury’s obviousness verdict, “we review all of the jury’s explicit and implicit factual findings for substantial evidence.” *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012). “We then examine the legal conclusion of obviousness de novo to determine whether it is correct in light of the factual findings that we find adequately supported.” *Id.* (citing *Jurgens v. McKasy*, 927 F.2d 1552, 1557 (Fed. Cir. 1991)).

The majority opinion implies that any evidence is substantial evidence, and that therefore we cannot actually examine the evidence presented to determine whether it actually supports the findings it is alleged to support. For example, the opinion cites survey evidence that consumers would rather purchase devices with a slide-to-unlock feature preventing accidental unlocking than purchase devices without a feature preventing accidental unlocking. Maj. Op. 35–36; J.A. 21066. This evidence is cited as substantial evidence

of commercial success of the '721 patent, which claims a particular slide-to-unlock feature.

But prior art devices, such as the Neocode, included similar slide-to-unlock features, so evidence of commercial success tied to the mere presence of such a feature—and not the novel aspects of it—is not substantial evidence of commercial success. “Where the offered secondary consideration actually results from something other than what is both claimed and *novel* in the claim, there is no nexus to the merits of the claimed invention.” *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (emphasis original); *see also, e.g., Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011) (“If commercial success is due to an element in the prior art, no nexus exists.”).³ Such survey evidence cannot support an implicit jury finding of any commercial success.

I believe that a district court or this court, when reviewing whether findings of fact are supported by substantial evidence, must actually review the evidence. It should determine if it is *substantial* evidence, as opposed to merely evidence. As the majority opinion does not do so today, perhaps an en banc opinion explaining this court’s role in substantial evidence review is warranted. The court en banc could provide guidance on what the substantial evidence standard means and how it is applied when we review the factual findings that underlie jury verdicts.⁴

³ Samsung argued in its briefing on appeal that Apple had not established a nexus between this evidence and the slide-to-unlock feature. Samsung Br. 37; *see also* Samsung Response & Reply Br. 21.

⁴ As the case before us demonstrates, different appellate judges can review the same evidence and disagree whether it is

2. OBVIOUSNESS ANALYSIS

I see an additional implicit dispute underlying the en banc court's reversal of the panel's obviousness determinations, one that might have served as proper grounds for en banc review in this case.

The original panel opinion could arguably be interpreted as applying a burden-shifting analysis for determining whether a patent is obvious. For example, it said "the prima facie case of obviousness was strong. Apple's evidence of secondary considerations was weak and did not support a conclusion that the '721 patent was nonobvious." *Apple*, 816 F.3d at 804. In addition, in his dissent, Judge Dyk cites Supreme Court precedent in making a forceful argument that secondary considerations of non-obviousness carry

substantial evidence in support of a jury's factual findings, and they can interpret the same patent and decide on a different claim construction. Judges can and often do disagree on results, as demonstrated by the frequent number of split panels.

Here, for example, the majority opinion finds that substantial evidence supports an implicit jury factual finding of commercial success for the '721 patent. Maj. Op. 38. As an example of such evidence, it cites Apple's expert testimony that "clearly there's been commercial success of the iPhones that use this invention." *Id.* at 35. In contrast, the panel did not even find this testimony worth mentioning in its analysis that no nexus existed between Apple's commercial success evidence and the merits of Apple's '721 patent. *Apple Inc. v. Samsung Elecs. Co.*, 816 F.3d 788, 806 (Fed. Cir. 2016). We have repeatedly stated that that conclusory testimony does not suffice as substantial evidence, *see, e.g., Whitserve, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 24 (Fed. Cir. 2012), and that evidence of commercial success is not substantial evidence unless there is a nexus between it and the merits of the claimed invention, *see, e.g., Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 837 (Fed. Cir. 2015).

little weight where strong evidence of obviousness exists.

The majority opinion states that “[a] determination of whether a patent claim is invalid as obvious under § 103 requires consideration of all four *Graham* factors, and it is error to reach a conclusion of obviousness until all those factors are considered.” Maj. Op. 22. It notes that “[o]bjective indicia of non-obviousness must be considered in every case where present.” *Id.*

We addressed this issue in *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063 (Fed. Cir. 2012). We explained that applying a burden-shifting framework in district court proceedings was inconsistent with this court’s decision in *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). 676 F.3d at 1076–80. We noted that such a burden-shifting framework only “ma[d]e sense” in the context of prosecuting patents before the U.S. Patent and Trademark Office. *Id.* at 1080 n.7.

It seems to me that the court disagrees over the role objective indicia play in the court’s analysis of the ultimate determination of obviousness. If so, we should candidly address this issue en banc.

The legal questions I see here include (1) whether an obviousness analysis involving secondary considerations (or objective indicia of non-obviousness) is a one- or two-step process and (2) how much weight to accord secondary considerations in the obviousness analysis.

These are important issues that should be addressed in the front room of the courthouse, with all stakeholders at the litigation table. Because we failed to do so in this case, I respectfully dissent.

112a

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1171, 2015-1195, 2015-1994

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Cross-Appellant,

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellants.

Appeals from the United States District Court
for the Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

Decided: February 26, 2016

WILLIAM F. LEE, Wilmer Cutler Pickering Hale
and Dorr LLP, Boston MA, argued for plaintiff-
crossappellant. Also represented by DANA OLCOTT
BURWELL, ANDREW J. DANFORD, MARK CHRISTOPHER
FLEMING, LAUREN B. FLETCHER, SARAH R. FRAZIER,
RICHARD WELLS O'NEILL; MARK D. SELWYN, Palo Alto,
CA; THOMAS GREGORY SPRANKLING, Washington, DC;

RACHEL KREVANS, Morrison & Foerster LLP, San Francisco, CA; ERIK JEFFREY OLSON, Palo Alto, CA.

KATHLEEN M. SULLIVAN, Quinn Emanuel Urquhart & Sullivan, LLP, New York, NY, argued for defendants-appellants. Also represented by WILLIAM ADAMS, DAVID MICHAEL COOPER; BRIAN COSMO CANNON, KEVIN P.B. JOHNSON, VICTORIA FISHMAN MAROULIS, Redwood Shores, CA; JOHN B. QUINN, SCOTT L. WATSON, MICHAEL THOMAS ZELLER, Los Angeles, CA.

Before PROST, *Chief Judge*, DYK, and REYNA, *Circuit Judges*.

DYK, *Circuit Judge*.

The current appeal results from a patent infringement suit and countersuit between Apple Inc. (“Apple”) and Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, “Samsung”). Apple alleged infringement of five U.S. patents that it owns: U.S. Patent Nos. 5,946,647 (the ’647 patent), 6,847,959 (the ’959 patent), 7,761,414 (the ’414 patent), 8,046,721 (the ’721 patent), and 8,074,172 (the ’172 patent). After a jury trial, the district court entered a judgment awarding Apple \$119,625,000 in damages and ongoing royalties¹ for infringement of the ’647 patent, the ’721 patent, and the ’172 patent. The jury found that Samsung had not infringed the ’959 patent and the ’414 patent. The district court entered judgment accordingly.

Samsung’s countersuit alleged infringement of two patents that it owns: U.S. Patent Nos. 5,579,239 (the ’239 patent) and 6,226,449 (the ’449 patent). The

¹ The district court determined that Apple was entitled to ongoing royalties but did not quantify the amount.

jury found Apple had infringed the '449 patent and awarded \$158,400 in damages but found that Apple had not infringed the '239 patent. The district court entered judgment in accordance with the jury verdict.

Both Apple and Samsung appeal. With regard to Apple's '647 patent, we reverse the district court's denial of Samsung's motion for judgment as a matter of law (JMOL) of non-infringement and find that Apple failed to prove, as a matter of law, that the accused Samsung products use an "analyzer server" as we have previously construed that term. We also reverse the district court's denial of JMOL of invalidity of Apple's '721 and '172 patents, finding that the asserted claims of both patents would have been obvious based on the prior art. We affirm the judgment of non-infringement of Apple's '959 and '414 patents, affirm the judgment of infringement of Samsung's '449 patent, and affirm the judgment of non-infringement of Samsung's '239 patent. In light of these holdings, we need not address the other issues on this appeal. Accordingly, we affirm-in-part and reverse-in-part.

BACKGROUND

This is our third appeal in this case. In the first appeal, we reversed the district court's order granting a preliminary injunction enjoining Samsung from selling one of its smartphones in the United States based on a patent no longer at issue in this case. *Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370 (Fed. Cir. 2012) ("*Apple I*"). In the second appeal, we vacated a district court remedial order denying Apple's request for a permanent injunction that would have enjoined Samsung from "making, using, selling, developing, advertising, or importing into the United States software or code capable of implementing the infringing features [of the '647, the '721, and the '172 patents] in its

products.” *Apple Inc. v. Samsung Elecs. Co.*, 809 F.3d 633, 638 (Fed. Cir. 2015).² The district court decision and our reversal addressed the appropriateness of injunctive relief for assumed infringement. That decision did not address or resolve the merits of the underlying case that is now before us. In this third appeal, we confront the core infringement and invalidity issues with respect to the asserted patents.

I

Apple filed suit against Samsung on February 8, 2012, asserting infringement of eight patents, including the five that are relevant for this appeal. Samsung answered, contesting infringement and alleging invalidity of the asserted patents. In addition, Samsung countersued Apple for infringement of eight patents that it owns, including the two relevant for the current appeal. Before trial, the parties reduced the number of asserted claims, with Apple maintaining infringement as to five patents and Samsung maintaining allegations of infringement of two patents.

The five Apple patents involved at trial and on appeal cover various aspects of the operation of smartphones. The '647 patent covers software to detect “structures,” such as a phone number, in text and to turn those structures into links, thus allowing a user to “click” on the structure to take an action (such as making a phone call) rather than having to copy and paste the structure into another application. The '721 patent is directed to the iPhone’s “slide to unlock” feature, where a user can slide a moving image across the screen of the phone with his finger to unlock

² On January 18, 2016, the district court entered the requested injunction, which was automatically stayed for 30 days.

the phone. The '172 patent covers “auto-correct” software on the phone that automatically corrects typing errors. The '959 patent claims “Universal Search,” where a user can, from a single search term, find results both from applications on the phone and from the Internet. Lastly, Apple’s '414 patent covers “Background Sync” software that synchronizes information on the phone with other devices while the user is using the phone.

As to Samsung’s patents, the '449 patent covers camera systems for compressing, decompressing, and organizing digital photos and videos. The '239 patent covers systems for compressing and transmitting videos.

After a 13-day trial, the jury found all asserted claims of the Apple patents not invalid and awarded Apple \$119.6 million for infringement of the asserted claims of the '647, '721, and '172 patents.³ The jury, however, found that Samsung had not infringed Apple’s '414 patent or Apple’s '959 patent. Additionally, the jury found that Apple had infringed the asserted claim of the '449 patent, awarding Samsung \$158,400 in damages, but found Samsung’s '239 patent not infringed. The district court entered judgment.

We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1). We review a district court’s order granting or denying JMOL under the standard applied by the regional circuit. In the Ninth Circuit, the review is *de novo*, and

³ The jury found the asserted claims of the '647 and the '721 patents infringed, and the district court had previously entered summary judgment of infringement of the asserted claim of the '172 patent.

the court views the evidence in the light most favorable to the jury verdict. *See Amarel v. Connell*, 102 F.3d 1494, 1521 (9th Cir. 1996).

DISCUSSION

I. The Apple '647 Patent

Apple asserted infringement of claim 9 of the '647 patent. The jury found that Samsung infringed and awarded Apple \$98,690,625. The district court denied JMOL of non-infringement.

Samsung argues that the district court erred in not granting its motion for JMOL of non-infringement. The '647 patent “discloses a system for recognizing certain structures (such as a telephone number) on a touchscreen and then linking certain actions (such as calling the telephone number) to the structure. For example, a user may be able to call or save a phone number it has received via text message or email simply by touching the number on the screen of its device.” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1304 (Fed. Cir. 2014) (“*Motorola*”). Asserted claim 9 depends on claim 1. Claim 1 reads:

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, col. 7 ll. 9–24 (emphasis added). Claim 9 adds an additional limitation, “wherein the user interface enables selection of an action by causing the output device to display a pop-up menu of the linked actions.” *Id.* at ll. 53–55.

Samsung contends that Apple failed to produce any evidence from which a reasonable jury could conclude that Samsung’s allegedly infringing phones practiced the “analyzer server” limitation.⁴

Before trial, neither party sought construction of “analyzer server,” agreeing that it should be given its ordinary meaning. However, on the last scheduled day of trial, we issued a decision in another case construing this term in the same claim at issue here. *See Motorola*, 757 F.3d at 1304. The district court adopted our construction and allowed each party to recall its expert witnesses to address whether the allegedly infringing devices met the limitation under our new

⁴ Samsung also maintains that Apple failed to provide any evidence that the accused software in the Samsung devices practiced the “linking actions to the detected structures” limitation. In light of our holding as to the “analyzer server” limitation, we need not address this issue.

construction. The district court then allowed the case to proceed to the jury.

In the *Motorola* case, we construed “analyzer server” to mean “a server routine separate from a client that receives data having structures from the client.” *Id.* We found that the “plain meaning of ‘server,’ when viewed from the perspective of a person of ordinary skill in the art, entails a client-server relationship. Consistent with this perspective, the specification discloses an analyzer server that is separate from the application it serves.” *Id.* We rejected Apple’s proposed construction—“a *program routine(s)* that receives data, uses patterns to detect structures in the data and links actions to the detected structures”—and Apple’s arguments that “the analyzer server need not be ‘separate from a client.’” *Id.* We found that the proposed construction and argument “conflict[] with the claim language by ignoring the claim term ‘server.’” *Id.* at 1305. In other words, Apple tried to “take[] the claim text and remove[] the ‘analyzer server,’ leaving the rest basically unchanged.” *Id.* Our construction required that the “analyzer server” be a piece of software that runs separately, receives data from a client application, performs the “detecting” and “linking” steps, and then returns that data to the client application. *Id.* at 1304–05.

Here, Apple accused two applications on Samsung devices of infringing claim 9: the Browser application (the web browser) and the Messenger application (used for text messaging). For these applications, Apple asserted that pieces of software code stored in shared program libraries were the “analyzer server” that performed the “detecting” and the “linking” functions. A “program library is a collection of computer programs for a particular application.” *Software Libraries*,

Encyclopedia of Computer Science 1620 (4th ed. 2000). Libraries contain collections of programs to perform specific operations common to many different applications. *Id.* As the name implies, a client program can go to the shared program library and “borrow” (i.e., use) code from the library to perform a specific needed task rather than having to program that functionality into the client program. In other words, the software library program runs as part of the client program. *See Program library (software library)*, Dictionary of Computing 391 (4th ed. 1996) (“Usually it is only necessary to reference the library program to cause it to be automatically *incorporated in* a user’s program.”) (emphasis added). In a client-server implementation, as our previous opinion recognized, *Motorola*, 757 F.3d at 1304–05, the client sends information to a separately-running independent program which then performs a task using that information and sends information back to the client program. *See Client-Server Computing*, Encyclopedia of Computer Science 215 (4th ed. 2000).

There can be no question that before the last day of trial, Apple tried its case based on the claim construction that we rejected in *Motorola*. Apple’s expert explicitly testified that the claim language covered any “piece of software that performs these functions,” J.A. 10896, and that the claim language did not require software that could be used across different applications. In other words, Apple’s expert, prior to the last day of trial, testified that the “analyzer server” need not be a separate piece of software that runs on its own.

On the last day of trial, Apple recalled the same witness to testify that the accused devices infringed even under our new claim construction. He testified that

the accused software was a separate “analyzer server” because the Samsung application (i.e., Messenger) “goes to the code where it is and uses it there, and it does that each time it accesses the code.” J.A. 13037. He also testified that these shared library programs were “definitely separate from the applications” because they were stored in a different part of memory, they received data from the Messenger and Browser applications, and they were developed independently of the Browser and Messenger applications. J.A. 13035–36.

However, this testimony is not sufficient evidence to allow a jury to conclude that the Samsung software met the “analyzer server” limitation. Our previous construction required more than just showing that accused software was stored in a different part of the memory and was developed separately. We found that the “analyzer server” limitation is a separate structural limitation and must be a “server routine,” consistent with the “plain meaning of ‘server.’” *Motorola*, 757 F.3d at 1304. That is, it must run separately from the program it serves.⁵ *See id.* At oral argument, Apple

⁵ Specifically, we found that the “analyzer server” had to involve a “client-server relationship.” *Motorola*, 757 F.3d at 1304. “Client-server computing is a distributed computing model in which client applications request services from server processes.” *Client-Server Computing*, Encyclopedia of Computer Science 215 (4th ed. 2000). The “client application is a process or program that sends messages to a server Those messages request the server to perform a specific task” *Id.* “The server process or program listens for client requests that are transmitted Servers receive those requests and perform actions such as database queries and reading files.” *Id.* In other words, a server process provides services, and the client receives those services. A client/server relationship assumes a “clean separation of functions”—both the client and the server are independently operating programs, each performing separate functions. *See, e.g.*, Stephen L. Montgomery, Object-Oriented Information

“agree[d] . . . that [the analyzer server] has to be run separately from the client.” Oral Argument at 29:28; *see generally id.* 27:16–29:40.

Multiple Samsung experts testified that the Samsung software library programs “do[] not run on [their] own. [They run] as *part of the application* that is using” them. *See, e.g.*, J.A. 11591. Another Samsung expert testified that the client program “go[es] to the library” and “integrate[s]” the library program code into the application, at which point “the library code is no different than any other code in the application.” J.A. 11792.

Apple could point to no testimony where its expert stated that the library programs run separately. When asked at oral argument to point to testimony that shows that the Samsung software runs separately, Apple continually pointed to its expert’s testimony on the last day of trial that the Samsung software “has access to the code and it goes to the code where it is and *uses* it there.” J.A. 13037 (emphasis added). This testimony, though, shows the opposite of what Apple contends. It shows that the client application borrows or *uses* the library program code, not that the library program code runs separately. This is consistent with other testimony by the same Apple expert, admitting that the Samsung programs were not “standalone program[s].” J.A. 13054. As he testified, shared library code, like the Samsung software, “needs to be *exercised*

Engineering: Analysis, Design, and Implementation 265 (1994); U.S. Patent No. 5,546,583, col. 1 ll. 24–25 (“Client/server interaction provides a clean separation of functions between processes”) (filed in 1994); *see also Parallel Networks, LLC v. Abercrombie & Fitch Co.*, 704 F.3d 958, 969 (Fed. Cir. 2013) (finding that the term “generated by the server” could not cover a situation where the function was “finalized at the client”).

by a particular application. It's not written as a standalone program, even though it is distinct and separate from the application." *Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv630, ECF No. 1928 (Trial Transcript of Apr. 28, 2014), at 3052:3–6 (emphasis added). Thus, both the Samsung and Apple expert testimony showed that the shared library code is "used" by the Messenger and Browser applications, and not run separately.⁶

Apple emphasizes conflicting testimony between the experts for each side as to whether the Samsung software is "copied" from the library before it is run. Samsung's expert testified that "[w]hen an application, like Messenger, uses [a shared library program],

⁶ Further undermining Apple's arguments that a shared library program can be a separately running server is testimony from one of the inventors of the '647 patent taken during deposition and referenced during examination of the experts. The inventor understood that a shared library program and a server were two different ways of implementing the function described in the '647 patent, testifying that a shared library implementation was a "different kind of implementation" than a client-server implementation. *Apple Inc. v. Samsung Elecs. Co.*, No. 5:12-cv630, ECF No. 1928 (Trial Transcript of Apr. 28, 2014), at 3045–46; *Id.*, ECF No. 1624 (Trial Transcript of April 7, 2014), at 897–99.

According to the referenced testimony, the inventor considered using a shared library to implement the functions described but opted for a server implementation instead. *Id.* Although inventor testimony "cannot be relied on to change the meaning of the claims," *Howmedica Osteonics Corp. v. Wright Medical Technology, Inc.*, 540 F.3d 1337, 1346 (Fed. Cir. 2008) (citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 983 (Fed. Cir. 1995) (en banc)), "[t]he testimony of an inventor, of course, may be pertinent as a form of expert testimony, for example, as to understanding the established meaning of particular terms in the relevant art," *Howmedica*, 540 F.3d at 1352 n.5 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (en banc)).

it gets [its] own copy.” J.A. 13094. Apple’s expert disagreed, stating that each application does not have its own copy of the shared library. J.A. 13036. This testimony is, indeed, conflicting and confusing.⁷ But this conflicting testimony is not relevant to whether the software on the Samsung devices runs separately or is run by the client application. Regardless of whether the code is copied, the expert testimony from both sides shows that the Samsung software library programs are not “standalone” programs that run separately.

In short, Apple provided no evidence that the accused software library programs in the Samsung phones run separately from the Browser and Messenger applications. No reasonable jury could have concluded that the accused devices had “an analyzer server for detecting structures in the data, and for linking actions to the detected structures.” We reverse the district court’s denial of JMOL of non-infringement by the Samsung devices of claim 9 of the ’647 patent.

II. The Apple ’721 and ’172 Patents

Apple asserted claim 8 of the ’721 patent and claim 18 of the ’172 patent. Before trial, the district court granted Apple summary judgment of infringement of the ’172 patent. The jury found both patents not invalid and found the asserted claim of the ’721 patent

⁷ It is unclear to what extent the experts are talking about copying the code into “Random Access Memory” (RAM) for execution, *see, e.g.*, ’647 patent, col. 3 ll. 44–46 (describing how software can be copied from disk storage to RAM prior to execution), or whether the experts are talking about making a copy from one part of disk storage to another part of disk storage. The testimony might not, in fact, be inconsistent if the experts are referring to different types of copying.

infringed, awarding \$2,990,625 for infringement of the '721 patent by three Samsung products and \$17,943,750 for infringement of the '172 patent by seven Samsung products. Additionally, the jury found that Samsung had willfully infringed the '721 patent, which Apple argued supported an award of enhanced damages. The district court denied Samsung's motions for JMOL of invalidity and non-infringement, but granted JMOL that Samsung did not willfully infringe the '721 patent. On appeal, Samsung challenges the determination as to invalidity, and Apple challenges the JMOL as to willfulness.

We first consider the questions of patent invalidity. Samsung argues on appeal that the district court erred in not granting its motion for JMOL that the '721 and '172 patents would have been obvious in light of the various prior art references.

A patent is invalid for obviousness “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103(a) (pre-America Invents Act); *see also KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). Obviousness is a question of law based on underlying findings of fact. *In re Kubin*, 561 F.3d 1351, 1355 (Fed. Cir. 2009). Secondary considerations, such as commercial success, long felt but unsolved needs, and the failure of others, must be considered. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1075 (Fed. Cir. 2012). For such evidence to be probative of nonobviousness, a patentee must demonstrate a nexus between the patented fea-

tures and the particular evidence of secondary considerations. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 305 n.42 (Fed. Cir. 1985).

A. The Apple '721 Patent

Samsung contends that the district court should have granted its motion for JMOL that the '721 patent would have been obvious. We agree.

The '721 patent is directed to the “slide to unlock” feature of the iPhone. As described in the specification, one problem with a portable device with a touchscreen is the accidental activation of features. When a user puts the portable device in a pocket, features may be activated by unintentional contact with the screen, and, for example, a phone call might be made. Thus, cell phone manufacturers had long used “well-known” procedures to prevent this, by locking the phone (i.e., not recognizing any touch inputs) until the user has “press[ed] a predefined set of buttons . . . or enter[ed] a code or password” to “unlock” the device. '721 patent, col. 1 ll. 47–50. The '721 patent claims a particular method of unlocking. The user touches one particular place on the screen where an image appears and, while continuously touching the screen, moves his finger to move the image to another part of the screen.

Asserted claim 8 depends on claim 7. Claim 7 reads:

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 the 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.

'721 patent, col. 19 l. 50–col. 20 l. 9. Claim 8 additionally requires “instructions to display visual cues to communicate a direction of movement of the unlock image required to unlock the device.” *Id.* at col. 19 ll. 10–12.

At trial, Samsung presented two prior art references, the NeoNode N1 Quickstart Guide (“Neonode”) from 2004 and a video and paper by Plaisant that were presented at a computer-human-interactivity conference in 1992. The parties treat the Plaisant video and paper as a single reference, and we do the same. Both NeoNode and Plaisant are prior art. Samsung argues that these two references together disclose every limitation of claim 8 of the '721 patent and that it would

be a trivial matter for one of skill in the art to combine the teachings of these two references. Thus, it asserts that claim 8 would have been obvious because it is simply “the combination of familiar elements according to known methods.” *KSR*, 550 U.S. at 416.

The Neonode reference describes an unlocking mechanism for a touchscreen phone where a user can, through movement of a finger continuously touching the screen of the device, unlock the phone. The reference also describes text on the device indicating how the user is to unlock the phone, specifically that the user is to “Right sweep to unlock.”

KEYLOCK - UNLOCKING THE UNIT

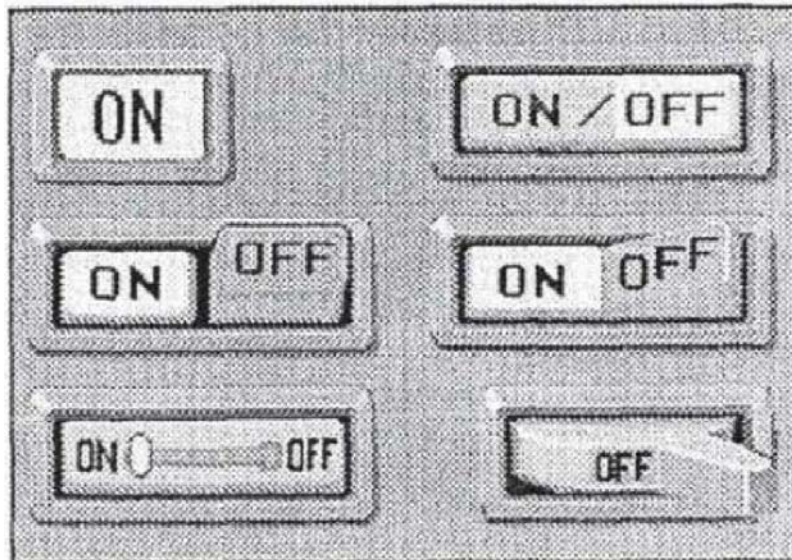


The ON/OFF switch is located on the left side of the N1, below the screen.

1. Press the power button once.
2. The text “Right sweep to unlock” appears on the screen. Sweep right to unlock your unit.

J.A. 20725. Samsung contends, and Apple does not dispute, that Neonode discloses all of the limitations of claim 8 except for limitations concerning an “unlock image” or the visual depiction of its movement. The claim requires using a “predefined location corresponding to an unlock image,” “continuous[] move[ment]” of the unlock image, and unlocking the device if the unlock image is moved from “one location to another.” In other words, Neonode discloses using a touch gesture on the screen to unlock a phone but does not have a moving image associated with the gesture.

The Plaisant paper, Samsung argues, supplies the missing element. The Plaisant paper “compares six different touchscreen-based toggle switches to be used by novice or occasional users to control two state (on/off) devices in a touchscreen environment.” J.A. 20742. In one of these toggles, the “slider toggle,” “a sliding/dragging movement is required to change the position of the yellow pointer from one side of the toggle to the other. . . . Users can [] grab the pointer and slide it to the other side.” J.A. 20743. The “lever toggle” has the same functionality with a different appearance. These six methods are pictured below, with the “slider toggle” on the bottom left and the “lever toggle” bottom right:



J.A. 20742. As demonstrated on the video of the conference presentation, the user will place his finger at one end of the slider (the first predefined location) and will continuously move his finger to the other end of the slider (the second predefined location). While the user

is moving his finger, the screen display will move the image.

On appeal, Apple does not dispute that Plaisant, when combined with Neonode, discloses all of the claimed features of the '721 patent. Rather, Apple argues that the jury could have reasonably found that (1) Plaisant teaches away from using the “slider toggle” and (2) a skilled artisan would not have had the motivation to combine Neonode and Plaisant because Plaisant describes wall-mounted devices rather than portable mobile phones.

First, Apple argues that Plaisant teaches away because the reference, in describing the results of human testing of the various slider designs, indicated that sliders were less intuitive than some other designs used. Specifically, the Plaisant paper states that “[t]he toggles that are pushed seemed to be preferred over toggles that slide. A possible explanation is that sliding is a more complex task than simply touching, but we also noticed that sliders are more difficult to implement than buttons!” J.A. 20743.

Our cases have recognized the “mere disclosure of more than one alternative” does not amount to teaching away from one of the alternatives where the reference does not “criticize, discredit, or otherwise discourage the” solution presented by the disclosure. *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1320 (Fed. Cir. 2015) (internal quotation marks omitted) (quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004)); *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 963–64 (Fed. Cir. 2014). Moreover, a motivation to use the teachings of a particular prior art reference need not be supported by a finding that that feature be the “preferred, or the most desirable.” *Fulton*, 391 F.3d at 1200. Indeed, we have found a reference to not teach

away when, for example, it described a particular composition “as somewhat inferior to some other product for the same use.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994).

The fact that the Plaisant paper here notes that users did not prefer the particular design of the slider toggles is not evidence of teaching away. The reference simply discloses that users were able to figure out the pushbutton-type toggles more intuitively than the slider toggle. Only a single sentence in the reference suggests that sliding toggles might be less preferable to push-button-type toggles because “sliding is a more complex task than simply touching” and is “more difficult to implement.” J.A. 20743. This was so primarily because of the design of Plaisant’s sliding toggle. The Plaisant paper notes that a simple alteration of the design could solve this problem, noting that “the slider pointer should be larger, and the lever or pointer should highlight when touched to signify that the user has control over it.” *Id.* The authors also discuss positive results, noting that “[e]ven if sliders were not preferred, the fact that users used them correctly is encouraging.” *Id.* The reference also lists many benefits of sliding toggles, noting that “many other controls can be designed using sliding motions. 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.” *Id.* There was no criticism of sliding toggles that would lead one of skill in the art to be “discouraged from following the path” that was taken. *Gurley*, 27 F.3d at 553. Further, the reference extolls the virtues of sliding toggles as a possible solution to particular problems in computer-human-interaction design. Under our authority, a reasonable jury could not have

found that Plaisant teaches away from using sliding toggles.

Apple also argues that the jury could have found that a skilled artisan would not have been motivated to combine Plaisant with Neonode because Plaisant is not relevant prior art. Whether a reference in the prior art is “analogous” is a fact question. *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992). A reference qualifies as analogous prior art if it is “from the same field of endeavor, regardless of the problem addressed” or “if the reference is not within the field of the inventor’s endeavor, . . . the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1237 (Fed. Cir. 2010) (quoting *Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343, 1351 (Fed. Cir. 2010)). We conclude that no reasonable jury could find that the Plaisant reference is not analogous art in the same field of endeavor as the ’721 patent. The field of endeavor is determined “by reference to explanations of the invention’s subject matter in the patent application, including the embodiments, function, and structure of the claimed invention.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *see also In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986) (finding that if a prior art reference discloses essentially the same structure and function as the invention, it is likely in the same field of endeavor).

Samsung presented expert testimony that a person of skill in the art “would be highly interested” in both Neonode and Plaisant when faced with the inadvertent activation problem because “they both deal with touch base[d] systems, they both deal with user interfaces. They both talk about changing state. . . . [A] person looking at this would just think it natural to

combine these two.” J.A. 11982. Notably, Apple did not offer any expert testimony that Plaisant was not relevant to the subject matter of the ’721 patent but instead simply asserts that “Plaisant describes a wall-mounted device to control home appliances like air-conditioning units and heaters, which a skilled artisan would not naturally turn to for solving the ‘pocket dialing’ problem.” Br. for Resp’ts 26–27.

Neither the Plaisant reference nor the ’721 patent so strictly defines the field of endeavor. As is described in the patent itself, the invention of the ’721 patent “relate[s] generally to user interfaces that employ touch-sensitive displays, and more particularly, to the unlocking of user interfaces on portable electronic devices.” ’721 patent, col. 1 ll. 18–21. The purpose of the invention is to allow “more efficient, user-friendly procedures for transitioning such devices, touch screens, and/or applications between user interface states (e.g., from a user interface state for a first application to a user interface state for a second application, between user interface states in the same application, or between locked and unlocked states).” *Id.* at col. 1 ll. 58–67. Accordingly, the patentee included as potentially relevant many prior art references relating generally to human-interface design, including the Plaisant reference.⁸ See File Wrapper for ’721 patent, Information Disclosure Statement filed May 13, 2011. The specification clearly describes the field of the

⁸ We have held that submission of an information disclosure statement to the USPTO does not constitute an admission that the reference listed is material prior art. *Abbott Labs. v. Baxter Pharm. Prods., Inc.*, 334 F.3d 1274, 1279 (Fed. Cir. 2003) (finding that of listing a prior sale in an IDS was not a disclaimer of claim scope). However, the nature of the prior art listed in an information disclosure statement can be informative as to the field of endeavor.

invention as being related to “transitioning” touch screen devices between interface states. ’721 patent, col. 1 ll. 58–64. The Plaisant paper describes exactly this same function—it describes “toggle switches^[9] to be used by novice or occasional users to control two state (on/off) devices in a touchscreen environment.” J.A. 20742 (footnote not in original). Though the authors of Plaisant describe one “practical orientation” of their work as being related to integrated control systems for entertainment, security, and climate controls, the goal of the study “was to select a usability-tested/error-free toggle and to better understand some of the problems and issues involved in the design of controls for a touchscreen environment” more broadly. *Id.*

Both the ’721 patent and the Plaisant reference also disclose essentially the same structure—a touchscreen device with software that allows the user to slide his finger across the screen to change interface states. Certainly, the problem faced by both the inventors of the ’721 patent and the authors of Plaisant was similar—how to create intuitive, easy to understand interfaces for changing states on touchscreen devices. A skilled artisan would naturally turn to references like Plaisant to find solutions. *See Bigio*, 381 F.3d at 1327 (a toothbrush was relevant prior art for a hairbrush because of the similarity in structure between the two devices); *Automatic Arc Welding Co. v. A.O. Smith Corp.*, 60 F.2d 740, 743–44, 745 (7th Cir. 1932) (an electric arc lamp was analogous art to a patent on an electric arc welder because “the problem of the electrical engineer in the other fields was so similar, and necessarily so, that one trained as an electrical

⁹ Toggle switches in Plaisant include the “sliding toggles” that are pertinent here.

engineer must be chargeable with knowledge common to those who labored in those fields”). A reasonable jury could not conclude otherwise.

Apple argues that even if Samsung established a prima facie case of obviousness, the evidence of secondary considerations demonstrates nonobviousness. Certainly secondary considerations “must be considered in evaluating the obviousness of a claimed invention.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1305 (Fed. Cir. 2010). But “weak secondary considerations generally do not overcome a strong prima facie case of obviousness.” *W. Union Co. v. MoneyGram Payment Sys., Inc.*, 626 F.3d 1361, 1373 (Fed. Cir. 2010) (citations omitted); see also *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1371 (Fed. Cir. 2011) (“A strong case of *prima facie* obviousness . . . cannot be overcome by a far weaker showing of objective indicia of nonobviousness.”); *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (finding that even “substantial evidence of commercial success, praise, and long felt need” was “inadequate” to overcome a strong prima facie showing of obviousness). This is particularly true when an invention involves nothing more than “the predictable use of prior art elements according to their established functions.” *Wyers*, 616 F.3d at 1246 (quoting *KSR*, 550 U.S. at 417); see also *Ohio Willow Wood Co. v. Alps South, LLC*, 735 F.3d 1333, 1344 (Fed. Cir. 2013) (“[W]here a claimed invention represents no more than the predictable use of prior art elements according to established functions, . . . evidence of secondary indicia are frequently deemed inadequate to establish non-obviousness.”).

Here, the prima facie case of obviousness was strong. Apple's evidence of secondary considerations was weak and did not support a conclusion that the '721 patent was nonobvious.

Apple contends that there was evidence showing (1) a long-felt but unresolved need, (2) industry praise, (3) copying, and (4) commercial success.

For long-felt but unresolved need, Apple argues that “[b]efore Apple’s invention, phone designers tried for years to solve the accidental activation problem and only came up with ‘frustrating’ methods.” Br. for Resp’ts 28. For this, it points to testimony by one of its expert witnesses describing the problem that the '721 patent was meant to solve. After describing the “pocket dial” problem (i.e., the accidental activation of features on touch screen phones), the expert described an example of how another manufacturer had solved the problem—the unlocking mechanism of a Nokia device. J.A. 10638–39. The expert testified that the Nokia device “shows *an example* that *I* have been very frustrated with” because “[w]hat was required to unlock, it was entirely unintuitive.” J.A. 10638 (emphasis added). What that device lacked, apparently, was a more intuitive unlocking mechanism.

We have held that evidence of a long-existing need in the industry for the solution to a recognized and persistent problem may lend support to a conclusion that an invention was nonobvious. *See, e.g., Ecolochem, Inc. v. S. California Edison Co.*, 227 F.3d 1361, 1376 (Fed. Cir. 2000). The idea behind this secondary consideration is that if a particular problem is identified by an industry but left unsolved, the failure to solve the problem (despite the incentive to do so) supports a conclusion of nonobviousness. *See, e.g., Natalie A. Thomas, Secondary Considerations in Nonobviousness*

Analysis: The Use of Objective Indicia Following KSR v. Teleflex, 86 N.Y.U. L. Rev. 2070, 2078 (2011). Thus, to demonstrate long felt need, the patentee must point to an “*articulated identified* problem and evidence of efforts to solve that problem” which were, before the invention, unsuccessful. *Tex. Instruments v. Int’l Trade Comm’n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993) (emphasis added). But “[w]here the differences between the prior art and the claimed invention are . . . minimal . . . it cannot be said that any long-felt need was unsolved.” *Geo. M. Martin Co. v. Alliance Mach. Sys. Int’l, LLC*, 618 F.3d 1294, 1304 (Fed. Cir. 2010).

Apple appears to identify the unsolved problem as the lack of an “intuitive” method of unlocking a touch-screen portable device. But Apple provided no evidence showing that this problem was recognized in the industry. No reasonable jury could find testimony by a single expert about his personal experience with one device as evidence of an industry-wide long-felt need. Apple’s contention here is nothing more than an unsupported assertion that Apple’s method is better and more “intuitive” than previous methods. This is not sufficient to demonstrate the existence of a long-felt but unmet need. *See Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1332–33 (Fed. Cir. 2009) (finding that patentee failed to demonstrate, as a matter of law, a long-felt but unmet need with bare assertions that the patent provided “improved efficiency”).

As evidence of industry praise, Apple presented expert testimony that the attendees at an Apple event manifested approval when Steve Jobs first presented and unlocked the iPhone. We have held that “[a]pprecia-

tion by contemporaries skilled in the field of the invention is a useful indicator of whether the invention would have been obvious to such persons at the time it was made.” *Vulcan Eng’g Co., Inc. v. Fata Aluminium, Inc.*, 278 F.3d 1366, 1373 (Fed. Cir. 2002) (citing *Stratoflex, Inc., v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)). For example, expression of disbelief by experts and then later acquiescence to the invention may be strong evidence of nonobviousness. See, e.g., *United States v. Adams*, 383 U.S. 39, 52 (1966); *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 697–98 (Fed. Cir. 1983). Similarly, industry recognition of the achievement of the invention, such as awards, may suggest nonobviousness provided that the praise is tied to the invention claimed by the patent. See *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327 (Fed. Cir. 2008). Evidence of approval by Apple fans—who may or may not have been skilled in the art—during the presentation of the iPhone is not legally sufficient.¹⁰

As to copying, Apple also argues that internal Samsung documents show that a feature of the Samsung unlock mechanism was copied from the iPhone. These documents show that Samsung engineers recommended modifying Samsung software to “clarify the unlocking standard by sliding” to make it the “[s]ame as [the] iPhone.” J.A. 51289. What was copied was not the iPhone unlock mechanism in its entirety, but only

¹⁰ Apple also relies on statements from Samsung documents that it contends demonstrates a competitor’s praise. We have sometimes recognized that, a competitor’s public statements, such as in advertising, touting the benefits of the technology claimed by a patent may be “inconsistent” with a position that the claimed invention is obvious. *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1352 (Fed. Cir. 2010). These internal Samsung documents are not such public statements.

using a fixed starting and ending point for the slide, a feature shown in the Plaisant prior art.

We have found, “[i]n some cases, evidence that a competitor has copied a product embodying a patented invention can be an indication of nonobviousness.” *W.M. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1364 (Fed. Cir. 2012). Evidence of copying of a feature in a patent owner’s commercial product is “not sufficient to demonstrate nonobviousness of the claimed invention” where, as here, there is a “substantial question of validity raised by the prior art references” cited by the accused infringer. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1366 (Fed. Cir. 2001). Thus Apple’s evidence showing that Samsung copied one aspect of the Apple unlocking mechanism is entitled to little weight on the question of obviousness.

Lastly, Apple points to the commercial success of the iPhone as evidence of nonobviousness. Apple argues that the success of the iPhone is tied to the patented feature of claim 8 of the ’721 patent. To make this connection, Apple cites to a study where users were asked to assess their willingness to purchase a product with and without the slide-to-unlock feature. But this study only asked about tablet devices with a screen size larger than seven inches, not phones. Further, evidence that customers prefer to purchase a device “with” a slide-to-unlock capacity does not show a nexus when the evidence does not show what alternative device consumers were comparing that device to. For example, it is not clear whether the alternative device had any unlocking feature. A reasonable jury could therefore not find a nexus between the patented feature and the commercial success of the iPhone.

In short, Apple’s evidence of secondary considerations is “insufficient as a matter of law to overcome our conclusion that the evidence *only* supports a legal conclusion that [the asserted claim] would have been obvious.” *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1371 (Fed. Cir. 2006). We reverse the judgment of infringement and no invalidity because the asserted claim of the ’721 patent would have been obvious in light of Neonode and Plaisant.

B. The Apple ’172 Patent

Samsung also contends that the district court erred in denying its motion for JMOL that asserted claim 18 of the ’172 patent was obvious. Again, we agree.

The ’172 patent covers the iPhone’s “autocorrect” feature. As is described in the patent specification, the small size of a physical or virtual keyboard on portable devices leads to more “typing mistakes and thus more backtracking to correct the mistakes. This makes the process of inputting text on the devices inefficient and reduces user satisfaction with such portable devices.” ’172 patent, col. 1 ll. 31–35. The ’172 patent seeks to solve this problem by providing methods of automatically correcting typographical errors as the user is typing. Apple asserted claim 18 of the ’172 patent, which reads:

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

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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.

'172 patent, col. 12 l. 49–col. 13 l. 4. In essence the claim requires that current text be displayed in a first area, that the current word as typed and suggested corrections be displayed in a second area, and that the correction be automatically entered if a certain key, such as the space bar, is pressed or if the user touches the suggested replacement. Additionally, the user can choose to use the current word (as typed) if he touches that option in the second area. Figure 4D from the '172 patent specification below demonstrates the invention:

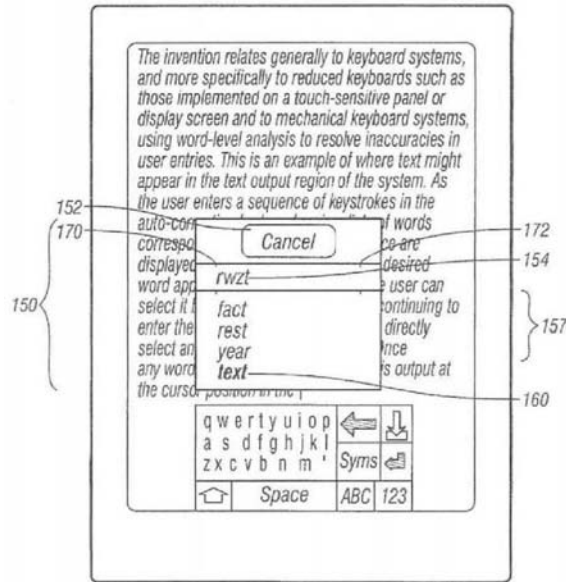


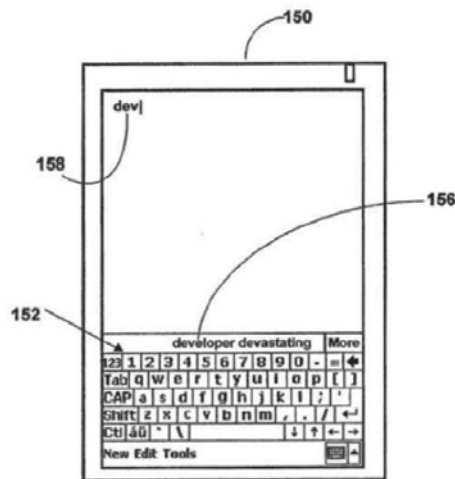
FIG. 1B

J.A. 20890.

The pop-up menu of Robinson (150) includes the word as typed (154) and suggestions, including the most commonly used suggested replacement (160), corresponding to the “second area” of claim 18 of the ’172 patent. As to the other elements, Robinson states that “[t]he space key acts to accept the default word . . . and enters the [default] word [] in the text output region at the insertion point in the text being generated where the cursor was last positioned.” J.A. 20925 col. 33 ll. 12–16. In other words, in Robinson, pressing the space bar selects the most frequently used word that is a correction of the incorrectly typed text. Robinson also discloses that when a user selects a corrected word by touching it, or when a user selects the text as typed by touching it, the selected text will be inserted. As both parties agree, Robinson thus discloses every aspect of the invention except displaying

and replacing an incorrectly typed word in a first area (in context).

Samsung argues that “displaying what a user is typing (i.e., the current character string) in the text entry area was a well-known behavior in computers.” Pet’r’s Br. 43. It points to an International Patent Application, WO 2005/008899 A1 (“Xrgomics”), which describes another text-entry system. Xrgomics discloses a “letter and word choice text input method” and describes “quick selection of choices to be implemented seamlessly for reduced keyboard systems,” like those in mobile devices. J.A. 21002. As pictured below, Xrgomics teaches displaying the current character string in a first area (158) and potential completions and/or replacements in a second area (156):



J.A. 21049. The combination of Robinson and Xrgomics results in Apple’s invention.

Apple argues that the jury could have found that a skilled artisan would not have been motivated to combine Xrgomics with Robinson because Xrgomics primarily discloses a text completion (rather than text

correction) system and that this is a different field than an autocorrect system. But, as with the '721 patent, the specification does not so narrowly draw boundaries around the field of the invention, stating that the disclosed invention “relate[s] generally to text input on portable electronic devices.” ’172 patent, col. 1 ll. 15–16. Both the ’172 patent and Xrgomics disclose text input systems on a mobile device, and do so with remarkably similar structures (displaying typed text in context and corrections/completions in a space below). Considering the “reality of the circumstances—in other words, common sense,” a skilled artisan would have considered Xrgomics to be within the scope of the art searched. *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992). Certainly text correction and text completion are closely related problems in the “same field of endeavor” such that they would be considered analogous arts. *See, e.g., Verizon Servs. Corp. v. Cox Fibernet Va., Inc.*, 602 F.3d 1325, 1338 (Fed. Cir. 2010) (finding that references relating to telephony and wireless communication were relevant to the Internet and network protocols because the “problem facing the inventors of the Network Patents was related to” the problem faced by the prior art references). There is a strong prima facie case of obviousness.

Apple also argues that a jury could have found its evidence of secondary considerations sufficient to demonstrate nonobviousness. As to the ’172 patent, Apple relies only on copying and commercial success.

For copying, Apple again points to internal Samsung documents showing that one feature of the iPhone was copied. Prior to the copying, the Samsung phones automatically corrected the typed text as the user typed. *See* J.A. 51488. On the iPhone, the correction was made only after the user “accepts or hits

space.” *Id.* This feature is exactly what was disclosed in Robinson. When the feature that is copied is present in the prior art, that copying is not relevant to prove nonobviousness. *See Amazon.com*, 239 F.3d at 1366; *Wm. Wrigley Jr. Co.*, 683 F.3d at 1363; *see also In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (“Where the offered secondary consideration actually results from something other than what is both claimed and *novel* in the claim, there is no nexus to the merits of the claimed invention.”).

For commercial success, Apple again relies on survey evidence to link the commercial success of its iPhone to the subject matter of claim 18. Here, the survey does address consumer preferences for this feature on phones. Users were asked whether they would be more or less likely to purchase a smartphone at a particular price point with or without autocorrection. The survey evidence indicates that consumers were more likely to purchase smartphones with automatic correction than without automatic correction. However, the survey evidence does not demonstrate whether a consumer would be more or less likely to buy a device with the specific combination of features reflected in claim 18 of the ’172 patent as opposed to, for example, the Robinson prior art.

To be relevant, commercial success must be linked to the “merits of the claimed invention,” *Wyers*, 616 F.3d at 1246 (alterations omitted), rather than features known in the prior art. *See also Ethicon Endo-Surgery, Inc. v. Covidien LP*, No. 2014-1771, 2016 WL 145576, at *9 (Fed. Cir. Jan. 13, 2016); *Pregis Corp. v. Kappos*, 700 F.3d 1348, 1356 (Fed. Cir. 2012); *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006). Apple’s evidence shows that phones with autocorrection may sell better than phones without

autocorrection, but it does not show that phones with the specific implementation of autocorrection embodied by claim 18 sell better than phones with other methods of autocorrection disclosed by the prior art. “A nexus must be established between the merits of the claimed invention and the evidence of commercial success before that issue becomes relevant to the issue of obviousness.” *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984). Apple presented no evidence demonstrating a nexus between the commercial success of the iPhone and the features claimed by the patent, and accordingly the claimed evidence of commercial success is entitled to no weight.

In short, we find that Samsung presented a strong case of obviousness, showing that every element of claim 18 was present in the prior art. Apple’s evidence of secondary considerations was very weak. Claim 18 of the ’172 patent would have been obvious to one of skill in the art as a matter of law. Therefore, we reverse the judgment of infringement and no invalidity.

Because we have found that the asserted claims of the ’721 and the ’172 patents would have been obvious, we need not address Apple’s argument that the jury’s finding of willful infringement of the ’721 patent should be reinstated nor Samsung’s argument that the district court erred in construing “keyboard” in the ’172 patent for purposes of determining infringement.

III. The Apple ’959 Patent

Next, we turn to Apple’s ’959 patent. The jury found the asserted claim not invalid but not infringed. After trial, both sides filed motions for JMOL, with Sam-

sung arguing invalidity (anticipation and indefiniteness) and Apple arguing infringement, both of which the district court denied. Both sides appeal.

We first address the issue of infringement. The '959 patent covers “universal search” on the iPhone. In short, the patent describes a method of providing “convenient access to items of information . . . by means of a unitary interface which is capable of accessing information in a variety of locations,” such as information stored on the phone and information stored on the Internet. '959 patent, col. 2 ll. 16–20. A user will input a search term into the search bar, and the phone will search a plurality of locations, including the address book, the calendar, and the Internet. The phone then displays results from all of these various searches in a list. Apple asserted claim 25, which depends on claim 24. Claim 24 reads:

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.

Id. at col. 9 ll. 16–26. Claim 25 adds an additional limitation, “wherein the information identifier is applied separately to each heuristic.” *Id.* at ll. 27–30.

On appeal, the only issue of contention is whether the search feature on the Samsung phones “provide[s] said information identifier to a plurality of heuristics to locate information in the plurality of locations which include the Internet and local storage media,” *id.* at col. 9 ll. 20–22, specifically whether the search function on the Samsung phones “locates” information on the Internet.

The district court found that “Samsung presented sufficient rebuttal evidence to permit the jury to decide that the accused devices lack instructions to search ‘a plurality of locations which include the Internet,’ as claim 25 requires.” J.A. 103. The district court pointed to two Samsung witnesses who testified that the Samsung search function “does not search the Internet, but rather ‘blends’ data previously retrieved from a Google server and a local database.” J.A. 103–04. In other words, these experts testified that because the search function only searched information previously pulled from the Internet, it was not searching the Internet, as required by the claim language. As the district court found, this is substantial evidence supporting the jury verdict of non-infringement.

Apple argues that the plain meaning of the claim ought to cover searching information previously downloaded from the Internet. The district court found that this argument attempts to assert “a new claim construction position after trial, when Apple did not request additional claim construction, and plain and ordinary meaning applied to the terms that Apple now raises.” J.A. 104. We agree with the district court and affirm the denial of Apple’s motion for JMOL of infringement of claim 25 of the ’959 patent. We thus also affirm the judgment of non-infringement.

Samsung conceded at oral argument in our court that we need not address its appeal as to invalidity of the '959 patent if we uphold the jury's non-infringement finding. Since we sustain the jury's verdict of non-infringement, we need not address issues of invalidity.

IV. The Apple '414 Patent

We now consider Apple's '414 patent. The jury found the asserted claim of the '414 patent not invalid and not infringed. After trial, both sides challenged the jury verdict, with Samsung moving for JMOL of invalidity and Apple moving for JMOL of infringement. The district court denied both motions. Both parties appeal.

We address first the issue of infringement. The '414 patent covers "background sync" and describes systems, methods, and computer readable media for synchronizing data between multiple devices. Specifically, the patent covers simultaneous synchronization where the "synchronization tasks and non-synchronization tasks [are] executed concurrently." '414 patent, col 2 ll. 19–21. Basically, this means that a user can continue using a program that manipulates data (say the Address Book) and the system can synchronize the data being used (i.e., the contacts in the Address Book) at the same time. The invention will "synchronize" a contact created on an iPhone to another device, such as an iPad, without any user interaction. Apple asserted claim 20, which depends on claim 11. Claim 11 reads:

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.

Id. at col. 33 ll. 37–54. Claim 20 adds the additional limitation, “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.”

Id. at col. 34, ll. 18–22.

Apple contends that the jury’s finding of non-infringement is not supported by substantial evidence, and that the district court erred in concluding otherwise. As the district court found, “[i]t is undisputed that claim 20 requires at least three distinct ‘synchronization software components 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.” J.A. 99. In other words, the claim requires three pieces of software that will synchronize three different data classes, such as contacts, calendar, and email. It is also undisputed that the accused Samsung phones contain synchronization software components that meet the other limitations of the claims for two data classes (calendar and contacts). The only issue is whether the Samsung devices contain synchronization software components “configured to synchronize” for email. The limitation in question was construed by the district court to have its plain and ordinary meaning.

The district court concluded that “substantial trial evidence permitted a reasonable jury to determine non-infringement” on the basis of Samsung expert testimony that email software was not configured to synchronize because it does not synchronize data by itself, but rather “indirectly ‘cause[s]’ synchronization by calling other software components.” J.A. 100; *see also, e.g.*, J.A. 11573. We agree with the district court that this is substantial evidence supporting the jury verdict of non-infringement.

Apple now argues that this testimony is insufficient because the plain and ordinary meaning of “configured to synchronize” includes indirect causes of synchronization, like the Samsung email software. The Samsung expert testimony, according to Apple, does not suffice as substantial evidence because it “import[s] additional limitations into the claims’ by suggesting that . . . a sync adapter be configured to perform all synchronization or to perform synchronization in a specific way.” J.A. 100. The district court rejected this argument because “Apple seeks a post-trial construction for ‘configured to synchronize’ . . . despite never requesting such a construction before.” *Id.* at

101–02. We agree and affirm the judgment of non-infringement.

Since we conclude that substantial evidence supports the jury’s finding of non-infringement, we need not address the invalidity of claim 20 of the ’414 patent.

V. The Samsung ’239 Patent

The jury, based on the district court’s claim construction, found asserted claim 15 of the ’239 patent not infringed. Samsung argues that the district court erred in construing “means for transmission” in claim 15.

Samsung’s ’239 patent pertains to “remote video transmission” and “provide[s] a method and means for capturing full-color, full-motion audio/video signals, digitizing and compressing the signals into a digitized data file, and transmitting the signals over telephone lines, cellular, radio and other telemetric frequencies.” ’239 patent, col. 2 ll. 26–31. Samsung asserted claim 15, which reads:

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.

Id. at col. 14 ll. 17–21. The district court construed “means for transmission”—a means-plus-function claim limitation—to require 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” disclosed in the specification, in addition to hardware. J.A. 150.

Samsung argues that “[t]he specification of the ’239 patent does not require any *software* for transmission, and including such software [in addition to hardware] as necessary structure was error.” Pet’r’s Br. 57 (emphasis in original). But, as the district court found, “the term ‘transmission’ implies communication from one unit to another, and the specification explains that software is necessary to enable such communication.” J.A. 144. Consistent with this, “the specification teaches that a software sequence is necessary for transmitting a signal in the context of the invention 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.” *Id.* (citing and quoting from the ’239 patent, col. 8 ll. 23–30). Hardware, alone, does nothing without software instructions telling it what to do, and the patent recognizes this, stating that the “transfer software” is what “enables” the transmission. *See* ’239 patent, col. 8 ll. 23–30. Thus, because “corresponding structure must include all structure that actually performs the recited function,” *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1119 (Fed. Cir. 2002), the district court correctly included software as part of the corresponding structure for “means for transmission.”

Samsung also argues, in the alternative, that even if software were required, the district court incorrectly required that the software initialize the communications ports, obtain a cellular connection, and obtain the captured video. But the district court was correct

in this regard as well. The specification explicitly describes the initializing and obtaining aspects of the transfer software as part of the structure that enables the remote unit to transmit a video file over a cellular frequency. *See* '239 patent, col. 8 ll. 17–30 (“Transmission of a data file is accomplished by selecting the ‘TRANSFER’ button” which “initiates” specific software sequences (sequences B and C) described in the specification as initializing the communications port, obtaining a cellular connection, and obtaining the captured video.).

We affirm the district court’s construction of “means for transmission” in claim 15 of the '239 patent and the judgment of non-infringement.

VII. The Samsung '449 Patent

Samsung asserted claim 27 of the '449 patent. The jury found that Apple had infringed and awarded \$158,400 in damages. The district court denied Apple’s post-trial motion for JMOL of non-infringement. Apple challenges the district court’s denial of its motion for JMOL that its products do not infringe the '449 patent.

Samsung’s '449 patent is directed to camera systems for compressing/decompressing and organizing digital files, such as photos and videos. Samsung asserted claim 27, which depends on claim 25. Claim 25 reads:

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

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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.

'449 patent, col. 18 ll. 7–35 (emphases added). Claim 27 additionally requires the classification be “able to change by a direction of a user.” *Id.* at ll. 40–42.

There are three limitations at issue on appeal. First, Apple contends that no reasonable jury could have found that the Apple products met the “compressor” and “decompressor” limitations of the claim because

these limitations require components that compress or decompress both still images and videos, and its products use separate and distinct components to compress and decompress still images and videos. But, as the district court found, Samsung presented testimony that “identified a single Apple design chip with the circuitry that performs both compressing methods.” J.A. 118. Even though this chip may contain separate components, a jury may still have reasonably concluded that the chip (not the individual components of that chip) performs the “compressing” and “decompressing” steps and that the chip itself meets the “compressing” and “decompressing” limitations.

Second, Apple contends that no reasonable jury could have found that the Apple products met the “search mode” limitation because the Apple products do not display a “list,” as required by the claims. The Apple products contain a “Camera Roll” which displays an array of thumbnails (small previews of the image). Samsung presented expert testimony that this “Camera Roll” was a “list” under the plain and ordinary meaning of that term in the context of the ’449 patent. As the district court found, a jury could have believed this testimony and concluded that this limitation was met.

Lastly, Apple argues that its products do not have a recording circuit that “records each one of said plurality of image signals with classification data.” ’449 patent, col. 18 ll. 32–33. Apple argues that the Camera Roll on its products includes all photos and videos taken with the device so that there is no classification of the images. But again, Samsung presented testimony that the Apple products record images with classification data. Samsung’s expert testified that, for example, the Camera Roll contains

“Albums” that are created automatically as well as albums that are created by the user. A jury could have reasonably believed this expert and found that Apple’s products contained “classification data.”

Therefore, we affirm both the district court’s denial of JMOL of non-infringement by Apple of claim 27 of the ’449 patent and the judgment of infringement.

VII. Remaining Issues

Because we have reversed the district court’s denial of JMOL of non-infringement of the ’647 patent and obviousness of the ’721 and ’172 patents, Samsung’s remaining arguments relating to ongoing royalties and the district court’s evidentiary rulings related to damages are now moot.

CONCLUSION

In conclusion, we reverse the district court’s judgment of infringement of the ’647 patent and the judgment of no invalidity with respect to obviousness of the ’721 patent and the ’172 patent. Samsung was entitled to a judgment of non-infringement of the ’647 patent and a judgment of invalidity as to the ’721 and ’172 patents. We affirm the judgment of non-infringement of Apple’s ’959 patent, Apple’s ’414 patent, and Samsung’s ’239 patent and affirm the judgment of infringement of Samsung’s ’449 patent. In light of these holdings, we find that we need not address any of the other issues on appeal.

AFFIRMED-IN-PART, REVERSED-IN-PART

COSTS

Costs to Samsung.

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APPENDIX C

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2014-1802

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Appellant

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellees

Appeal from the United States District Court for the
Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

Decided: December 16, 2015

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CHARLES DUAN, Public Knowledge, Washington, D.C., for amici curiae Public Knowledge and Electronic Frontier Foundation.

Before PROST, *Chief Judge*, MOORE, and REYNA, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* MOORE, in which *Circuit Judge* REYNA joins.

Concurring opinion filed by *Circuit Judge* REYNA.

Dissenting opinion filed by *Chief Judge* PROST.

MOORE, *Circuit Judge*.

Apple Inc. appeals from an order of the district court denying Apple’s request for a permanent injunction against Samsung Electronics Company, Ltd.; Samsung Electronics America, Inc.; and Samsung Telecommunications America, LLC (collectively, “Samsung”). We *vacate* and *remand* for further proceedings.

BACKGROUND

In 2007, Apple introduced the iPhone, revolutionizing the cell phone market. To develop the iPhone, Apple invested billions of dollars over several years—investment that came with significant risk. J.A. 10424–26, 10585–98. Indeed, Apple executives referred to the iPhone as a “you bet your company”

product because of the uncertainty associated with launching an untested product line in a new market. J.A. 10425–26, 10451–52.

To protect the inventions developed as a result of this investment, Apple applied for and received patents covering much of the innovative technology incorporated into the iPhone. Apple’s patents are numerous and include U.S. Patent Nos. 5,946,647; 8,046,721; and 8,074,172, the patents at issue in this appeal. Claim 8 of the ’721 patent claims a touchscreen device that unlocks when the user makes contact with an “unlock image” and moves that image to a second, predefined location. ’721 patent col. 19 l. 51 – col. 20 l. 12. Although seemingly straightforward, Apple considered this feature so core to the Apple iPhone user experience that it opened the first iPhone ad with imagery illustrating the operation of this “slide to unlock” feature. J.A. 10433–34, 21014. Claim 9 of the ’647 patent claims a system that detects “data structures” within text and generates links to specific actions that can be performed for each type of detected structure—for example, detecting a phone number in a text message and creating a link that would allow the user to dial the phone number or store it in an address book. ’647 patent col. 7 ll. 52–54, fig.7. And claim 18 of the ’172 patent claims a method for automatically correcting spelling errors on touchscreen devices. ’172 patent col. 12 l. 49 – col. 13 l. 4.

The iPhone was undisputedly successful. After its release, reviewers praised a number of features on the iPhone, including its multitouch screen, software, ease of use, and overall user experience. Trial Transcript Day 2 at 436–40, *Apple, Inc. v. Samsung Elecs. Co.*, No. 12-CV-00630-LHK (N.D. Cal. 2014) (No. 1622). Other companies followed. Samsung, in particular,

developed competing smartphones. Internal Samsung documents show that Samsung “paid close attention to, and tried to incorporate” some of Apple’s patented technology, which was “indicative of copying by Samsung.” *Apple, Inc. v. Samsung Elecs. Co.*, No. 12-CV-00630-LHK, 2014 WL 7496140, at *14 (N.D. Cal. Aug. 27, 2014) (“*Injunction Order*”). Today, Apple and Samsung are fierce competitors in the smartphone and tablet market. *Id.* at *8.

The instant appeal springs from a suit filed by Apple against Samsung in February 2012 alleging infringement of five patents directed to smartphone and tablet interfaces, including the ’721 patent, the ’647 patent, and the ’172 patent. The district court held on summary judgment that Samsung infringed the ’172 patent. The case proceeded to trial, and a jury found that nine Samsung products infringed one or both of Apple’s ’647 and ’721 patents. The jury awarded Apple a total of \$119,625,000 for Samsung’s infringement of the three patents.

Following the verdict, Apple filed a motion seeking a permanent injunction that would bar Samsung from, *inter alia*, making, using, selling, developing, advertising, or importing into the United States software or code capable of implementing the infringing features in its products. That is, Apple did not seek to enjoin Samsung’s infringing smartphones and tablets, but only the infringing features. Moreover, Apple’s proposed injunction included a 30-day “sunset period” that would stay enforcement of the injunction until 30 days after it was entered by the district court, during which Samsung could design around the infringing features. This “sunset period” coincided with Samsung’s representations at trial that it could

remove the infringing features from its products quickly and easily. *Injunction Order* at *20–22.

Despite the narrowness of Apple’s proposed injunction, the district court denied Apple’s motion, finding that Apple had not shown that it would suffer irreparable harm without an injunction. *Id.* at *23. Predicated entirely on this finding, the district court reasoned that Apple could not establish that monetary damages were inadequate. *Id.* at *19. Although the district court found that the public interest favored Apple’s request and that the narrowness of Apple’s proposed injunction tilted the balance of hardships in Apple’s favor, it determined that these factors did not overcome Apple’s lack of irreparable harm. *Id.* at *23. Apple appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

The Patent Act provides a patentee with the “right to exclude others from making, using, offering for sale, or selling the [patented] invention.” 35 U.S.C. § 154(a)(1). This right has its roots in the U.S. Constitution’s Intellectual Property Clause, which refers to inventors’ “exclusive Right to their respective . . . Discoveries.” U.S. Const. art. I, § 8, cl. 8. In furtherance of this right to exclude, district courts “may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.” 35 U.S.C. § 283. “[N]ot surprising[ly], given the difficulty of protecting a right to *exclude* through monetary remedies that allow an infringer to *use* an invention against the patentee’s wishes,” historically courts have “granted injunctive relief upon a finding of infringement in the vast majority of patent cases.” *eBay Inc. v. MercExchange*,

L.L.C., 547 U.S. 388, 395 (2006) (Roberts, C.J., concurring) (emphasis in original).

A party seeking a permanent injunction must demonstrate:

- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
- (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
- (4) that the public interest would not be disserved by a permanent injunction.

Id. at 391 (majority opinion). The decision to award or deny permanent injunctive relief lies within the equitable discretion of the district court; these traditional equitable principles do not permit the adoption of “certain expansive principles suggesting that injunctive relief could not issue in a broad swath of cases.” *Id.* at 391, 393. The district court’s decision is reviewable for abuse of discretion. *Id.* at 391. A court abuses its discretion when it “ma[kes] a clear error of judgment in weighing relevant factors or exercise[s] its discretion based upon an error of law or clearly erroneous factual findings.” *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1379 (Fed. Cir. 2008). We review the district court’s conclusion as to each *eBay* factor for abuse of discretion and its underlying factual findings for clear error. *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 861 (Fed. Cir. 2010).

A. Irreparable Harm

To satisfy the first *eBay* factor, the patentee must show that it is irreparably harmed by the infringement. This requires proof that a “causal nexus

relates the alleged harm to the alleged infringement.” *Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370, 1374 (Fed. Cir. 2012) (“*Apple II*”). This just means that there must be proof that the infringement causes the harm.

Apple argued to the district court that it was irreparably harmed by Samsung’s infringement due to damage to its reputation as an innovator, lost market share, and lost downstream sales. *Injunction Order* at *6, *11. The district court rejected Apple’s arguments regarding irreparable harm and found that Apple had not shown that a causal nexus connected Samsung’s infringement to these alleged injuries. *Id.* at *8–9, *11–16. On appeal, Apple argues that the district court erred in a number of ways with respect to this *eBay* factor. First, Apple argues that the court should not have required Apple to prove that a causal nexus linked Samsung’s infringement to Apple’s harms because Apple’s proposed injunction was limited to the infringing features alone, not the products as a whole. Apple also argues that the court erred when it found that Apple did not suffer irreparable harm stemming from its sales-based losses and from harm to its reputation as an innovator due to Samsung’s infringement. We address each of Apple’s arguments in turn.

1. Causal Nexus Requirement

Apple claims that “[t]he purpose and substance of the causal nexus requirement are necessarily satisfied in this circumstance because there is no risk that Apple might be ‘leveraging its patent for competitive gain beyond that which the inventive contribution and value of the patent warrant.’” Appellant’s Br. 33 (quoting *Apple, Inc. v. Samsung Elecs. Co.*, 735 F.3d 1352, 1361 (Fed. Cir. 2013) (“*Apple III*”) (alterations

omitted)). Apple argues that our discussion of causal nexus to date has been limited to cases where the patentee sought a product-based injunction. *See Apple III*, 735 F.3d at 1352; *Apple II*, 695 F.3d at 1375–76; *Apple, Inc. v. Samsung Elecs. Co.*, 678 F.3d 1314, 1324 (Fed. Cir. 2012) (“*Apple I*”). Apple asserts that there is no causal nexus requirement when the patentee is seeking, as in this case, a narrow injunction, limited to the infringing features.

Apple misunderstands the purpose of the causal nexus requirement. Although we stated in *Apple II* that the causal nexus requirement “informs whether the patentee’s allegations of irreparable harm are pertinent to the injunctive relief analysis, or whether the patentee seeks to leverage its patent for competitive gain beyond that which the inventive contribution and value of the patent warrant,” this statement was incomplete. *Apple II*, 695 F.3d at 1375. The causal nexus requirement ensures that an injunction is only entered against a defendant on account of a harm resulting from the defendant’s wrongful conduct, not some other reason. For example, it ensures that an injunction is not entered on account of “irreparable harm caused by otherwise lawful competition.” *Apple III*, 735 F.3d at 1361. Whether a patentee’s irreparable harm stems from infringement of its patents is entirely independent of the scope of the proposed injunction.

And while, in the past, we have only had occasion to require proof of causal nexus for product-based injunctions, we have also rejected Apple’s argument that narrowing the proposed injunction can eliminate the causal nexus requirement. In *Apple III*, we explained that, while narrowing a proposed injunction by delaying it so that the infringer could design around

the infringing features would make it “more likely to prevent only infringing *features* rather than the sale of entire *products*,” it did not “show that the patentee is irreparably harmed *by the infringement*.” *Id.* at 1363 (emphasis in original). The same is true here. That Apple’s proposed injunction applies only to infringing features says nothing about whether Apple is irreparably harmed by Samsung’s infringement. The purpose of the causal nexus requirement is to establish the link between the infringement and the harm, to ensure that there is “some connection” between the harm alleged and the infringing acts. *Id.* at 1364. Thus, a causal nexus linking the harm and the infringing acts must be established regardless of whether the injunction is sought for an entire product or is narrowly limited to particular features.

To be sure, the scope of an injunction plays a role in determining whether that injunction is awarded. For example, it is crucial when considering the final two factors of the *eBay* test. Here, the district court did not err by requiring Apple to satisfy the causal nexus requirement to show irreparable harm.

2. Sales-Based Harm

Apple argues that the district court erred in finding that Apple did not suffer irreparable harm due to lost market share and lost downstream sales stemming from Samsung’s infringement. The district court noted that it was undisputed that Apple lost market share and downstream sales to Samsung. *Injunction Order* at *11. It was also undisputed that “Apple and Samsung compete directly in the market for smartphones and tablets” and that “this competition affects [Apple’s] downstream sales because of so-called ‘ecosystem’ effects, where one company’s

customers will continue to buy that company's products and recommend them to others." *Id.* Moreover, the court wrote that the record established that "the competition between Apple and Samsung was 'fierce'" and that "Apple was Samsung's 'largest smartphone competitor' in the U.S. market." *Id.* Because "[w]here two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions," *id.* (quoting *Douglas Dynamics, LLC v. Buyers Prods. Co.*, 717 F.3d 1336, 1345 (Fed. Cir. 2013)), the court found that "[t]he presence of direct competition between Apple and Samsung in the smartphone market weighs in favor of finding irreparable harm," *id.*

Despite these findings, the district court found that Apple failed to demonstrate irreparable harm due to lost sales because it failed to show a causal nexus between the infringement and the lost sales. That is, according to the district court, Apple did not show that the infringing features "drive consumer demand for Samsung's infringing products." *Id.* at *13. Here, the district court erred.

When a patentee alleges it suffered irreparable harm stemming from lost sales solely due to a competitor's infringement, a finding that the competitor's infringing features drive consumer demand for its products satisfies the causal nexus inquiry. In that case, the entirety of the patentee's alleged harm weighs in favor of injunctive relief. Such a showing may, however, be nearly impossible from an evidentiary standpoint when the accused devices have thousands of features, and thus thousands of other potential causes that must be ruled out. Nor does the

causal nexus requirement demand such a showing. Instead, it is a flexible analysis, as befits the discretionary nature of the four-factor test for injunctive relief. We have explained that proving a causal nexus requires the patentee to show “some connection” between the patented features and the demand for the infringing products. *Apple III*, 735 F.3d at 1364.¹ Thus, in a case involving phones with hundreds of thousands of available features, it was legal error for the district court to effectively require Apple to prove that the infringement was the sole cause of the lost downstream sales. The district court should have determined whether the record established that a smartphone feature impacts customers’ purchasing decisions. *Apple III*, 735 F.3d at 1364. Though the fact that the infringing features are not the only cause of the lost sales may well lessen the weight of any alleged irreparable harm, it does not eliminate it entirely. To

¹ As we explained in *Apple III*, “some connection” between the patented feature and consumer demand for the products may be shown in “a variety of ways,” including, for example, “evidence that a patented feature is one of several features that cause consumers to make their purchasing decisions,” “evidence that the inclusion of a patented feature makes a product significantly more desirable,” and “evidence that the absence of a patented feature would make a product significantly less desirable.” *Id.* These examples do not delineate or set a floor on the strength of the connection that must be shown to establish a causal nexus; rather, they are examples of connections that surpass the minimal connection necessary to establish a causal nexus. *Apple III* included a fourth example to demonstrate a connection that does not establish a causal nexus—where consumers are only willing “to pay a nominal amount for an infringing feature.” *Id.* at 1368 (using example of \$10 cup holder in \$20,000 car). There is a lot of ground between the examples that satisfy the causal nexus requirement and the example that does not satisfy this requirement. The required minimum showing lies somewhere in the middle, as reflected by the “some connection” language.

say otherwise would import a categorical rule into this analysis.

The right to exclude competitors from using one's property rights is important. And the right to maintain exclusivity—a hallmark and crucial guarantee of patent rights deriving from the Constitution itself—is likewise important. “Exclusivity is closely related to the fundamental nature of patents as property rights.” *Douglas Dynamics*, 717 F.3d at 1345. And the need to protect this exclusivity would certainly be at its highest when the infringer is one's fiercest competitor. Essentially barring entire industries of patentees—like Apple and other innovators of many-featured products—from taking advantage of these fundamental rights is in direct contravention of the Supreme Court's approach in *eBay*. 547 U.S. at 393 (“[E]xpansive principles suggesting that injunctive relief could not issue in a broad swath of cases . . . cannot be squared with the principles of equity adopted by Congress.”).

The district court thus erred when it required Apple to prove that the infringing features were the exclusive or predominant reason why consumers bought Samsung's products to find irreparable harm. *See Apple III*, 735 F.3d at 1364 (explaining that “[c]onsumer preferences are too complex—and the principles of equity are too flexible” for a patentee to have to show that patented features are the “one and only reason for consumer demand”). Instead, the district court should have considered whether there is “some connection” between the patented features and the demand for Samsung's products. *Id.* That is, the district court should have required Apple to show that the patented features impact consumers' decisions to purchase the accused devices. *Id.* (explaining that

causal nexus can be shown with evidence that “a patented feature is one of several features that cause consumers to make their purchasing decisions”).

The record here establishes that these features do influence consumers’ perceptions of and desire for these products. The district court wrote that there was evidence that Samsung valued the infringing features, including evidence that Samsung “paid close attention to, and tried to incorporate, certain iPhone features,” which was “indicative of copying.” *Injunction Order* at *14. This included evidence that Samsung had copied the “slide to unlock” feature claimed in the ’721 patent, such as “internal Samsung documents showing that Samsung tried to create unlocking designs based on the iPhone,” *id.* (citing PX119 (J.A. 20197), PX121 (J.A. 20274, 20347)); testimony from a Samsung engineer about “the value of designs for unlocking,” *id.* (citing Tr. at 1729:3–11 (J.A. 11735:3–11)); and “Samsung e-mails noting that certain carriers disapproved of the noninfringing ‘circle lock’ alternative,” *id.* (citing PX181 at 5 (J.A. 21019)). The district court also noted that the jury found that Samsung willfully infringed the ’721 patent. *Id.* For the ’647 patent, evidence of copying included “an internal Samsung report that shows iPhone screens and notes the ‘[n]eed to improve usability by providing Links for memo contents,’” *id.* (citing PX146 at 37 (J.A. 20584)), and “an internal Samsung document that copied a figure from the publication of one of the ’647 patent’s inventors,” *id.* (citing PX107 at 52 (J.A. 20063)); *see also* J.A. 20003 (inventor’s publication). And for the ’172 patent, Apple presented evidence that users criticized Samsung’s noninfringing keyboards and word-correction designs. *Injunction Order* at *14 (citing PX168 at 4 (J.A. 20985), PX169 at 4 (J.A. 21006), PX219 at 104 (J.A.

21318)); *see also* J.A. 10700–02 (explaining that a Samsung carrier found Samsung’s noninfringing word-correction method “jarring,” which Samsung resolved by going to the word-correction method described in the ’172 patent). Finally, the district court held that Apple had shown that it too found the “slide to unlock” feature claimed in the ’721 patent valuable to consumers. *Injunction Order* at *15 (citing Tr. at 432:20–433:18 (J.A. 10433:20–10434:18); Tr. at 600:23–601:15 (J.A. 10602:23–10603:15)); *see also* J.A. 21014 (Apple’s first iPhone ad, which opened with imagery of the “slide to unlock” feature). The district court rejected this evidence as insufficient to establish the requisite causal nexus. *Injunction Order* at *13–15 (citing *Apple I*, 678 F.3d at 1327–28; *Apple III*, 735 F.3d at 1367). In doing so, the district court relied on our previous statements that copying is not sufficient to show causal nexus:

While the evidence that Samsung’s employees believed it to be important to incorporate the patented feature into Samsung’s products is certainly relevant to the issue of nexus between the patent and market harm, it is not dispositive. That is because the relevant inquiry focuses on the objective reasons as to why the patentee lost sales, not on the infringer’s subjective beliefs as to why it gained them (or would be likely to gain them).

Apple I, 678 F.3d at 1327–28.

The district court was correct that evidence of copying does not, by itself, establish a causal nexus. But that does not make the evidence wholly irrelevant. Here, too, we must avoid categorical rules. Where the precise question is about consumer preferences and buying choices, the strength and weight to be given to

such evidence is to be determined on a case-by-case basis based on what the evidence indicates. Sometimes this evidence will have little or no probative value, for example, if the record contains evidence that the infringer's belief may be at odds with consumer preferences. But here, Apple's evidence of copying established a further link between Apple's and Samsung's subjective beliefs and consumers' perceptions, thereby strengthening a causal nexus and irreparable harm to Apple. The dissent criticizes Apple's evidence of copying as "lack[ing] any connection to the critical details that define the patented features." Dissent 11. The district court made no such findings. *Injunction Order* at *14. The district court acknowledged that Apple presented evidence that carriers ('721 patent) and users ('172 patent), not just Samsung, preferred and valued the infringing features and wanted them in Samsung phones. *Id.* It also acknowledged that Apple presented evidence that carriers or users disapproved of Samsung's alternative to the infringing features. The court failed to appreciate, however, that this evidence did not just demonstrate that Samsung valued the patented features, but also that its carriers or users valued the features. The district court further correctly concluded that the '721 patent's features are valuable to Apple's consumers. *Id.* at *15. It was legal error for the district court to reject such strong evidence in this case because Apple presented evidence showing that Samsung's subjective beliefs are indicative of consumers' perceptions of the infringing features. Given the strength of the evidence of copying and Samsung's professed belief in the importance of the patented features as a driver of sales, and the evidence that carriers or users also valued and preferred phones with these features, the district court erred by

disregarding this evidence, which further establishes a causal nexus and Apple's irreparable harm.

Furthermore, this record contained Dr. John Hauser's conjoint study, which established that consumers would not have purchased a Samsung phone if it lacked the patented features, that they valued these features, and that they were willing to pay considerably more for a phone that contained these features. *Injunction Order* at *12; see also J.A. 20491–98 (survey results showing that many respondents would not purchase a Samsung phone without the infringing features); J.A. 20539 (results showing that respondents were willing to pay more for devices that included the infringing features). Based on the results, Dr. Hauser concluded that “[t]he features that were enabled by the patents at issue in this case have a measurable impact on consumer demand for Samsung telephones, smartphones, and tablets.” J.A. 11130. The district court appeared to disregard the Hauser study, writing that “[t]he weight of the evidence shows that [the Hauser study] fails to demonstrate that the features claimed in the ’647, ’721, and ’172 patents drive consumer demand for Samsung’s infringing products.” *Injunction Order* at *13. The district court’s decision seems to be predicated on an incorrect understanding of the nature of the causal nexus requirement, as discussed above.

In short, the record establishes that the features claimed in the ’721, ’647, and ’172 patents were important to product sales and that customers sought these features in the phones they purchased. While this evidence of irreparable harm is not as strong as proof that customers buy the infringing products only because of these particular features, it is still evidence

of causal nexus for lost sales and thus irreparable harm. Apple loses sales because Samsung products contain Apple's patented features. The district court therefore erred as a matter of law when it required Apple to show that the infringing features were the reason why consumers purchased the accused products. Apple does not need to establish that these features are *the* reason customers bought Samsung phones instead of Apple phones—it is enough that Apple has shown that these features were related to infringement and were important to customers when they were examining their phone choices. On this record, applying the correct legal standard for irreparable harm, Apple has established irreparable harm. The strength of its evidence of irreparable harm goes to this factor's weight when assessing the propriety of the injunction. Apple established that customers wanted, preferred, and would pay extra for these features. Apple established that Samsung believed these features were important and copied them. The evidence establishes that Samsung's carriers and users wanted these features on phones. The evidence establishes that Apple believed these features were important to customer demand. The evidence establishes that Samsung was Apple's biggest rival, its fiercest competitor. It was clear error in the face of this evidence for the district court to conclude that Apple failed to establish "some connection" between the patented features and demand for the infringing products. Apple did not establish that these features were the exclusive driver of customer demand, which certainly would have weighed more heavily in its favor. Apple did, however, show that "a patented feature is one of several features that cause consumers to make their purchasing decisions." *Apple III*, 735 F.3d at 1364. We conclude

that this factor weighs in favor of granting Apple’s injunction.

B. Inadequate Remedy at Law

The second *eBay* factor is whether “remedies available at law, such as monetary damages, are inadequate to compensate” for the irreparable harm suffered by the patentee. 547 U.S. at 391.

The district court found that Apple’s sales-based losses were difficult to quantify. *Injunction Order* at *18. In support, the district court cited testimony by Mr. Phil Schiller, an Apple marketing executive; testimony by Apple’s damages expert; and its own past findings on the subject in the context of the Apple-Samsung litigation. *Id.* at *17. We agree with the district court’s analysis. Sales lost by Apple to Samsung are difficult to quantify due to the “ecosystem effect”—that is, the effect the sale of a single product can have on downstream sales of accessories, computers, software applications, and future smartphones and tablets. *Id.*; *see also* J.A. 10449–50. In addition to the downstream sales to the individual customer, Mr. Schiller testified that individual customers have a “network effect,” by which they advertise Apple’s product to their friends, family, and colleagues. J.A. 10449–50. Thus, the loss by Apple of a single smartphone or tablet customer may have a far-reaching impact on Apple’s future revenues. Because of its variable and uncertain nature, this loss is very difficult to calculate.

Despite its finding that Apple’s sales-based losses were difficult to quantify, the district court nonetheless found that this factor weighed against injunctive relief based on its determination that Apple had failed to establish any irreparable harm. *Injunction Order* at

*19. Apple argues that if we reverse the court on that point, this factor will also tip in its favor. We agree. Because we find the district court’s finding that Apple did not suffer any irreparable harm stemming from its losses of sales was predicated on a legal error, it also erred when it found that this factor weighs against an injunction. This factor strongly weighs in favor of Apple because, as the district court found, the extent of Apple’s downstream and network effect losses are very difficult to quantify.

C. Balance of Hardships

To satisfy the third *eBay* factor, the patentee must show that the balance of hardships weighs in its favor. 547 U.S. at 391. This factor “assesses the relative effect of granting or denying an injunction on the parties.” *i4i*, 598 F.3d at 862. Because “Apple’s proposed injunction targets only specific features, not entire products” and contains a 30-day “sunset provision,” *Injunction Order* at *20–21, and because “Samsung repeatedly told the jury that designing around the asserted claims of the three patents at issue would be easy and fast,” *id.* at *22, the district court found that Samsung would “not face any hardship” from Apple’s proposed injunction, *id.* at *19. The court, reasoning that “requiring a patentee to ‘compete against its own patented invention . . . places a substantial hardship’ on the patentee,” found that Apple would suffer hardship without an injunction. *Id.* at *22 (quoting *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1156 (Fed. Cir. 2011)). The court therefore found that this factor weighed in Apple’s favor. We agree. This factor strongly favors granting Apple the relief requested.

Samsung argues that the district court erred in finding the balance of hardships favors the entry of an

injunction. It argues that Apple will not suffer any hardship in the absence of an injunction because the patented features are minor components in a complex device. Samsung argues that it and its carriers, retailers, and customers would suffer substantial hardship if an injunction issued, particularly because the proposed injunction would extend to unadjudicated products with software that is “capable of implementing” the infringing features or other features “not colorably different.” Appellees’ Br. 55 & n.14 (quoting J.A. 2698).

The district court did not abuse its discretion in finding the balance of hardships favors an injunction; to the contrary, this factor strongly weighs in favor of an injunction. Samsung’s infringement harmed Apple by causing lost market share and lost downstream sales and by forcing Apple to compete against its own patented invention, which “places a substantial hardship” on a patentee, especially here where it is undisputed that it is essentially a two-horse race. *Bosch*, 659 F.3d at 1156. Furthermore, as the district court found, Apple’s proposed injunction was narrowly tailored to cause no harm to Samsung other than to deprive it of the ability to continue to use Apple’s patented features. *Injunction Order* at *21–22. The court has overseen the Apple-Samsung litigation from the beginning and has worked extensively with parties and their counsel. Given the court’s familiarity with the infringing products, the parties, and their history of litigation, it is best-positioned to determine the impact of the scope of the injunction on the parties. Furthermore, the district court presided over a trial in which Samsung’s witnesses and counsel assured the jury that design-arounds to the infringing features would be “simple or already exist.” *Id.* at *20. And Samsung asserted at oral argument that none of the

products it currently sells practice the '721 patent or the '172 patent, and that only a single product practices the '647 patent. Oral Argument at 31:10–31:48, *available at* <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2014-1802.mp3>. As we wrote in *Douglas Dynamics*, when the infringer “ha[s] a non-infringing alternative which it could easily deliver to the market, then the balance of hardships would suggest that [it] should halt infringement and pursue a lawful course of market conduct.” 717 F.3d at 1345. On this record, it is clear—Samsung will suffer relatively little harm from Apple’s injunction, while Apple is deprived of its exclusivity and forced to compete against its own innovation usurped by its largest and fiercest competitor. Given the narrow feature-based nature of the injunction, this factor strongly weighs in favor of granting Apple this injunction.

D. Public Interest

The fourth *eBay* factor requires the patentee to show that “the public interest would not be disserved by a permanent injunction.” 547 U.S. at 391. The district court found that the public interest “favor[s] the enforcement of patent rights to promote the encouragement of investment-based risk,” particularly where, as here, the patentee’s proposed injunction is narrow in scope and includes a sunset provision limiting the impact of the injunction on consumers. *Injunction Order* at *22–23 (quotation marks omitted). The court also noted that “an injunction may prompt introduction of new alternatives to the patented features.” *Id.* at *23. It therefore concluded that the public interest factor favors Apple.

Samsung argues that the district court erred in finding the public interest weighs in favor of an

injunction. Samsung also argues that the proposed injunction, while styled as narrow, is actually quite broad and would lead to the removal of products from store shelves, which it argues would harm the public interest. Samsung also argues that the public has a strong interest in competition and the resulting variety of product choices, and that the cost of administering this injunction would be great.

The district court did not abuse its discretion in finding that the public interest favors an injunction. Indeed, the public interest *strongly* favors an injunction. Samsung is correct—the public often benefits from healthy competition. However, the public generally does not benefit when that competition comes at the expense of a patentee’s investment-backed property right. To conclude otherwise would suggest that this factor weighs against an injunction in every case, when the opposite is generally true. We base this conclusion not only on the Patent Act’s statutory right to exclude, which derives from the Constitution, but also on the importance of the patent system in encouraging innovation. Injunctions are vital to this system. As a result, the public interest nearly always weighs in favor of protecting property rights in the absence of countervailing factors, especially when the patentee practices his inventions. “[T]he encouragement of investment-based risk is the fundamental purpose of the patent grant, and is based directly on the right to exclude.” *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1383 (Fed. Cir. 2006) (quotation marks omitted).

This is not a case where the public would be deprived of Samsung’s products. Apple does not seek to enjoin the sale of lifesaving drugs, but to prevent Samsung from profiting from the unauthorized use of

infringing features in its cellphones and tablets. Again, Apple seeks only a narrow feature-based injunction commensurate in scope with its monopoly rights. And the evidence of record is that Samsung can effect the removal of the patented features without recalling any products or disrupting customer use of its products. Apple has not attempted to expand the scope of its monopoly. Given the important public interest in protecting patent rights, the nature of the technology at issue, and the limited nature of the injunction, this factor strongly favors an injunction.

CONCLUSION

The district court erred when it found the first two *eBay* factors weighed against an injunction. Although the evidence may not make a strong case of irreparable harm, Apple has satisfied the causal nexus requirement and therefore established irreparable harm.² Apple has also established that the harm it will suffer is not easily compensable at law. Moreover, as the district court found, the balance of hardships and public interest weigh strongly in favor of an injunction. Given this, the district court abused its discretion when it did not enjoin Samsung's infringement. If an injunction were not to issue in this case, such a decision would virtually foreclose the possibility of injunctive relief in any multifaceted, multifunction technology. We vacate the district court's order

² Because we hold that the district court erred when it found that Apple did not suffer irreparable harm stemming from its sales-based losses, *see supra* at 9–17, and that on this record and consistent with the other holdings of the district court, this harm is sufficient to justify an injunction, *see infra* at 22, we do not reach the issue of whether Apple also suffered irreparable reputational harm

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denying Apple's proposed injunction and remand for further proceedings consistent with this opinion.

VACATED AND REMANDED

COSTS

Each party shall bear its own costs.

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UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2014-1802

APPLE INC., A CALIFORNIA CORPORATION,

Plaintiff-Appellant

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,

Defendants-Appellees

Appeal from the United States District Court for
the Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

REYNA, *Circuit Judge*, concurring.

The Constitution bestows on Congress the power to secure inventors' "exclusive Right[s]" to their inventions. U.S. Const. Art. I, § 8. The utility of this power would, according to James Madison, "scarcely be questioned" as the rights to inventions "belong to the inventors." The Federalist No. 43, p. 214 (L. Goldman ed. 2008) (J. Madison). In the years since Congress first exercised this power and enacted the first Patent Act in 1790, courts have varied in how they have protected the right to exclude, first preferring damages, then granting injunctions

routinely, and recently rigorously applying the irreparable injury factor of the four-part *eBay* test. The court today correctly concludes that Apple, Inc. is entitled to a narrow, feature-based injunction against Samsung¹ because Samsung's infringement will likely cause Apple to lose downstream sales. I agree with this decision and note that it leaves open the door for obtaining an injunction in a case involving infringement of a multi-patented device, a door that appears near shut under current law.

I write to add that I believe Apple satisfied the irreparable injury factor based on Samsung's infringement on Apple's right to exclude and based on the injury that the infringement causes Apple's reputation as an innovator. There is no dispute that Samsung has infringed Apple's right to exclude and, absent an injunction, it will likely continue to do so. I believe that such a finding satisfies the irreparable harm requirement because the infringement is, in this case, "irreparable." On reputational injury, the roles are reversed: it is undisputed that such an injury is irreparable; the question is whether this injury will likely occur. As I explain below, I believe that the record here—particularly the toe-to-toe competition between Apple and Samsung, Apple's reputation as an innovator, and the importance of the patents-in-suit to that reputation—establishes that Apple will likely suffer irreparable harm to its reputation.

¹ I refer to Samsung Electronics Company, Ltd.; Samsung Electronics America, Inc.; and Samsung Telecommunications America, LLC collectively as "Samsung."

I. Injury to The Right to Exclude is an “Injury”
That is, in this Case, “Irreparable.”

A patentee’s rights spring forth from the Constitution, which gives Congress the power to “secur[e] for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries.” U.S. Const. Art. I, § 8. Under this grant of authority, Congress has given patentees “monopoly rights.” *F.T.C. v. Actavis, Inc.*, 133 S. Ct. 2223, 2240 (2013) (Roberts, C.J., dissenting). That is, the patentee obtains the right to invoke the “State’s power” to prevent others from engaging in certain activities. *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 135 (1969). Those activities include “making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States,” and if the invention is a process, “using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process.” 35 U.S.C. § 154(a)(1).

These monopoly rights do not necessarily entitle a patentee to injunctive relief. At least as far back as the 17th century, courts have required a showing of “irreparable” injury before granting injunctive relief. See Laycock, Douglas, *Death of the Irreparable Injury Rule*, 103 Harv. L. Rev. 687, 699 (1990) (“Laycock”). After Congress passed the first Patent Act in 1790 up until 1819, American courts generally found that the patent statutes provided damages as the remedy for patent infringement, meaning that infringement of patent rights did not constitute an irreparable injury. See *Root v. Lake Shore & M.S. Ry. Co.*, 105 U.S. 189, 192 (1881); Frankfurter, Felix, *The Business of the Supreme Court of the United States — A Study in the Federal Judicial System*, 39 Harv. L. Rev. 587, 616–17

(1926). In 1819, Congress specifically granted courts the authority to grant injunctions in cases involving patent infringement. *Root*, 105 U.S. at 192. From this point until the 20th century, courts granted injunctions in patent cases where the defendant was shown to be likely to continue to infringe. Robinson, William C., *The Law of Patents for Useful Inventions*, § 1088 (1890); Lipscomb, Ernest Bainbridge, III, *Walker on Patents*, § 25:33 (1988). In the early 20th century, courts went further, holding that the default rule was that monetary damages were insufficient to compensate for infringement on the right to exclude. *E.g.*, *Am. Code Co. v. Bensinger*, 282 F. 829, 834 (2d Cir. 1922) (“In cases of infringement of copyright, an injunction has always been recognized as a proper remedy, because of the inadequacy of the legal remedy.”) Our court followed suit, holding that where “validity and continuing infringement have been clearly established,” irreparable injury is presumed. *Smith Intern., Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1581 (Fed. Cir. 1983). We eventually created a default rule that an injunction would issue when infringement has been established, absent a “sound” reason for denying it. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1246–47 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 853 (1989).

In *eBay Inc. v. MercExchange, L.L.C.*, the Supreme Court rejected that default rule, holding that a plaintiff seeking a permanent injunction must satisfy the four-factor test historically employed by courts of equity, including establishing irreparable injury. 547 U.S. 388, 391, 393 (2008). Though we read *eBay* to overrule our presumption of irreparable injury, we cautioned that courts should not necessarily “ignore the fundamental nature of patents as property rights granting the owner the right to exclude.” *Robert Bosch*

LLC v. Pylon Mfg. Corp., 659 F.3d 1142, 1149 (Fed Cir. 2011). Yet our recent cases have done precisely that, ignoring the right to exclude in determining whether to issue an injunction. Indeed, our opinions in the most recent cases between Apple and Samsung do not even mention the right to exclude as a possible basis for injunctive relief.²

I believe that this recent trend extends *eBay* too far. Infringement on the right to exclude is, in my view, an “injury” that is sometimes irreparable. An “injury” is not limited to tangible violations but rather encompasses “violation[s] of another's *legal right*, for which the law provides a remedy; a wrong or injustice.” Injury, *Black's Law Dictionary* (10th ed. 2014) (emphasis added). Courts have routinely granted injunctions when constitutional rights are at issue. 11A Charles Alan Wright et al. *Federal Practice & Procedure* § 3942 (3d ed.). Nor is this approach limited to rights derived from the Constitution—courts have granted injunctions against private parties based on various statutorily-granted rights. See, e.g., *E.E.O.C. v. Cosmair, Inc., L'Oreal Hair Care Div.*, 821 F.2d 1085, 1090 (5th Cir. 1987) (employment discrimination); *Park Vill. Apartment Tenants Ass'n v. Mortimer Howard Trust*, 636 F.3d 1150, 1152 (9th Cir. 2011) (statutory housing rights); *Armstrong v. Schwarzenegger*, 622 F.3d 1058 (9th Cir. 2010) (ADA rights).

There is no reason to treat patent rights differently. As the majority aptly puts it, the right to exclude is “important.” Maj. Op. at 12. The patentee earned this

² See *Apple Inc. v. Samsung Elecs. Co.*, 678 F.3d 1314 (Fed. Cir. 2012) (“*Apple I*”); *Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370 (Fed. Cir. 2012) (“*Apple II*”); *Apple Inc. v. Samsung Elecs. Co.*, 735 F.3d 1352 (Fed. Cir. 2013) (“*Apple III*”).

right by disclosing a useful invention to the public. *See* 35 U.S.C. §§ 101, 112. Madison recognized the balance between the right to exclude and the benefit extended to society by the disclosure included in a patent as a “public good.” *The Federalist* No. 43, p. 214 (L. Goldman ed. 2008) (J. Madison). When courts do not force the public to hold up its end of the bargain they inhibit rather than “promote” the “progress of the useful arts.” U.S. Const. Art. I, § 8. Indeed, Chief Justice Roberts’s concurrence in *eBay*, discussed in more detail below, implicitly acknowledges that infringement on the right to exclude is an injury for which an injunction can be granted. *eBay*, 547 U.S. at 395.

Such an injury can be irreparable. In this context, “irreparable” does not mean that the injury cannot be remedied at all. If that were the case, the plaintiff would not have standing to sue. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992). What makes an injury “irreparable” is that legal damages, i.e., monetary relief, cannot remedy the harm. *See* Laycock at 694. Courts have provided several reasons why this may be the case, including instances in which injury is repeated or threatened, substitutes are difficult to obtain, or *damages are difficult to measure*. *See, e.g.*, Mark P. Gergen et al., *The Supreme Court’s Accidental Revolution? The Test for Permanent Injunctions*, 112 *Colum. L. Rev.* 203, 237 (2012) (“Gergen”).

The last of these concerns was the reason courts traditionally found infringement of intellectual property rights to be irreparable. As Chief Justice Roberts explained in his *eBay* concurrence:

From at least the early 19th century, courts have granted injunctive relief upon a finding of infringement in the vast majority of patent

cases. This “long tradition of equity practice” is not surprising, given the difficulty of protecting a right to exclude through monetary remedies that allow an infringer to use an invention against the patentee’s wishes—a difficulty that often implicates the first two factors of the traditional four-factor test.

eBay, 547 U.S. at 395. As Justice Kennedy explained, however, this traditional model does not always apply, particularly when the patentee is a non-practicing entity:

An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.

Id. at 396–97. Where the patentee is an entity that uses patents primarily to obtain licensing fees, its business objectives are premised on monetary relief being sufficient to compensate for infringement. The relationship between the patentee and the infringer is also relatively simple, making damages relatively straightforward to calculate.

That is not the case here. Apple's business objectives encompass far more than obtaining licensing fees. And the relationship between Apple and Samsung is complex. Apple and Samsung "fiercely" compete in the mobile device hardware and software markets. The device hardware market includes multiple competitors, but Apple and Samsung stand alone as the market leaders. They also compete in the device operating system market, where Apple's "iOS" operating system competes with Google, Inc.'s "Android" operating system.

Apple effectively created the smartphone market when it launched its iPhone in June 2007. According to Phil Schiller, the head of Apple's Worldwide Marketing Group, Apple sold 300,000 units during its first quarter. J.A. 10447. This figure rose to over 10 million at the start of 2009. *Id.* According to Mr. Schiller, what distinguished Apple's phones was that they were controlled completely by software (as opposed to buttons on the phone), which allowed users to access media and the Internet. J.A. 10449. Apple released its tablet, the iPad, in 2010, and it too enjoyed great success. J.A. 10451. When Samsung entered the smartphone market, releasing its own line of "Galaxy" smartphones, Apple took notice. To Mr. Schiller, Samsung's smartphones seemed like an "attempt to copy the iPhone." J.A. 10470. By August of 2011, when Apple was releasing version 5 of iOS, the relationship between Apple and Samsung, in Mr. Schiller's words, "wasn't a good relationship." J.A. 10473. Apple and Samsung had created an "extremely competitive environment." J.A. 10473. Apple and Samsung were at the time of trial, according to Mr. Schiller, "head-to-head" competitors in a variety of retail markets for smartphones and tablets. J.A. 10469.

From Samsung's perspective, the competition was equally vigorous. In its internal marketing documents, Samsung listed one of its 2010 objectives in market reputation terms to "overcome fast follower status and establish Samsung as a challenger to Apple." J.A. 11703. In Samsung's view, the marketplace mainly involved competition between devices that run Apple's iOS and devices that run Google's Android. J.A. 11708. Indeed, Samsung's counsel asserted in its opening statement that "Apple has sued . . . the biggest user of Google's Android software and the most successful manufacturer of Android phones, Samsung, to try to prevent it from selling phones with that leading Android software . . ." J.A. 10361. Samsung, however, also attempted to distinguish its devices from Apple's through hardware advancements, including, for example, larger screen sizes, near field communications, and allowing for the use of a stylus. J.A. 11710. Despite this fierce, toe-to-toe competition, Apple and Samsung are also business partners. Samsung supplies about 25 percent of the components in the iPhone. J.A. 11712.

This evidence demonstrates that the relationship between Apple and Samsung is dramatically different from a non-practicing entity and an infringer. Apple's business objective is not merely to obtain licensing fees from Samsung. Rather, it seeks to firmly establish and grow its market share in the rapidly evolving smartphone and tablet market. In a marketplace this complex, it is difficult, if not impossible, for a court to accurately value Apple's right to exclude. How, for example, does Apple value its rights to exclude relative to other means for competing against Samsung? What effect does the infringement have on how consumers view subsequently released products? How would Apple's existing business relationship with

Samsung factor into this valuation? Courts are not equipped to answer these questions.

In sum, a jury found that Samsung infringed Apple's right to exclude. Apple has been injured and, absent an injunction, that injury will likely continue. *eBay* and its progeny explain that such a finding is not necessarily sufficient to meet the irreparable harm requirement. But that does not mean we should ignore this injury. In view of Apple's and Samsung's unique competition, I would conclude a court cannot accurately determine the extent of Apple's injury, and thus, I would find that Samsung's infringement of Apple's patent rights irreparably injures Apple.

II. Apple has shown that Samsung's Infringement will Likely Injure Apple's Reputation as an Innovator.

Having determined that Apple established irreparable injury via lost downstream sales, the majority opinion does not reach the issue of reputational injury. Maj. Op. at 22, n.2. I would reach this issue and hold, in the alternative, that Samsung's continued infringement would irreparably injure Apple's reputation as an innovator.

To establish any irreparable injury, this court has generally required the plaintiff to establish a "causal nexus": "[t]o show irreparable harm, it is necessary to show that the infringement *caused* harm in the first place." *Apple I*, 678 F.3d at 1324 (emphasis added). The problem with this formulation is that it necessarily focuses on the past, and in doing so effectively requires the plaintiff to show a near certainty of irreparable harm and not a "likelihood" of harm. As the Supreme Court explained more than sixty years ago, injunctive relief addresses future

harms and the past is only relevant as an indicator of the future:

The sole function of an action for injunction is to forestall future violations. . . . All it takes to make the cause of action for relief by injunction is a real threat of future violation or a contemporary violation of a nature likely to continue or recur. . . . In a forward-looking action such as this, an examination of ‘a great amount of archeology’ is justified only when it illuminates or explains the present and predicts the shape of things to come.

United States v. Or. State Med. Soc., 343 U.S. 326, 333 (1952) (Jackson, J.). In *Winter v. Natural Resources Defense Council, Inc.*, the Court further explained that a plaintiff must show that irreparable injury is “likely” in the absence of an injunction. 555 U.S. 7, 22 (2008).³ While “likely” is more demanding than “possible,” it does not require a showing that the injury is certain or nearly certain. *Small v. Avanti Health Sys., LLC*, 661 F.3d 1180, 1191 (9th Cir. 2011). Rather, the plaintiff must show that irreparable injury is more likely than not to occur absent an injunction. *Cf. Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1166 (Fed. Cir. 2014) (explaining that “likely” success on the merits means “more likely than not”).

A plaintiff can meet this burden by showing that it will likely suffer an injury and, separately, satisfy the nexus requirement by showing that this injury is causally linked to the infringement. The plaintiff’s

³ Though *Winter* addressed the test in the context of a preliminary injunction, the substantive analysis for irreparable harm factor is the same for a permanent injunction. *Amoco Prod. Co. v. Village of Gambell, AK*, 480 U.S. 531, 546 n.12 (1987).

evidence often comes in the form of empirical data showing both a past injury and a causal link between that injury and the past infringement.⁴ The district court faults Apple for not following this methodology here, finding significant that Apple’s data do not empirically show that its reputation had been harmed. *Apple Inc. v. Samsung Elecs. Co. Ltd.*, No. 12-CV00630, 2014 WL 7496140, at *15–17 (N.D. Cal. Aug. 27, 2014). But our case law does not require a plaintiff to follow this methodology. A plaintiff can instead rely on a theory of causation to show that it will be irreparably harmed. In other words, the plaintiff can show both the presence of irreparable injury and the causal nexus by establishing circumstances under which infringement would more likely than not cause the claimed injury. This was how the patentee proved irreparable injury in *Douglas Dynamics, LLC v. Buyer Products Co.*, 717 F.3d 1336 (Fed. Cir. 2013).

In that case, the patentee, Douglas Dynamics, and infringer, Buyer Products, were competitors in the market for snowplow assemblies often mounted on the front of a truck. *Id.* at 1339. Douglas Dynamics had about sixty percent of the market share and was recognized as being an innovator. *Id.* The patented features were recognizable by consumers, thus influencing how consumers viewed Douglas Dynamics. The patented features included a mounting frame that did not extend beyond the vehicle’s bumper, reducing the likelihood of inadvertent damage and allowing drivers to “remove heavy portions of the snowplow

⁴ As noted, an injunction is a form of forward-looking relief. Thus, arguments based on past harm implicitly assume that circumstances will not change.

assembly from the vehicle when the plow is not in use, thus reducing stress on the vehicle's suspension." *Id.*

We held that the district court abused its discretion in finding that Douglas did not meet the irreparable injury factor. *Id.* In particular, we held—without any empirical evidence of injury or causal nexus—that the district court's finding that Douglas Dynamics's reputation would not be injured by the infringement was clearly erroneous. *Id.* at 1344. Infringement, we explained, can harm a company's reputation, "particularly its perception in the marketplace by customers, dealers, and distributors." *Id.* Douglas Dynamics's reputation would "certainly be damaged" if customers found the patented features appearing in a competitor's product. *Id.* at 1344–45. Douglas Dynamics would be perceived as less of an innovator because its competitors could incorporate the patented features without noting that they belonged to Douglas Dynamics. *Id.* at 1344. Exclusivity, we further explained, is "an intangible asset that is part of a company's reputation." *Id.* at 1345. "Where two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions." *Id.* Where the patentee and the infringer are toe-to-toe competitors in a two-competitor marketplace, the loss of reputation caused by infringement marks a gain of reputation of the infringer as an innovator.

On the record before us, I would hold that Apple has shown that it will likely suffer irreparable injury. First, Apple and Samsung are direct competitors in the smartphone and tablet market. We have repeatedly held after *eBay* that competition between the patentee and the infringer, particularly direct

competition, strongly militates toward a finding of irreparable harm. As noted above, in *Douglas Dynamics*, we focused on the competition between the patentee and the infringer. *Id.* In *Presidio Components*, we explained that direct competition is “one factor suggesting strongly the potential for irreparable harm.” *Presidio Components Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012) (internal citation omitted). And in *Trebo Manufacturing*, we explained that because the record showed that the patentee and the infringer were direct competitors, it “strongly show[ed] a probability for irreparable harm.” *Trebo Mfg. v. Firefly Equipment*, 748 F.3d 1159, 1171 (Fed. Cir. 2014). This factor is especially strong here because Apple and Samsung are toe-to-toe competitors in a unique marketplace.

Second, like *Douglas Dynamics*, Apple’s reputation as an innovator is critical to its ability to compete against Samsung. As the district court explained, Apple has a strong reputation as being an innovator in the smartphone and tablet market. *See* 2014 WL 7496140 at *15. Samsung appears to concede this point, going so far as to refer to Apple as an “amazing innovative company” in its opening statement at trial. J.A. 10361. Mr. Schiller testified that Apple prizes this reputation, explaining that the “very DNA” of Apple is that it is an innovator that “creates unique differentiations in [its] products that customers value.” J.A. 10453. He further explained that Apple’s marketing strategy was “The Product as Hero.” J.A. 10466. That is, the features of the product are the emphasis of the marketing, not, e.g., price, customer service, etc. *See id.*

The patents at issue here cover the types of features that made Apple’s products the “hero.” These patents

cover features that consumers regularly interact with, thereby influencing how consumers perceive Apple, not latent features which consumers may not be aware of. *Douglas Dynamics*, 717 F.3d at 1339. For example, U.S. Patent No. 5,946,647 discloses software that allows a user to take action with respect to a detected phone number by dialing a phone number without exiting one program and entering another. '647 patent col. 5 ll. 38–50. These features were so important that Apple included it across all of its products, including iPhones and iPads. J.A. 10794. U.S. Patent No. 8,046,721 discloses a device that a user unlocks with gestures. '721 patent col. 8 ll. 49–55. This feature was one of the features that Apple marketed in its first ads. It represented a “great beginning” that customers often utilize. J.A. 10433–34, 21014, 10602–04. Similarly, U.S. Patent No. 8,074,172 discloses a method for automatically correcting spelling errors as a user types words using a touchscreen device, a boon for those who would accept a misspelled word in favor of looking up its correct spelling. '172 patent col. 9 ll. 11–27.

In *Douglas Dynamics*, we explained that when customers find the patentee’s innovations appearing in a competitor’s products, the patentee’s reputation as an innovator will “certainly” be damaged. *Douglas Dynamics*, 717 F.3d at 1344–45. That reasoning applies with great force here. Though the parties dispute whether Apple practices every aspect of the claimed inventions, it is essentially undisputed that Apple’s products include similar features that compete with the patented features, as practiced in Samsung’s products. The presence of the patented features in the products of Apple’s chief competitor communicates a message that Apple’s corresponding features are

commonplace, not innovative. Samsung's infringement thus neutralizes the beneficial impact that Apple's corresponding features have in the mind of the consumer. This injury is amplified here because of the toe-to-toe competition between Apple and Samsung. In such a market, even otherwise minor differences between competitors are magnified as each competitor attempts to gain some advantage over the other, such as the perception that one is a greater innovator than the other.

Apple's reputational injury is all the more important here because of the nature of Apple's reputation, i.e., one of an *innovator* (as opposed to, e.g., a producer of low-cost goods). Consumers in the smartphone and tablet market seek out innovative features and are willing to pay a premium for them. Sometimes consumers in this market will even prioritize innovation over utility. A reputation as an innovator creates excitement for product launches and engenders brand loyalty. Samsung recognized the importance of such a reputation and set its sights not on developing more useful products, but rather to overcome the perception that it was a "fast follower." *Apple*, 2014 WL 7496140, at *8.

Samsung argues that some or all of the patented features not being exclusive to Apple "defeats any claim of reputational harm." Appellee Br. 38. Apple appears to concede that it has license agreements with Nokia and HTC.⁵ Appellant Br. 46. Apple also appears to have license agreements with Microsoft and IBM, but Samsung did not rely on these licenses before the district court. 2014 WL 7496140 at *33, n.7. A patentee's willingness to license can militate against a

⁵ All license agreements are described in general terms because aspects of these agreements are confidential

finding of irreparable harm, but it does not foreclose such a finding. *Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1328 (Fed. Cir. 2008) (“A plaintiff’s past willingness to license its patent is not sufficient per se to establish a lack of irreparable harm if a new infringer were added.”) (citing *eBay*, 547 U.S. at 393). In the context of reputational injury, if patented features appear in products other than the infringer’s products, the marginal impact of the infringer’s use of those features may be minimized. The licensed use of patented features is sufficient to make those features appear commonplace, and thus the infringer’s use of those features has little or no impact. This reasoning does not apply here because there is no evidence that any of the licensees practiced any of the patented features. Samsung counters that it is Apple’s burden to produce evidence tending to prove the negative, i.e., to produce “evidence that Microsoft and HTC cannot and do not use the patented features.” Appellee Br. 38. Samsung’s argument misunderstands the burden applicable in this case. In requesting a permanent injunction, Apple of course bears the burden of production. *Robert Bosch*, 659 F.3d at 1154. Apple met this burden with the evidence cited above—particularly, the unique, direct, and fierce competition between the parties, Apple’s reputation as an innovator, and the importance of the patented features to that reputation. If Samsung seeks to rebut this evidence with instances of the use of the patented features by other parties, it was Samsung’s burden to show that this occurred. To hold otherwise would mean that proof of a lack of licensing activity is a

prerequisite to injunctive relief, a position the Supreme Court rejected in *eBay*. 547 U.S. at 393.⁶

Nor does the presence of the licensing agreements indicate that Apple considered monetary remedies sufficient to compensate it for Samsung's infringement. As the district court found, the Nokia and HTC licenses are litigation settlements. 2014 WL 7496140 at *33. Though these agreements may allow for some form of monetary compensation, they have a fundamentally non-monetary undergirding—the end of a litigation between the parties. In addition, the licenses themselves indicate a strong desire on the part of Apple to carefully guard its own user experience. The HTC license excluded products that were “clones” of Apple's products, and the license to Nokia only applied for a “standstill” period. *Id.* Most notably, the licensed companies are not Apple's chief competitor. Thus, even if the licenses indicate a willingness to accept monetary compensation from Nokia and HTC, they would not show that monetary compensation is sufficient in this case. As we explained in *Acumed*, the “identity of the past licensees, the experience in the market since the licenses were granted, and the identity of the new infringer” all affect whether monetary damages are sufficient to compensate for infringement. 551 F.3d at 1328.

Samsung also argues that a reliance on the factors described in *Douglas Dynamics* would create a “per se” rule of the sort that the Supreme Court rejected in

⁶ The Dissent incorrectly asserts that requiring Samsung to provide evidence of instances of the use of the patented features by parties other than Samsung “arbitrarily shift[s] the burden of proof to Samsung.” Dissent at 3–4 n.1. The burden of proof, of course, remains on Apple. But Apple does not have to prove a negative to carry that burden.

eBay. Appellee Br. 30. Indeed, a theme that runs through both parties' briefing is that the other side's reasoning would impermissibly create a per se rule. Both sides are of course correct that *eBay* rejected this court's "categorical grant" of injunctions absent exceptional circumstances. 546 U.S. at 394. But relying on factors from past cases to determine whether a patentee will likely suffer irreparable harm is not the creation of a per se rule; it is the application of *stare decisis*. As Justice Holmes famously stated, "a page of history is worth a volume of logic." *N.Y. Trust Co. v. Eisner*, 256 U.S. 345, 349 (1921) (quoted in *eBay*, 547 U.S. at 395 (Roberts, C.J., concurring)).

III. CONCLUSION

I would hold that Samsung's infringement amounted to an irreparable injury to Apple's right to exclude. That injury is sufficient, based on the facts of this case, to grant an injunction. Apple also has shown that Samsung's infringement will likely injure its reputation as an innovator in the fiercely competitive smartphone and tablet market.

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UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2014-1802

APPLE INC., A CALIFORNIA CORPORATION,

Plaintiff-Appellant

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION, SAMSUNG
TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,

Defendants-Appellees

Appeal from the United States District Court for
the Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

PROST, *Chief Judge*, dissenting.

This is not a close case. One of the Apple patents at issue covers a spelling correction feature not used by Apple. Two other patents relate to minor features (two out of many thousands) in Apple’s iPhone—linking a phone number in a document to a dialer, and unlocking the screen. Apple alleged that it would suffer irreparable harm from lost sales because of Samsung’s patent infringement. For support, Apple relied on a consumer survey as direct evidence, and its allegations of “copying” as circumstantial evidence.

The district court rejected both evidentiary bases. On the record of this case, showing clear error in the district court's factual findings is daunting, if not impossible. Not surprisingly, Apple principally presses a novel legal theory in this appeal: that the narrowness of its injunction request eliminated its burden to show nexus between its alleged irreparable harm and Samsung's patent infringement. The majority correctly rejects this theory and the case should have ended there.

So why doesn't it? Because the majority finds legal error by the district court where none exists. Then, under the guise of the purported "legal error," the majority reverses without deference the district court's rejection of Apple's survey evidence, never mentioning that the survey was rejected by the district court because Samsung's serious challenges to its techniques and conclusions were unrebutted by Apple. The majority further relies on "evidence," found nowhere in the record, that carriers or users preferred having the patented features on Samsung's phones. It also concludes—contrary to our case law—that Apple's alleged evidence of "copying" is sufficient to show nexus to Apple's alleged lost-sales. Because the majority here reaches a result that comports with neither existing law nor the record in this case, I must respectfully dissent.

A

Injunctions in patent cases, as in other areas of law, require evaluating the traditional four factors, including irreparable harm. Following *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), when the infringing feature is but one of several components of the accused product, our precedent has clearly and consistently required patentees requesting injunctions

to establish a nexus between the alleged irreparable harm and the patent infringement. This nexus showing is, of course, an indispensable prerequisite in a case such as this, where, we are told, the infringed features are merely three of potentially hundreds of thousands of patented features in a single product. Requiring a showing of nexus is necessary to prevent undue leverage wielded by patents on minor features.

B

Turning to the case, the majority's first error is its determination that the district court's analysis was legally erroneous. Specifically, the majority states that, regarding Apple's alleged irreparable harm from lost sales, "it was legal error for the district court to effectively require Apple to prove that the infringement was the sole cause of the lost downstream sales." Majority Op. at 11; *see also id.* at 12, 16. But the majority quotes nothing from the district court's opinion to show there is such an error. And for good reason: there is nothing. Hence, there is no error.

The words "sole" and "predominant" are not even present in the district court's opinion.¹ There is simply

¹ The district court used the words "exclusivity" and "exclusively," but only in the context of rejecting Apple's contention of irreparable reputational harm. *See, e.g., Apple Inc. v. Samsung Elecs. Co.*, No. 12-CV-00630-LHK, 2014 WL 7496140, at *11 (N.D. Cal. Aug. 27, 2014) ("*Injunction Order*"). And while the majority declines to reach the reputational harm issue, the concurrence does not. Here, the district court found that Apple's licenses to other competitors were fatal to its claim that it had a "reputation for exclusivity" over the patented features. *Id.* The concurrence simply disregards this finding. Instead, the concurrence faults Samsung for failing to show evidence "that any of the licensees practiced any of the patented features" and states that Apple only "bears the burden of production," after which the burden shifts to Samsung. Concurrence at 16. But the

nothing in the district court’s opinion that explicitly or implicitly required Apple to show that the patented features were the “sole,” “predominant,” or “exclusive” reasons for purchasing Samsung’s products. Nevertheless, the majority concludes that the district court’s rejection of Apple’s direct evidence—the consumer survey and testimony by its expert, Dr. Hauser—“seems to be predicated on an incorrect understanding of the nature of the causal nexus requirement, as discussed above,” i.e., the so-called “legal error” by the district court. *Id.* at 14.

In reality, however, the district court simply weighed the evidence and found it lacking: “[t]he weight of the evidence shows that Apple’s conjoint study fails to demonstrate that the features claimed in the ’647, ’721, and ’172 patents drive consumer demand for Samsung’s infringing products.” *Injunction Order* at *13. The district court reasoned that Apple made “only cursory arguments” about Dr. Hauser’s survey, while in contrast, Samsung challenged its myriad deficiencies including that the survey “omitted the major factors and major drivers of sales,” “overstated the scope of the claimed features and improperly included noninfringing alternatives,” and “produced nonsensical results, such as the conclusion that the patented word correction feature (corresponding to the ’172 patent) was worth about \$102 on a phone that cost \$149.” *Id.* at *12–13. The district court therefore found that Apple “d[id] not

party requesting injunction bears more than the “burden of production;” it bears the “burden of proving irreparable harm,” a burden which Apple failed to meet. *See Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1154 (Fed. Cir. 2011). Apple’s failure of proof cannot be excused by disregarding the district court’s factual findings and arbitrarily shifting the burden of proof to Samsung.

rebut Samsung's critiques of Dr. Hauser's techniques or show that Apple's conjoint study in this case establishe[d] a causal nexus." *Id.* at *13.

In making these factual findings, the district court followed our case law faithfully. Nothing in the district court's opinion suggests that it deviated from our precedent. Rather, it is the majority that deviates from our precedent by repeating as a mantra the phrase "some connection" in *Apple Inc. v. Samsung Electronics Co.*, 735 F.3d 1352 (Fed. Cir. 2013) ("*Apple III*") detached from the causal nexus standard explained in our prior cases. *See* Majority Op. at 9, 10, 11 n.1, 12, 17. The phrase "some connection" was not made in a vacuum, but instead in the context of our prior decisions, which goes ignored by the majority here.

Specifically, in *Apple II*, we explained that the connection between harm and infringement must be more than "insubstantial:"

It is not enough for the patentee to establish some *insubstantial* connection between the alleged harm and the infringement and check the causal nexus requirement off the list. The patentee must rather show that the infringing feature drives consumer demand for the accused product.

Apple Inc. v. Samsung Elecs. Co., 695 F.3d 1370, 1375 (Fed. Cir. 2012) ("*Apple II*") (emphasis added). And in *Apple III*, we explained that the requisite connection might be met by evidence showing that the patented feature is a "significant" driver of demand:

There might be a variety of ways to make this required showing, for example, with evidence that a patented feature is one of several

features that cause consumers to make their purchasing decisions. It might also be shown with evidence that the inclusion of a patented feature makes a product *significantly* more desirable. Conversely, it might be shown with evidence that the absence of a patented feature would make a product *significantly* less desirable.

Apple III, 695 F.3d at 1364 (emphasis added).

The majority simply dismisses these examples from *Apple III* on grounds that they “do not delineate or set a floor on the strength of the connection that must be shown to establish a causal nexus” but instead are “examples of connections that surpass the minimal connection necessary.” Majority Op. at 11, n.1. But divorcing *Apple III*’s “some connection” language from the examples directly following those words morphs our decision into something it was not. And the majority’s attempt to sidestep that language by relying on *Apple III*’s cup holder example (illustrating an insufficient connection) fares no better. *Id.* In this case, Apple’s evidence fell far short of even the meager cup holder example, as Apple failed to offer any defensible evidence on consumers’ willingness to pay even a nominal premium for the patented features over non-infringing alternatives. *See Injunction Order* at *13 (finding that Apple “d[id] not rebut Samsung’s critiques of Dr. Hauser’s techniques or show that Apple’s conjoint study in this case establishes a causal nexus.”).

Perhaps recognizing its error, the majority reissued its opinion in this case to remove the implication that even an *insignificant* connection might be enough to

satisfy the causal nexus requirement.² While this change is a more accurate reflection of our law, it does not obviate the central problem with the majority's conclusion in this case. As we stated in *Apple III*, “[t]he question becomes one of degree, to be evaluated by the district court.” *Apple III*, 695 F.3d at 1368. Here, the district court weighed the evidence and found it lacking. *Injunction Order* at *13 (“[T]he weight of the evidence shows that Apple’s conjoint study fails to demonstrate that the features claimed in the ’647, ’721, and ’172 patents drive consumer demand for Samsung’s infringing products.”). The majority identifies no basis for overturning this finding with its conclusion—unsupported by the record—that “Apple did, however, show that ‘a patented feature is one of several features that cause consumers to make their purchasing decisions.’” Majority Op. at 17 (quoting *Apple III*, 735 F.3d at 1364).

C

Hamstrung by the deficiencies in Apple’s direct survey evidence, the majority trumpets instead Apple’s “copying” evidence and even creates new evidence:

Given the strength of the evidence of copying and Samsung’s professed belief in the importance of the patented features as a driver of sales, and the evidence that

² The majority’s original opinion stated that: “Apple did not establish that that [*sic*] these features were the exclusive or *significant* driver of customer demand, which certainly would have weighed more heavily in its favor.” *Apple Inc. v. Samsung Elecs. Co.*, 801 F.3d 1352, 1363 (Fed. Cir. 2015), *vacated*, Order (Fed. Cir. Dec. 16, 2015) (emphasis added). The majority’s reissued opinion removes the words “or significant” from this sentence. Majority Op. at 17.

carriers or users also valued and preferred phones with these features, the district court erred by disregarding this evidence, which further establishes a causal nexus and Apple's irreparable harm.

Majority Op. at 15. All three parts of this statement are wrong: there was no evidence at all of such "carriers' or users' preference;" there was no "strong" evidence of "copying;" and "copying" alone is not dispositive to establish a causal nexus to Apple's alleged irreparable harm from lost sales.

First, the majority's "carriers' or users' preference" theory was not mentioned at all by the district court. The majority asserts that "[t]he district court acknowledged that Apple presented evidence that carriers ('721 patent) and users ('172 patent), not just Samsung, preferred and valued the infringing features and wanted them in Samsung phones." *Id.* at 15. The majority again quotes nothing from the district court's opinion to show there is such an acknowledgement. Again for good reason: there is nothing. As the majority notes just two sentences later, the district court "failed to appreciate" that the evidence cited by Apple "did not just demonstrate that Samsung valued the patented features, but also that its carriers or users valued the features." *Id.* The district court could not have "acknowledged" what it "failed to appreciate." The majority reaches its creative interpretation of the evidence to find "carriers' or users' preference" all on its own.

The majority also cites nothing from the record to support its "carriers' or users' preference" theory. I can only guess that the majority's "users ('172 patent) preference" theory is relying on its earlier statement

that “users criticized Samsung’s noninfringing keyboards and word-correction designs,” for that is the only reference by the majority to anything in the record in connection with users and the ’172 patent. *See id.* at 13 (citing J.A. 20985). The document in the Joint Appendix on page 20985, however, is merely an internal Samsung e-mail message that mentioned “carrier issues” with Samsung’s keyboard user interface and referred to a table of information immediately following. Apple’s expert, Mr. Cockburn, concluded from the table that Samsung was proposing to use the feature defined in the ’172 patent. J.A. 10700–02 (“And the next column across says ‘shows word in suggestion bar but does not change in the text field until user accepts or hits space.’ So this is the infringing method.”). Immediately below the text interpreted by Apple’s Mr. Cockburn as proposing the infringing feature, Samsung’s employees noted “[Carrier requests additional information] It is not clear exactly what the issue is.” J.A. 20988 (brackets in original). The carrier was concerned about and had some “issue” with Samsung’s proposal to change to the purported infringing feature; the “carrier issues” were not about Samsung’s previous non-infringing method.

This e-mail message mentioned no users’ or carriers’ criticisms of Samsung’s non-infringing alternative to the ’172 patent’s method. *See* J.A. 20983–88, J.A. 10700–02. Moreover, even if this e-mail were to show such criticisms, a negative view towards a non-infringing feature does not prove a positive preference towards the patented feature. Consumers could have preferred many other non-infringing word correction alternatives to the ’172 patent, including Apple’s implementation in its “undisputedly successful” products that do not practice the ’172 patent. *See* Majority Op. at 4.

Likewise, I can only guess that the majority's "carriers ('721 patent) preference" theory is relying on its earlier statement that "Samsung e-mails not[ed] that certain carriers disapproved of the noninfringing 'circle lock' alternative," for that is the only statement by the majority tying the '721 patent to carriers. *See id.* at 12 (citing J.A. 21019). The document in the Joint Appendix on page 21019, however, is merely an internal Samsung e-mail message referring to a single carrier's "negative response towards our company's circle lock playing the role of the unlock visual cue." The majority's characterization of the negative response as a "disapproval" is much too strong because the response was only preliminary; the carrier had not reviewed an actual working sample and was "request[ing] to review actual working sample" *See id.* Moreover, as discussed above, a negative view towards a non-infringing feature does not prove a positive preference for the patented feature. The evidence cited by the majority of a "negative response" does not show that any carrier preferred the feature defined by the '721 patent. The majority's "carriers' or users' preference" arguments and the factual record it builds for support dissolve upon review of the evidence.

What we are therefore left with is the majority's reliance on the so-called "copying" by Samsung to justify its reversal of the district court's finding of no irreparable harm from lost sales. And the factual support is weak. The majority concedes as much in concluding that "the evidence may not make a strong case of irreparable harm" *Id.* at 22.

Nevertheless, the majority states that "[t]he district court wrote that there was evidence . . . 'indicative of copying.'" *Id.* at 13. The quotations upon which the

majority relies, however, are not the district court's findings. Rather, they are the district court's recitation of Apple's contentions, with which the district court disagreed. As the district court noted, "[w]hile indicative of copying by Samsung, this evidence alone *does not establish that the infringing features drove customer demand for Samsung's smartphones and tablets.*" See *Injunction Order* at *14 (emphasis added). The district court, of course, did not mean that Apple proved copying for all three patents-in-suit. As the district court noted, Apple did not practice or allege copying of the '172 patent. *Id.* The district court also rejected Apple's only support for its contention that it practiced the '647 patent. *Id.* at *15 (finding Apple's only evidence of its own use "did not directly equate asserted claim 9 of the '647 patent with 'data detectors'"). Without Apple practicing these patents, Samsung obviously could not have copied the patented features from Apple's products.

The district court also discounted Apple's evidence of "copying," because "[s]ome of the cited Samsung documents show that Samsung valued numerous other noninfringing features." See *id.* In fact, Apple's evidence of "copying" lacked any connection to the critical details that define the patented features. The handful of internal Samsung documents cited by Apple merely addressed generic or un-patented aspects of Apple's linking and screen-unlocking features. For example, one internal Samsung analysis recommended that Samsung provide "Links for memo contents such as Web, Call and E-mail, that can be linked." J.A. 20584. But the asserted '647 patent claim does not monopolize the general concept of linking from documents; it is limited instead by specific elements such as "display[ing] a pop-up menu of the linked actions" and more. See *Injunction Order* at *1

(detailing asserted '647 patent claim 9). None of these critical elements were addressed in Apple's "copying" evidence.

Similarly, another internal Samsung analysis compared Apple's "unlocking standard by sliding" with Samsung's "unlock[ing] with only a slight flick motion." J.A. 20347. But the '721 patent does not deal with an innovation based on the strength and speed of the touch input, i.e., "sliding" versus "slight flick motion;" it requires instead details such as "display[ing] visual cues to communicate a direction of movement of the unlock image required to unlock the device" and more. *See Injunction Order* at *2 (detailing asserted '721 patent claim 8). Again, none of these critical elements were addressed in Apple's "copying" evidence. Merely mentioning generic or un-patented aspects of Apple's linking and screen-unlocking features is clearly insufficient to show copying of the relevant patented features.

Finally, the majority concludes that the evidence in this case, which boils down to Apple's allegations of "copying," is enough to show nexus to Apple's alleged irreparable harm from lost sales. This conclusion is contrary to our precedent. As the district court stated, "the parties' subjective beliefs about what drives consumer demand are relevant to causal nexus, but do not independently satisfy the inquiry." *Id.* at *14. Once again, the district court was doing nothing more than faithfully following our case law. We have repeatedly affirmed the district court's previous rejections of the same allegations of "copying" as insufficient to show irreparable sales-based harm. *Apple I* at 1327; *Apple III* at 1367. As we have explained, to prove nexus to the alleged lost-sales, "the relevant inquiry focuses on the objective reasons as to why the patentee lost sales,

not on the infringer's subjective beliefs as to why it gained them (or would be likely to gain them)." *Apple I* at 1327–28.

The district court was well within its discretion to reject Apple's contentions of "copying." There is simply no basis for this court, on an abuse of discretion review, to reverse the district court's denial of Apple's injunction request.

D

In sum, the majority states that "the evidence [of consumer preferences and buying choices] is to be determined on a case-by-case basis based on what the evidence indicates." Majority Op. at 14. The district court did exactly that in this case. Given the unassailable factual findings by the district court, the majority faces a tough mountain to climb to reach a reversal.

Thus, in order to reach its result, as described above, the majority rests on findings of non-existent legal error, of "carriers' preference" created without record support, and of "copying" as dispositive to show causal nexus to lost sales that is contrary to our case law. I must disagree with the majority's approach and its conclusion that Apple would suffer irreparable harm from Samsung's patent infringement.³

³ I also disagree with the majority's reversal of the district court's findings that remedy at law would be adequate. This reversal is premised on the majority's disagreement with the district court's findings of no irreparable harm and the majority's acceptance of Apple's contention that any lost downstream sales would be "difficult to quantify." Majority Op. at 17. We noted previously that if "Apple cannot demonstrate that demand for Samsung's products is driven by the infringing features, then Apple's reliance on lost market share and downstream sales to

Finally, I also note the majority's discussion on the public interest factor. I agree with the majority that the public's interest in competition, without more, does not necessarily decide this factor against granting an injunction. But it does not follow that the public interest "nearly always" favors granting an injunction as the majority states. According to the majority, "[i]njunctions are vital to this system. As a result, the public interest nearly always weighs in favor of protecting property rights, especially when the patentee practices his inventions." *Id.* at 21.

The majority repeatedly relies on the statutory right to exclude others from practicing a patent and the public policy embodied in the statute. *See id.* at 5–6, 12, 21. But I am confident that we all remain mindful that pre-*eBay*, "[a]ccording to the Court of Appeals, this statutory right to exclude alone justify[ed] its general rule in favor of permanent injunctive relief." *eBay*, 547 U.S. at 392. The Supreme Court, however, unanimously rejected that approach, reasoning that "the creation of a right is distinct from the provision of remedies for violations of that right." *Id.* For the same reason, the statutory right to exclude should not categorically bias the public interest factor "*strongly*" in the determination of the injunctive remedies as the majority asserts. *See Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312 (1982) ("The Court has repeatedly held that the basis for injunctive relief in the federal courts has always been irreparable injury and the

demonstrate the inadequacy of damages will be substantially undermined." *Apple III* at 1371. Because I agree with the district court that Apple failed to show irreparable harm, I would also affirm the district court's finding that Apple failed to show inadequacy of legal remedy

inadequacy of legal remedies.”). The particular facts of a given case matter. As Justice Kennedy explained, “[w]hen the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.” *eBay*, 547 U.S. at 396–97 (Kennedy, J., concurring).

Based on this record, I cannot agree with the majority’s broad warning that “[i]f an injunction were not to issue in this case, such a decision would virtually foreclose the possibility of injunctive relief in any multifaceted, multifunction technology.” *See* Majority Op. at 22. Rather, injunctive relief will be appropriate when and if, consistent with our case law, the causal nexus requirement is met. This is not such a case.

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APPENDIX D

UNITED STATES DISTRICT COURT NORTHERN
DISTRICT OF CALIFORNIA SAN JOSE DIVISION

Case No.: 12-CV-00630-LHK

APPLE, INC., A California corporation,
Plaintiff and Counterdefendant,

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.

ORDER GRANTING IN PART AND
DENYING IN PART SAMSUNG'S MOTION
FOR JUDGMENT AS A MATTER OF LAW

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 "pre-trial 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;

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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 cor-
responding 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, interac-
tive 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 com-
municate 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 non-obviousness"); *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 1.64-col.8 1.45. 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

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

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.

² Dr. Greenberg testified that in the Ice Cream Sandwich version of the Galaxy Nexus, the new image is a larger circle. ECF

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 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

No. 1717 at 1981. In the Jelly Bean Version, the new image is a series of dots. *Id.*

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 auto-correct technology to adopt the functionality of claim 18).³

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.

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 justify] 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 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.

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

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-

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

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

Dr. Snoeren also opined that freeWAIS-sf did not teach the limitation of “plurality of heuristics to locate information in the plurality of locations.” Regarding “plurality of heuristics,” Dr. Snoeren critiqued Dr. Rinard’s demonstration because it repeated the same heuristic on multiple computers, “so what we have here is two copies of the same heuristic,” such that

“[w]e don’t have a plurality of heuristics.” Tr. at 2823:7-2824:6. Regarding “plurality of locations,” Dr. Snoeren also testified that the WAIS source code did not show searching on the Internet, only on “a local server and a server on another machine.” *Id.* at 2825:7-19. On these points, the jury could reasonably have credited Apple’s expert evidence over Samsung’s.

Additionally, Apple called into question whether WAIS qualified as prior art. Samsung relied on the WAIS reference being known or used in the United States prior to the ’959 patent’s priority date. *See* 35 U.S.C. § 102(a) (2006). Dr. Rinard admitted that he did not know of any actual computers in the United States that ran freeWAIS-sf before the ’959 patent’s priority date of January 5, 2000. *See* Tr. at 1953:8-25. On cross-examination, Mr. Pfeifer (the developer of freeWAIS-sf) also equivocated as to whether freeWAIS-sf was available from servers in the United States, or only in four countries abroad, before the ’959 patent’s priority date. *See id.* at 1870:9-21 (“I would not want to rule out that I put one copy of, or fetched one copy from the United States.”). Mr. Pfeifer was also unable to confirm the configuration of any freeWAIS-sf systems that allegedly 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, 1378-80 (Fed. Cir. 2012). Although indefiniteness was not an issue in the appeal and the Federal Circuit’s analysis preceded *Nautilus*, the Federal Circuit’s analysis may be some indication that “heuristic” is not indefinite and has a reasonably certain meaning.

Later, at the summary judgment stage, the Court further addressed the meaning of “heuristic.” Without objection from the parties, the Court construed “heuristic” in the ’959 patent consistently with its prior construction of “heuristic algorithm,” to mean: “some ‘rule of thumb’ that does not consist solely of constraint satisfaction parameters.” ECF No. 1151 at 31. As noted above, the Court rejected Samsung’s indefiniteness arguments in Samsung’s summary judgment motion. The Court distinguished “heuristic” from other terms held to be indefinite—such as “fragile gel” in *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244 (Fed. Cir. 2008)—because “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.” ECF No. 1151 at 32.

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

H. Invalidity of Claim 20 of the ’414 Patent

The jury also determined that asserted claim 20 of Apple’s ’414 patent was not invalid. *See* 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

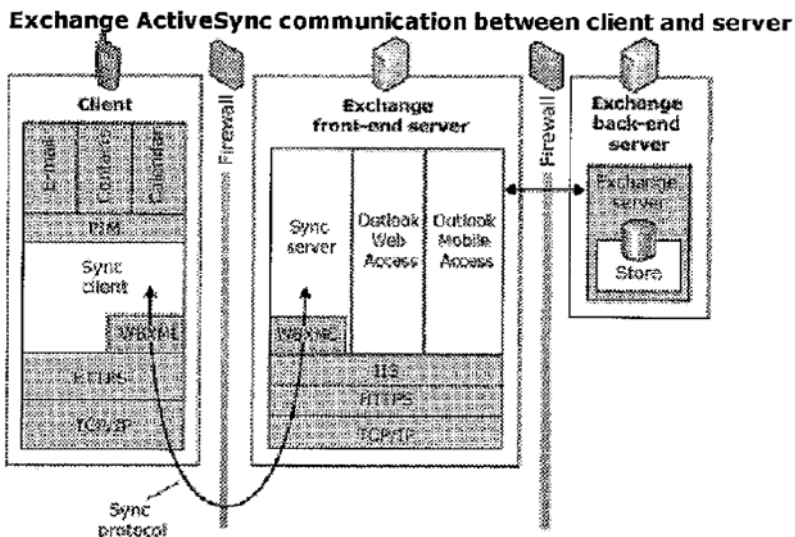
edit structured data in a first store associated with a first database; and

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 and Exchange 2003":



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 preexisting 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 "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

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.

which claim 20 depends) recites “at least one synchronization 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 matter

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, 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.

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

Patent law provides that “whoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b). A claim for actively inducing infringement requires scienter and mens rea. *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011). Thus, to prevail on an inducement claim, a patentee must show “first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.” *Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1353–54 (Fed. Cir. 2008) (internal quotation marks and citation omitted); *accord DSU Med. Corp. v. JMS Co. Ltd.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc). “[M]ere knowledge of possible infringement by others does not amount to inducement;

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

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. 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 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 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 infringement.” *Id.*

[rather,] specific intent and action to induce infringement must be proven.” *DSU*, 471 F.3d at 1305 (citation omitted). Specific intent requires a “showing that the alleged infringer’s actions induced infringing acts and that he knew or should have known his actions would induce actual infringements.” *Id.* at 1304 (citation omitted). “While proof of intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice.” *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 668 (Fed. Cir. 1988). “The requisite intent to induce infringement may be inferred from all of the circumstances.” *Id.* at 669. There is no requirement that direct evidence be introduced, nor is a jury’s preference for circumstantial evidence over direct evidence unreasonable *per se.*” *Liquid 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 (Velluro) (SEC shipped devices to STA for sale in the United States); ECF No. 1715 at 1285-86 (Velluro) (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.*, 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-CV01846, 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

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.

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 the total award before entering judgment. *Id.* The Federal Circuit summarily affirmed the opinion without reasoning. *See* 477 Fed. Appx. 740. Critically, however, *Arlington* involved a double damages award in *the same case*, and did not hold or suggest that when there are two cases with two separate judgments, damages must be deducted before the second case is appealed.¹⁰ Given that there is no clear statement of law on this issue, the Court finds no reason to deviate from its previous decision to address the issue of double recovery after appeal of both cases are resolved. This decision is most efficient. Notably, if this Court strikes the damages awarded in the instant case as impermissible double recovery now, and then the judgment of design patent infringement in the *first* case gets vacated on appeal, this Court will

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

have to reinstate the damages award in this case on remand after the appeal of this case to ensure Apple actually receives damages for each infringing sale, assuming the judgment of infringement in this case withstands appellate review.¹¹

Accordingly, consistent with this Court's ruling at the pretrial conference, the Court will, if necessary,

¹¹ The Court denies Apple's request that this Court calculate a supplemental damages award and prejudgment interest in Case No. 11-CV-01846 at this time. Despite the fact that the Court previously ruled that it would wait until the appeals in the first case are resolved before calculating supplemental damages and prejudgment interest in that case, *see* ECF No. 2271 at 6, 8 (March 2013 post-trial order); ECF No. 2947 at 3 (damages retrial post-trial order declining Apple's request to reconsider Court's decision), Apple in its opposition to Samsung's motion for judgment as a matter of law in Case No. 12-CV-00630 renews its request for a supplemental damages award and pre-judgment interest in Case No. 11-CV-01846. Opp'n at 40-41. Apple's request is procedurally improper, as it is made in connection with briefing in the *second* case between the parties, not the *first* case. Second, the Court rejects Apple's request on the merits. Apple now 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)).

“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.

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(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.

IT IS SO ORDERED. Dated: September 9, 2014

/s/ Lucy H. Koh

LUCY H. KOH

United States District Judge

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APPENDIX E

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

[Filed 08/27/14]

Case No.: 12-CV-00630-LHK

APPLE, INC., a California corporation,
Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD,
A Korean corporation; SAMSUNG ELECTRONICS
AMERICA, INC., a New York corporation;
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
a Delaware limited liability company
Defendants.

ORDER DENYING APPLE'S MOTION
FOR PERMANENT INJUNCTION

[REDACTED]

Apple, Inc. ("Apple") owns U.S. Patent Nos. 5,946,647 (the "647 patent"); 8,046,721 (the "721 patent"); and 8,074,172 (the "172 patent"), which each cover features that Apple contends are related to the ease of using smartphones. Apple asserted these three patents and two others against Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, "Samsung"). On summary judgment, the

Court found that Samsung infringed the '172 patent. A jury then found that Samsung also infringed the '647 and '721 patents, and awarded damages for all infringed patents. Apple now moves, based only on these three patents, to enjoin Samsung from making, selling, developing, or advertising infringing features in its products. *See* ECF No. 1895-4 (“Proposed Order”). Apple’s motion is fully briefed, and the Court heard oral arguments on July 10, 2014. Having considered the parties’ arguments, the briefing, the relevant law, and the record in this case, the Court concludes that Apple has not established that it is entitled to the permanent injunction it seeks. Apple’s Motion for a Permanent Injunction is therefore DENIED.

I. TECHNOLOGICAL BACKGROUND

Because the particular features claimed by the patents-in-suit are relevant to the Court’s conclusions, the Court begins by briefly reviewing the claimed features.

The '647 patent, entitled “System and Method for Performing an Action on a Structure in Computer-Generated Data” and colloquially called the “quick links” patent, discloses “a system and a method [that] causes a computer to detect and perform actions on structures identified in computer data.” '647 patent Abstract. The application for the '647 patent was filed on February 1, 1996, and the patent issued on August 31, 1999. Asserted claim 9 depends from claim 1. Both claims recite:

1. A computer-based system for detecting structures in data and performing actions on detected structures, comprising:
an input device for receiving data;

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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.

Id. cls.1, 9. 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.* col.2 ll.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.* col.1 ll.24-35; *see also id.* col.2 ll.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 e-mail address is detected in a document, the system may

automatically give the user the options to send an e-mail to the identified address or to store the e-mail address in an electronic address book. *Id.* at col.5 ll.5-18. As another example, when a phone number is detected in a document, the system may give the user the option to place a call to that phone number or to place the number in an electronic telephone book. *Id.*

For infringement of the '647 patent, Apple accused the Messenger (also referred to as "Messaging" by the parties) and Browser applications in the Gingerbread, Ice Cream Sandwich, and Jelly Bean versions of the Android operating system, as implemented on nine accused Samsung products: the Admire, Galaxy Nexus, Galaxy Note, Galaxy Note II, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, Galaxy S III, and Stratosphere. *See* Tr. at 833:5-8, 839:1-6, 841:23-842:14. The jury found that all nine accused products infringe the '647 patent. *See* ECF No. 1884 at 9.

The '721 patent, entitled "Unlocking a Device by Performing Gestures on an Unlock Image" and nicknamed the "slide to unlock" patent, is generally directed to devices with touch-sensitive displays that users can unlock by performing certain gestures. *See* '721 patent Abstract. The '721 patent claims priority to an application filed on December 23, 2005, and issued on October 25, 2011. Asserted claim 8 depends from claim 7. Both claims recite:

7. A portable electronic device, comprising:
 - a touch-sensitive display;
 - memory;
 - one or more processors; and

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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.

Id. cls.7, 8. Thus, the patent generally discloses ways to unlock a smartphone by sliding a finger (for example) across the screen to “continuously move” an image to an unlocking position.

For infringement of the '721 patent, Apple accused the touchscreen-based unlocking mechanisms on six accused Samsung products: the Admire, Galaxy

Nexus, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, and Stratosphere. *See* Tr. at 650:14-16, 658:17-659:4. The jury found that the Admire, Galaxy Nexus, and Stratosphere infringe the '721 patent, but that the Galaxy S II, Galaxy S II Epic 4G Touch, and Galaxy S II Skyrocket did not infringe. *See* ECF No. 1884 at 9.

The '172 patent, entitled "Method, System, and Graphical User Interface for Providing Word Recommendations" and colloquially called the "auto correct" patent, discusses systems for suggesting replacements for text as a user types. *See* '721 patent Abstract. The application for the '721 patent was filed on January 5, 2007, and the patent issued on December 6, 2011. Asserted claim 18 recites:

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.

Id. cl.18. The '172 patent discloses a method, system, and interface for providing word recommendations to users inputting text into a portable communication device and for allowing the user to select the recommended words. *See generally id.* at Abstract.

For infringement of the '172 patent, Apple accused the word recommendation feature of the Messenger application in Android as implemented on seven accused Samsung products: the Admire, Galaxy Nexus, Galaxy Note, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, and Stratosphere. *See* ECF No. 1884 at 9; ECF No. 1151 at 9, 11 n.3. Before trial, the Court granted summary judgment that the accused products infringe the '172 patent, ECF No. 1151 at 14, and the jury awarded damages for that infringement, *see* ECF No. 1884 at 9.

II. PROCEDURAL BACKGROUND

Apple's current motion follows multiple rulings regarding preliminary and permanent injunctions in the two patent lawsuits between Apple and Samsung

in this Court, including three opinions from the Federal Circuit. In its March 6, 2014 order denying Apple's request for a permanent injunction in the first lawsuit, this Court summarized the relevant proceedings in both litigations, the appeals to the Federal Circuit regarding injunctions, and the Federal Circuit's guidance regarding the proper analysis for assessing injunctive relief in patent cases. *See* Order Denying Apple's Renewed Mot. for Permanent Injunction at 5-14, *Apple, Inc. v. Samsung Elecs. Co.*, No. 11-CV-01846-LHK (N.D. Cal. Mar. 6, 2014) (ECF No. 3015, "1846 Injunction Order"). Of particular relevance are the Federal Circuit's opinions in "*Apple I*" (678 F.3d 1314 (Fed. Cir. 2012)), "*Apple II*" (695 F.3d 1370 (Fed. Cir. 2012)), and "*Apple III*" (735 F.3d 1352 (Fed. Cir. 2013)).¹

Apple filed the instant lawsuit on February 8, 2012, alleging that Samsung infringed several Apple patents not asserted in the first lawsuit. On the same day, Apple moved for a preliminary injunction, seeking to enjoin Samsung's accused Galaxy Nexus smartphone based on four asserted patents. *See* ECF No. 10. This Court granted Apple's motion as to the so-called "unified search" patent, No. 8,086,604 (the "'604 patent," which is no longer asserted), but denied Apple's motion as to the other three patents, and entered a preliminary injunction. *See* ECF No. 221. Samsung appealed this Court's ruling as to the '604 patent. On appeal, the Federal Circuit reversed the Court's finding that Samsung's alleged infringement of the '604 patent caused Apple irreparable harm and concluded that "the causal link between the alleged

¹ In the 1846 Injunction Order, the Court referred to *Apple III* as "*Apple IV*." Because the parties now refer to this Federal Circuit decision as "*Apple III*," the Court follows suit.

infringement and consumer demand for the Galaxy Nexus is too tenuous to support a finding of irreparable harm.” *See Apple II*, 695 F.3d at 1376. This Court subsequently dissolved the preliminary injunction. *See* ECF No. 1383.

At the summary judgment stage, the Court held that Samsung infringed the ’172 patent. ECF No. 1151 at 14. This case then proceeded to trial. On May 5, 2014, a jury returned a verdict that nine of ten accused Samsung products infringed one or both of Apple’s ’647 and ’721 patents. *See* ECF No. 1884 at 9. Apple sought approximately \$2.1 billion in damages for infringement of all five of its asserted patents, but the jury awarded Apple a total of \$119,625,000.00 for infringement of the three patents at issue. *Id.* at 8. Both parties filed motions for judgment as a matter of law, challenging various portions of the jury’s verdict.

In accordance with the Court’s schedule for post-trial motions and briefing, Apple filed the present motion on May 23, 2014. ECF No. 1895-3 (“Mot.”). Samsung filed an Opposition on June 6, 2014. ECF No. 1907-3 (“Opp’n”). Apple filed a Reply on June 13, 2014. ECF No. 1918 (“Reply”). The Court held a hearing on July 10, 2014.

III. LEGAL STANDARD

The Patent Act provides that in cases of patent infringement a court “may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.” 35 U.S.C. § 283. A patentee seeking a permanent injunction must make a four-part showing:

- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law, such as

monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006). Though injunctions were once issued in patent cases as a matter of course, the U.S. Supreme Court ruled in 2006 that “broad classifications” and “categorical rule[s]” were inappropriate in analyzing whether to grant a permanent injunction. *Id.* at 393. “An injunction is a drastic and extraordinary remedy, which should not be granted as a matter of course.” *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 165 (2010).

The Court evaluates each of the four *eBay* factors in light of the Federal Circuit’s guidance and determines whether, on balance, the principles of equity support issuance of a permanent injunction in this case.

IV. DISCUSSION

A. Irreparable Harm

“[T]o satisfy the irreparable harm factor in a patent infringement suit a patentee must establish both of the following requirements: 1) that absent an injunction, it will suffer irreparable harm, and 2) that a sufficiently strong causal nexus relates the alleged harm to the alleged infringement.” *Apple II*, 695 F.3d at 1374. The Federal Circuit has explained that “the purpose of the causal nexus requirement is to show that the patentee is irreparably harmed *by the infringement*. Without such a showing, it is reasonable to conclude that a patentee will suffer the same harm with or without an injunction, thus undermining the

need for injunctive relief in the first place.” *Apple III*, 735 F.3d at 1363 (emphasis in original). This test “reflects general tort principles of causation and applies equally to the preliminary and permanent injunction contexts.” *Id.* at 1361.

With respect to the first prong of the irreparable harm standard, Apple asserts two forms of irreparable harm. Apple argues that it will suffer irreparable damage to its reputation as an innovator, similar to the harm suffered by the patentee in *Douglas Dynamics, LLC v. Buyers Products Co.*, 717 F.3d 1336, 1344-45 (Fed. Cir. 2013). Apple also contends that it will suffer irreparable harm from sales-based losses.

With respect to the second prong of the irreparable harm standard, Apple argues that trial evidence demonstrated a causal nexus between the alleged sales-based harm and Samsung’s infringing behavior. Mot. at 12. Apple argues, however, that when reputational harm is alleged, the second prong of the irreparable harm test falls away and no separate proof of causal nexus is required. Reply at 2. Despite *Apple II*’s seemingly unambiguous language (“a patentee must establish both of the following requirements”), Apple argues that in *Douglas Dynamics*, the Federal Circuit “did not require separate proof of a causal nexus-because irreparable harm to the patentee’s reputation *necessarily flows* from infringement[.]” *Id.* (emphasis in original).

1. Causal Nexus and Reputational Harm

The Court first addresses Apple’s assertions that, under *Douglas Dynamics*, reputational harm is not subject to the “causal nexus” requirement. As set forth below, the Court finds no reason to depart from the Federal Circuit’s guidance that a patentee must

demonstrate a causal nexus between infringement and any alleged irreparable harm—including injury to reputation.

The Federal Circuit has repeatedly stated that the causal nexus inquiry is required to show irreparable harm. In *Apple II*, the Federal Circuit stated that “although the irreparable harm and the causal nexus inquiries may be separated for the ease of analysis, they are *inextricably related concepts*.” 695 F.3d at 1374 (emphasis added). In *Apple III*, the Federal Circuit further observed:

Apple proposes that because no single equitable factor in the injunction analysis is dispositive, “[a] strong showing of irreparable harm should offset comparatively weak evidence of causal nexus, and vice-versa.” Apple Br. 60. Like Apple’s first argument, this argument seems to be premised on the mistaken notion that the causal nexus is a separate factor from irreparable harm. As we have explained, however, *the causal nexus requirement is part of the irreparable harm factor. Without a showing of causal nexus, there is no relevant irreparable harm.* In other words, *there cannot be one without the other.*

735 F.3d at 1363 (emphases added). Furthermore, without the causal nexus requirement, a court cannot distinguish “between irreparable harm caused by patent infringement and irreparable harm caused by otherwise lawful competition.” *Id.* at 1361; *see also* Hon. Kathleen O’Malley, *Interesting Times at the Federal Circuit*, 63 Am. U.L. Rev. 949, 956 (2014) (“[W]e have explained – and outlined the contours of the requirement – that there must be some causal nexus between an infringed feature in a product

and the consumer demand for that product before a permanent injunction barring that product can issue.”).

There is no reason to forego this analysis in the context of reputational harm. Even if harm will be done to Apple’s reputation, Apple is not entitled to an injunction if that harm originates from some source *other than Samsung’s infringing behavior*. For example, it is possible that Apple’s reputation as an “innovator” could be harmed if Samsung’s *noninfringing* features are perceived as innovative, but that would not justify an injunction.

Apple argues that the Federal Circuit did not require proof of causal nexus in *Douglas Dynamics*, “presumably because that type of reputational harm flows directly from the mere fact of infringement.” Mot. at 5. In *Douglas Dynamics*, however, the defendant did not challenge the existence of a causal nexus between the infringing behavior and the alleged harm. Indeed, the Federal Circuit concluded that the patentee “has suffered irreparable injury *from [defendant’s] infringement.*” 717 F.3d at 1345 (emphasis added). Apple mistakenly asserts that the defendant there “argued that the patentee could not prove irreparable harm because the patents ‘cover only some components of the accused snowplow assemblies.’” Reply at 3 (quoting *Douglas Dynamics*, 717 F.3d at 1343). Apple relies on language from the *Douglas Dynamics* opinion that did not concern causal nexus. It appears that the “some components” argument to which the Federal Circuit referred did not dispute the *cause* of the alleged harm to the patentee, but rather the *degree* of that harm. See *Douglas Dynamics*, 2012 WL 2375012 at *48 (Defendant

Cross-Appellant’s Brief) (“[Patentee] cannot demonstrate that it is suffering significant—much less irreparable—harm from sales of [infringer’s] snowplows.”). Because the issue was not raised, the fact that the Federal Circuit did not explicitly address causal nexus in *Douglas Dynamics* cannot be interpreted as an abrogation of the causal nexus requirement in the context of alleged reputational harm.

Later, in *Apple III*, the Federal Circuit implicitly confirmed this interpretation of *Douglas Dynamics*, observing that causal nexus was not raised in *Douglas Dynamics*. In *Apple III*, Apple argued that the causal nexus requirement should not be applied in the context of a permanent injunction, citing a number of cases, including *Douglas Dynamics*. 735 F.3d at 1361-62. The Federal Circuit rejected Apple’s argument, listing the cases cited by Apple and observing: “there is no indication that any of the infringers in *those cases* challenged the existence of a causal nexus between their infringement and the patentees’ alleged harm.” *Id.* at 1362 (emphasis added). Apple points to the portion of the *Apple III* opinion where the Federal Circuit distinguished *Douglas Dynamics* specifically on the grounds that damage to reputation was “a type of harm not asserted by Apple” in *Apple III*. *Id.* Apple argues that because it *does* assert damage to reputation in the instant case, *Apple III*’s distinction of *Douglas Dynamics* is inapposite. Apple errs, however, in presuming that this is the *only* basis on which *Apple III* distinguishes *Douglas Dynamics*. The language on which Apple relies is from a portion of the Federal Circuit’s opinion that distinguishes *Douglas Dynamics* from the facts in *Apple III* “on other grounds *as well*.” *Id.* (emphasis added). In *Apple III*, the Federal Circuit rejected Apple’s reading of *Douglas*

Dynamics for the same reason that the instant Court rejects it today—in *Douglas Dynamics*, causal nexus was never in dispute. Moreover, Apple argues that *Douglas Dynamics* implicitly abrogated the causal nexus requirement, despite the court’s express guidance that causal nexus and irreparable harm “are inextricably related.” It is highly unlikely that the Federal Circuit intended to eliminate an “inextricable” requirement without comment, further analysis, or argument by the parties.

Apple’s claim that “the mere fact of infringement” demonstrates irreparable reputational harm also suggests the type of “categorical rule” that the U.S. Supreme Court rejected. *See eBay*, 547 U.S. at 393. For injury relating to either lost sales or reputation, Apple must demonstrate that it will suffer irreparable harm if an injunction does not issue, *and* demonstrate that there is a causal nexus between the alleged harm and Samsung’s infringement of Apple’s patents.

2. Harm to Apple’s Reputation

Apple argues that, absent an injunction, it will suffer the same type of irreparable harm to “reputation and brand” that warranted an injunction in *Douglas Dynamics*. Mot. at 5. Specifically, Apple argues that Samsung’s infringement erodes Apple’s reputation in multiple respects, “including by tainting Apple’s reputation as an innovator, by leading customers and competitors to believe that Apple is not entitled to enforce its patent rights (even when it prevails on its infringement claims), and by disrupting Apple’s attempts to maintain exclusivity over its patented inventions.” *Id.* at 11. Samsung disputes both irreparable harm and causal nexus, and further argues that Apple’s claim for damage to its reputation has been waived by Apple. *See Opp’n* at 8. This Court

finds that Apple did not waive its arguments regarding reputational harm, but determines that Apple has not met its burden to show irreparable harm to its reputation or goodwill without an injunction, and has not demonstrated a causal nexus between Samsung's infringement and any alleged reputational injury.

a. Waiver

In Apple's previous motion for a preliminary injunction in this matter, Apple argued that Samsung's infringement of "key distinguishing features" diluted the "critical distinctiveness of Apple's products and goodwill associated with those products." Apple Mot. for Preliminary Injunction (ECF No. 10) at 24. In response to that motion, this Court observed that "[l]oss of goodwill, as well as damage to reputation, can support a finding of irreparable harm." ECF No. 221 at 76 (citing *Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 930 (Fed. Cir. 2012)). However, this Court found that even if Apple could establish a "reputation for innovativeness," a likelihood of irreparable harm had not been shown at that time because "Apple has presented no evidence explaining how the presence in the market of an infringing product . . . erodes that goodwill." *Id.* at 77.

Despite Apple's arguments during the preliminary injunction phase, Samsung asserts that Apple has since waived any claim for irreparable harm based on loss of goodwill or damage to Apple's reputation as an "innovator." Opp'n at 8. Samsung relies on Apple's alleged failure to include reputational harm in Apple's response to Samsung's Interrogatory No. 10, which requested "the complete factual and legal basis" for Apple's claim to injunctive relief, including "what irreparable injury APPLE has suffered" Fazio Decl. Ex. 2 (ECF No. 1907-10) at 65. Even assuming

that Apple needed to re-raise its preliminary injunction arguments regarding reputational harm, Samsung's waiver argument fails because Apple referenced reputational harm in its response to Samsung's Interrogatory No. 10. Specifically, Apple's response to Interrogatory No. 10 incorporates "by reference as if fully set forth herein all facts and evidence contained or identified in Apple's Motion for Preliminary Injunction. . . ." *Id.* at 66-67. This incorporation notified Samsung that Apple intended to continue asserting the same type of harm that was alleged during the preliminary injunction phase, including reputational harm.

Even if this reference was not sufficient to preserve Apple's claim, Apple also served a "Third Supplemental Response to Interrogatory No. 10," in which Apple provided "[a]dditional evidence to show Apple's entitlement to injunctive relief, including the irreparable injury Apple has suffered. . . ." *Id.* at 73. Apple stated that such harm is the subject of various expert opinions, listed in the Supplemental Response and "incorporated by reference." *Id.* at 74. Apple incorporated by reference the "Declaration of Christopher Vellturo, PH.D., dated February 8, 2012 and all exhibits, appendices, errata, and supplementations thereto." *Id.* That Declaration, provided initially in support of the motion for a preliminary injunction, discloses the "Irreparable Injury Due to Harm to Apple's Goodwill Resulting from Samsung's Infringement." Vellturo 2012 Decl. (ECF Nos. 12-14) ¶¶ 96-98 (discussing the "goodwill Apple has built with end users," relying on surveys and reports in the popular press). Samsung argues that these paragraphs are merely "conclusory" and are "insufficient to cure Apple's waiver by failing to raise this theory in response to Samsung's Interrogatory."

Opp'n at 8 n.10. While Samsung is correct that these paragraphs standing alone do not suffice to prove that Apple will *in fact* suffer irreparable harm, these references were sufficient to preserve the issue. The Court rejects Samsung's waiver argument.

b. Evidence of Reputational Harm

To demonstrate irreparable reputation-based harm, Apple must first demonstrate that it has goodwill or reputation that could be the subject of damage. Apple argues that it established a reputation among consumers as an "innovator." Mot. at 6. Dr. Velturo opined that the "distinctive user experience Apple created and nurtured . . . is a critical determinant in the value of the Apple brand," and cited survey evidence indicating that [REDACTED]

[REDACTED] Velturo 2012 Decl. ¶ 96. Dr. Velturo further noted popular press articles ranking Apple first in a list of the world's most innovative firms. *Id.* ¶ 97. Samsung leaves this contention largely un rebutted. Indeed, Samsung's counsel acknowledged in his opening statement at trial that "Apple is an amazingly innovative company." Tr. at 360:1-2. Accordingly, the Court finds that, like the plaintiff in *Douglas Dynamics*, Apple has demonstrated an undisputed "reputation as an innovator." 717 F.3d at 1344.

However, Apple must still demonstrate that it will likely suffer irreparable reputational harm absent an injunction, and that there is a causal nexus between that harm and Samsung's infringement. Apple again relies extensively on *Douglas Dynamics*, arguing that all of the factors discussed by the Federal Circuit in that case are present here as well. Specifically, Apple points to the appearance of Apple's patented innovations in competing and allegedly inferior products;

Apple's reputation for enforcement of intellectual property rights; and Apple's general refusal to license its patents. *See* Mot. at 5-11. In *Douglas Dynamics*, the Federal Circuit identified similar facts and concluded the patentee's reputation would suffer irreparable harm from the infringing behavior. 717 F.3d at 1345. Apple is incorrect, however, in arguing that *Douglas Dynamics* demands a finding of irreparable harm whenever those factors are present.

In *Douglas Dynamics*, the district court concluded there was no injury to the patentee's reputation because "there was no evidence that interested consumers confused the [patentee and infringer]." *Id.* at 1344. The Federal Circuit rejected this finding, concluding that harm to a company's reputation can occur "even absent consumer confusion." *Id.* The factors identified by the *Douglas Dynamics* court are listed as *examples* of damage to reputation that can exist outside of the customer confusion context. *Id.* at 1344-45 ("As just one example. . ."). Apple's interpretation of *Douglas Dynamics* would essentially create a *per se* rule in cases where the patentee is an innovative company, forcing a finding of irreparable harm wherever the infringer is a direct competitor.² This is at odds with the flexible and equitable nature of the irreparable harm inquiry. *See eBay*, 547 U.S. at 391-92; *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1149 (Fed. Cir. 2011). In *Douglas Dynamics*, the factors cited by the court were context-specific examples, and the court's ultimate conclusion

² At times, Apple's argument goes even further, suggesting that "reputational harm flows directly from the mere fact of infringement," Mot. at 5, and that "irreparable harm to the patentee's reputation *necessarily flows* from infringement," Reply at 2 (emphasis in original).

relied on “evidence submitted by [the patentee].” 717 F.3d at 1345. While the factors cited by Apple may form part of the analysis, *Douglas Dynamics* does not alter the need to weigh all relevant evidence in conducting the irreparable harm inquiry. The Court now turns to Apple’s specific arguments regarding reputational harm.

i. Presence of Patented Features in Competing Products

Apple argues that its reputation as an innovator is damaged when “customers [find] the same ‘innovations’ appearing in competitors’ [products],” including products considered less prestigious and innovative. Mot. at 6 (quoting *Douglas Dynamics*, 717 F.3d at 1345), 9. Apple argues that the harm to its reputation is “particularly acute” for the ’647 and ’721 patents because Apple practices those patents in its own products.³ *Id.* at 7. Furthermore, even if Apple does not currently practice all of the patents at issue, Apple argues that it continues to sell products that *compete* with infringing Samsung products. *See Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1171 (Fed. Cir. 2014) (“[A] party that does not practice the asserted patent may still receive an injunction when it sells a competing product.”).

To establish harm, Apple relies on trial testimony from various witnesses about Apple’s reputation and the competition between Apple and Samsung. Philip Schiller, Apple’s Senior Vice President of Worldwide Marketing, testified that he believes Apple values its reputation for innovation: “I think it’s really important to the very DNA of Apple that we’re an

³ Samsung disputes that Apple in fact practices the ’647 and ’721 patents. Opp’n at 13.

innovator who creates unique differentiations in our products that customers value.” Tr. at 451:8-452:9. Mr. Schiller further stated that Samsung’s alleged infringement and copying of Apple’s intellectual property “diminishes the value that we’re bringing to customers” and “confuses customers about the source of those things, whether Apple is being [an] innovator and doing these things or whether Samsung or someone else is innovating,” and that “[Samsung’s infringement] has caused people to question some of the innovations that we’ve created and Apple’s role as the innovator.” *Id.* at 469:15-470:18, 473:25-474:21. Additionally, Apple highlights statements from Samsung’s corporate witnesses, including Dale Sohn, who noted the importance of “know[ing] who my competitors are,” *id.* at 1633:20-25, and Todd Pendleton, who admitted that Samsung has been perceived as a “fast follower” and “not an innovator,” *id.* at 1696:2-1698:11. Apple also points to alleged admissions by Samsung’s damages experts regarding competition. Dr. Judith Chevalier acknowledged that “Apple and Samsung are fierce competitors in this market.” *Id.* at 2433:9-17. Dr. Tülin Erdem testified that certain unaccused features—such as video cameras and GPS—do not differentiate smartphones in consumers’ eyes. *See id.* at 2340:5-22. Finally, Apple cites internal Samsung documents indicating that Samsung considered Apple a major rival. *See* PX216 at 3 (Samsung document: “Beating Apple is no longer merely an objective, it is our survival strategy.”); DX431 at 5 (Samsung document: “Overcome Fast Follower Status & Establish Samsung as Challenger Brand to Apple”).

Apple further argues that its reputation suffers because its patented innovations have appeared in Samsung products that are perceived as “less

prestigious and innovative.” *See* Mot. at 9 (quoting *Douglas Dynamics*, 717 F.3d at 1345). As evidence, Apple points to the statements above by Mr. Pendleton regarding perceptions of Samsung as a “fast follower” and “not an innovator.” *Id.* (quoting Tr. at 1696:2-1698:11). Apple asserts that consumers may begin to “associate Apple’s patented features with a company viewed by many as ‘not an innovator.’” *Id.*

While Apple has presented significant evidence about the strength of its reputation and the intensity of the parties’ competition, the Court finds that Apple has not satisfied its burden of establishing irreparable reputational harm due to Samsung’s infringing use of patented features. A number of factors not present in *Douglas Dynamics* weigh against finding Apple suffered irreparable harm to its reputation stemming from the appearance of Apple’s patented features in Samsung’s products. First, Apple has provided only limited persuasive evidence of such actual injury. The testimony above tends to show that Apple is recognized for innovation, and that Samsung and Apple are “fierce” competitors. However, this evidence does not indicate that Apple’s reputation suffered as a result of Samsung’s infringement. While Mr. Schiller testified that Samsung’s actions generally harm Apple’s brand, this is true of competitors generally, and Mr. Schiller did not link any harm to infringement of the three patented features in question. At oral argument, Apple’s counsel did not identify any other evidence of reputational harm. Apple does not provide (for example) any surveys to establish that consumers have begun to question Apple’s role as an innovator or have difficulty differentiating Samsung and Apple products due to the infringing features.

Second, Samsung argues persuasively that Apple's reputation has proved extremely robust, *see* Opp'n at 11, weakening Apple's claim that it has suffered or will suffer irreparable harm to its reputation from infringement of only three patents. Dr. Chevalier cites evidence that Apple's reputation derives from products and features other than the three patents at issue. *See* Chevalier Decl. (ECF No. 1907-5) ¶ 61 (“[T]here is no evidence that Apple's reputation as an innovator was meaningfully connected to these patents prior to infringement.”). Additionally, Apple executives testified that highly publicized problems with its hardware and software have had little or no effect on Apple's reputation. *See* Joswiak 7/9/13 Depo. Tr. (Fazio Decl. Ex. 3, ECF No. 1907-11) at 80:17-81:20 (stating that “AntennaGate” did not have “much of an impact on [Apple's] brand at all”); Schiller 7/23/13 Depo. Tr. (Fazio Dec. Ex. 4, ECF No. 1907-12) at 87:24-88:7 (noting that the “long-term effect of Antennagate was negligible”); Tr. at 514:7-20 (Schiller noting that the iPhone did “extremely well” despite highly criticized “Maps” application in iOS 6). While not dispositive, Apple's demonstrably robust reputation makes it less likely to be irreparably harmed by the appearance of Apple's three patented features in Samsung's products.

Third, Apple fails to demonstrate harm stemming from consumer association of Apple's patented innovations with Samsung's allegedly “less prestigious” products. In *Douglas Dynamics*, the Federal Circuit noted the risk that consumers would associate the patentee's innovations with less innovative products, and the patentee's reputation as an innovator would suffer as a result. *See* 717 F.3d at 1344-45. Apple asserts that same harm here, disparaging Samsung's perception as a “fast follower” as opposed to an

innovator. *See* Mot. at 9. However, Samsung’s expert Dr. Chevalier argues that these statements are taken out of context because this testimony concerned only Samsung’s reputation in the past. *See* Chevalier Decl. ¶ 63. To establish Samsung’s reputation as it stands today, Dr. Chevalier points to recent innovations in “large-screened products, [Samsung’s] Note product line, products using a stylus, and with respect to near field communication,” and to a 2013 survey that “listed Samsung as the second most innovative company (behind only Apple).” *Id.* ¶¶ 63-64. Thus, the record indicates that Samsung’s products are also reputable. Apple has not identified specific evidence that Samsung’s infringing *products* are perceived as “less prestigious,” or that Samsung’s products have been marketed as “[Apple’s] at half the price.” *Douglas Dynamics*, 717 F.3d at 1344, 1345. By contrast, the infringing products in *Douglas Dynamics* were of substantially inferior quality to those sold by the patentee. *See id.* at 1348 (Mayer, J., dissenting) (“[S]nowplow distributors viewed Douglas’ plows as very high quality products, but saw Buyers’ plows as low quality products.”); *see also In re: BRCA1- and BRCA2- Based Hereditary Cancer Test Patent Litig.*, No. 2:14-MD-2510, 2014 U.S. Dist. LEXIS 31345, at *112 (D. Utah Mar. 10, 2014) (distinguishing *Douglas Dynamics* and denying preliminary injunction where “Plaintiffs here offer no clear evidence suggesting that the public would view Defendant’s testing products as less prestigious or innovative.”).

Fourth, as discussed in greater detail below, Apple has licensed ██████████ to competing companies in the smartphone market. Apple notes that it “has licensed the ██████████ to IBM, Nokia, HTC, and Microsoft, and has licensed the ██████████ to IBM and HTC.” Mot. at 16. In *Douglas Dynamics*, the

patentee had “never licensed the infringed patents,” 717 F.3d at 1345, so it was reasonable to conclude that an injunction would prevent those features from appearing in competitors’ products and eroding the patentee’s reputation for innovation. Here, Apple’s claim for irreparable harm to its reputation as an innovator would be undermined by the presence of the patented features in non-Apple products regardless of an injunction. Consumers are unlikely to understand that certain features appear in competing products due to licenses as opposed to unauthorized infringement.

Fifth, Apple has not met its burden to establish a causal nexus between the patents at issue and any alleged harm. Apple must demonstrate that the features that infringe the ’647, ’721, and ’172 patents in Samsung’s products are a significant factor causing any reputation-based harm. *See Apple I*, 678 F.3d at 1324 (reasoning that if the patented feature does not drive the alleged harm, a likelihood of irreparable harm cannot be shown). Here, the patents at issue cover three features in complex smartphones that contain many different patented inventions. *See Chevalier Decl.* ¶ 20; *Tr.* at 1372:5-19 (Velturo testimony: “Q. . . . You’ve seen estimates that there are as many as 250,000 patents in a smartphone? . . . A. I’ve seen some estimates like that, yes.”). Apple argues that *Douglas Dynamics* “enjoined entire snowplow assemblies” even though the patent covered “only some components of the accused snowplow assemblies.” Reply at 3 (quoting 717 F.3d at 1343). This argument was answered in *Apple III*, where the Federal Circuit observed that where a product is relatively simple, “the impact that the infringing features had on demand for the products may never

have been in doubt.”⁴ 735 F.3d at 1362. Here, in contrast to *Douglas Dynamics*, there is considerable disagreement whether any harm to Apple’s reputation as an innovator shares a causal nexus with the infringing features of Samsung’s products. Dr. Chevalier concluded that “individual software features rarely impact consumer purchases, and some of the same evidence suggests that individual software features would not drive Apple’s reputation as an innovator.” Chevalier Decl. ¶ 62. As noted above, Samsung’s infringement consists of infringing three patented features out of many unaccused hardware and software components in smartphones and tablets. At trial, Mr. Schiller conceded that he did not know if the patent claims at issue were used in Apple’s products, or if any industry praise for Apple’s products was related to the patented features. *See* Tr. at 485:5-486:2. Moreover, Apple does not contend that it practices the ’172 patent, and Apple has not tied its reputation to infringement of that invention. Accordingly, Apple has not demonstrated that the

⁴ *Apple III* did not specifically identify *Douglas Dynamics* as a “simple” case, but the thrust of the court’s holding was that “the causal nexus requirement applies regardless of the complexity of the products. It just may be more easily satisfied (indeed, perhaps even conceded) for relatively ‘simple’ products.” 735 F.3d at 1362. *Douglas Dynamics* fits into this “simple” category of cases, in that causal nexus was not challenged. While it is true that the product at issue in *Douglas Dynamics* (a detachable snowplow) is likely more complicated than the “simple” products cited by the Federal Circuit in *Apple III* (e.g., windshield wiper blades in *Robert Bosch*, 659 F.3d at 1145, and orthopedic nails in *Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1326 (Fed. Cir. 2008)), even a relatively complicated snowplow assembly stands in stark contrast to the extraordinarily complex and multi-featured smartphones at issue here.

inclusion of three infringing features in Samsung's products irreparably damages Apple's reputation.

ii. Reputation for Enforcing Intellectual Property

Next, Apple argues that without an injunction, others might believe Apple "did not enforce its intellectual property rights." Mot. at 9 (quoting *Douglas Dynamics*, 717 F.3d at 1345). Apple relies again on *Douglas Dynamics* to assert that a patentee's reputation is *necessarily* harmed if "customers and business partners" believe the patentee does not enforce its intellectual property rights. *Id.* This misstates *Douglas Dynamics*. While Apple points to its reputation among "customers and business partners," the *Douglas Dynamics* court focused only on the effect that intellectual property enforcement might have on "dealers and distributors" of the patentee's products. 717 F.3d at 1345. *Douglas Dynamics* did not rely on consumers' perceptions of intellectual property enforcement. Apple provides no evidence that smartphone consumers make purchasing decisions based on Apple's reputation for enforcing its intellectual property rights.

It is more plausible to suppose Apple's "business partners" are aware of Apple's reputation for enforcement of intellectual property rights. However, Apple cannot demonstrate irreparable harm merely by reciting *Douglas Dynamics* and asserting that the same harm will occur without proof. The *Douglas Dynamics* court relied on evidence established at trial, specifically citing an admission made by the defendant's expert. *Id.* ("Furthermore, as Buyers's expert agreed, Douglas's reputation would be damaged if its dealers and distributors believed it did not enforce its intellectual property rights."). Here,

Apple's claims regarding a diminished reputation for patent enforcement are unconvincing. Apple has engaged in vigorous patent litigation in this Court and others throughout the country. *See Apple, Inc. v. Samsung Elecs. Co.*, No. 11-CV-01846-LHK (N.D. Cal.); *Apple Inc. v. Motorola, Inc.*, No. 2012-1548, 2014 WL 1646435 (Fed. Cir. Apr. 25, 2014) (asserting '647 patent); *Certain Personal Data and Mobile Communc'ns Devices and Related Software*, Inv. No. 337-TA-710, (USITC July 15, 2011) (asserting '647 patent); *Apple Inc. v. High Tech Computer Corp.*, No. CA 10-166-GMS, 2011 WL 124446 (D. Del. Jan. 14, 2011); *Apple Inc. v. Motorola Mobility, Inc.*, No. 3:11-CV-00178 (W.D. Wis.). Apple accuses Samsung of "relentlessly criticiz[ing] Apple for attempting to enforce its patent rights," and provides examples of statements to that effect made by Samsung's counsel to the press. Mot. at 9-10. The Court finds there is little established risk that any customers or business partners will believe that Apple does not enforce its patent rights. Apple has not demonstrated any causal nexus between infringement of the three patents at issue and any perception of Apple's failure to enforce its intellectual property rights.

iii. Apple's Licenses

Apple argues that its general refusal to license patents favors finding irreparable reputational harm. *Id.* at 10. In *Douglas Dynamics*, the court concluded that the patentee had "never licensed the infringed patents . . . so that it could maintain market exclusivity." 717 F.3d at 1345. That exclusivity "is an intangible asset that is part of a company's reputation," the loss of which irreparably harmed the patentee. *Id.* As noted above, Apple "has licensed the [redacted] to IBM, Nokia, HTC, and Microsoft, and has

licensed the [REDACTED] to IBM and HTC.” Mot. at 16. Apple argues that the circumstances of these licenses diminish their relevance here, because those licenses occurred in the context of cross-license agreements [REDACTED]; were executed before the licensee entered the smartphone market; or involved litigation settlements. *Id.* at 16-17.

These circumstances are relevant in evaluating the evidentiary value of licenses as they pertain to the sufficiency of money damages in a patent infringement case. In addressing the adequacy of legal remedies (*eBay* factor 2), this Court previously concluded in the first lawsuit between the parties (Case No. 11-CV-1846) that “Apple’s past licensing behavior demonstrates a reluctance to license the utility patents-in-suit to Samsung, and several factors distinguish Apple’s licenses to IBM, HTC, and Nokia from the present circumstances.” 1846 Injunction Order at 37; *see also Apple III*, 735 F.3d at 1370 (“these factors are relevant to whether monetary damages will adequately compensate Apple for Samsung’s infringement of the asserted patents”); *Acumed*, 551 F.3d at 1328 (“The fact of the grant of previous licenses, the identity of the past licensees, the experience in the market since the licenses were granted, and the identity of the new infringer all may affect the district court’s discretionary decision concerning whether a reasonable royalty from an infringer constitutes damages adequate to compensate for the infringement.”).

In evaluating the harm to Apple’s reputation as an innovator, however, these circumstances are less relevant. Apple provides no reason why consumers would be likely to appreciate or care about the

licensing origins of the myriad patented features on their smartphones or tablets. *Cf.* Chevalier Decl. ¶ 14 (describing features that drive consumer demand for smartphones). For example, if the patented features appear in smartphones from several licensed companies, it is unlikely that consumers will associate those features exclusively with Apple, regardless of the reasons why Apple granted those licenses. Apple cannot argue that Samsung’s use of patented features will damage Apple’s reputation for exclusivity if these features are not in fact exclusive to Apple, due to licenses to competitors. *Cf. Douglas Dynamics*, 717 F.3d at 1345 (observing the patentee had “never” licensed the patents at issue, whether for monetary or non-monetary compensation). Therefore, after affording due consideration to the circumstances around Apple’s licenses, those licenses nevertheless suggest that Apple’s reputation as an innovator among consumers will not be irreparably harmed without an injunction.

3. Harm From Lost Sales

In addition to reputational harm, Apple contends that it suffered sales-based losses that independently establish irreparable harm and entitlement to a permanent injunction. Apple argues that it has lost market share and downstream sales due to Samsung’s infringement, as this Court found in the first litigation between the parties. Relying on survey data from its expert Dr. John Hauser, Apple then contends that Apple provided direct evidence that consumers value the features claimed in the ’647, ’721, and ’172 patents. Apple also argues that both parties greatly valued the infringing features, and Samsung deliberately copied Apple’s products. Samsung disputes Apple’s characterization of the record, and further claims that

Apple suffered no sales-based losses because the verdict shows that the jury awarded no lost profits. The Court addresses these arguments in turn.

Initially, Apple argues that it lost market share and downstream sales to Samsung, citing as support this Court's ruling in the first lawsuit and certain trial testimony in the instant case. *See* Mot. at 11 (citing *Apple III*, 735 F.3d at 1360). Samsung does not address these arguments. Indeed, as detailed above, it is undisputed that Apple and Samsung compete directly in the market for smartphones and tablets. *See, e.g.*, Tr. at 557:22-558:9 (Schiller testimony); PX216 at 3 (Samsung document: "Beating Apple is no longer merely an objective, it is our survival strategy."). It is also undisputed that this competition affects downstream sales because of so-called "ecosystem" effects, where one company's customers will continue to buy that company's products and recommend them to others. *See* Tr. at 448:12-449:4 (Schiller testimony); *see also* 1846 Injunction Order at 15 ("Apple has also been harmed by its loss of downstream sales, as network compatibility and brand loyalty cause many consumers to be 'locked in' to either Apple or Samsung after their initial purchase.").

The Federal Circuit observed that "[w]here two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented inventions." *Douglas Dynamics*, 717 F.3d at 1345.⁵ Here, the record

⁵ Apple erroneously relies on this quote from *Douglas Dynamics* to support an argument for harm to Apple's reputation for innovation. While the Federal Circuit concluded that the patentee had suffered reputation-based harm, that was not the

establishes that the competition between Apple and Samsung was “fierce.” Tr. at 2433:9-17 (Chevalier testimony). Indeed, evidence established that Apple was Samsung’s “largest smartphone competitor” in the U.S. market. PX3002 (DiCarlo deposition, ECF No. 1920 at 3). The presence of direct competition between Apple and Samsung in the smartphone market weighs in favor of finding irreparable harm. *See Presidio Components, Inc. v. Am. Technical Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed. Cir. 2012) (“Direct competition in the same market is certainly one factor suggesting strongly the potential for irreparable harm”). However, Apple must still provide specific evidence of causal nexus between any such harm and Samsung’s infringement.

a. Evidence of Consumer Demand

To show that consumers value the infringing features, Apple relies on a conjoint study from Dr. Hauser and faults Samsung for not offering comparable survey data of its own. Samsung responds that Apple’s conjoint survey is flawed, based on rebuttal opinions from its experts Dr. David Reibstein and Dr. Erdem. *See* Reibstein Decl. (ECF No. 1907-7); Erdem Decl. (ECF No. 1907-6).

only type of harm identified. Rather than establishing any particular type of irreparable harm, the *Douglas Dynamics* opinion’s “direct competition” analysis appears to bear on the question of irreparable harm more generally, or with respect to sales-based losses. *See, e.g., Trebro*, 748 F.3d at 1171 (“Trebro and FireFly are direct competitors selling competing products in this market. Thus the record strongly shows a probability for direct harm.”); *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 703 (Fed. Cir. 2008) (“Qualcomm has previously conceded. . . indirect competition. . . . Thus, Broadcom provided evidence of irreparable harm.”).

In the first lawsuit between these parties (Case No. 11-CV-1846), the Court analyzed a similar conjoint survey from Dr. Hauser that purported to show demand for the patented features in that case. *See* 1846 Injunction Order at 16. Following the Federal Circuit’s guidance in *Apple III*, this Court evaluated Dr. Hauser’s survey in combination with Apple’s additional evidence regarding copying and ease of use, for purposes of determining whether to enter a permanent injunction. The Court identified numerous potential flaws with that conjoint analysis, finding that the survey could not account for actual market prices, provided little information about the significance of any price increases supposedly attributable to the patented features, and inflated the value of the patents by overemphasizing the relevant features while inadequately presenting noninfringing alternatives. *See generally id.* at 16-29. As a result, the Court concluded that “Dr. Hauser’s survey results simply do not allow the Court to determine whether the patented features meet [the] test” for causal nexus. *Id.* at 29.

In the instant case, the Court previously reviewed Dr. Hauser’s current survey (as disclosed in his expert report) in the context of a *Daubert* challenge by Samsung. *See* ECF No. 1326. The Court summarized Dr. Hauser’s methodology in the instant case and compared it to Dr. Hauser’s survey in the first lawsuit between the parties (Case No. 11-CV-1846). The Court noted that his methods in the instant case were “identical” with respect to his analysis of “willingness to pay” in the first lawsuit, but different in that Dr. Hauser added a second set of survey options in the instant case to measure the number of Samsung customers who would not have purchased Samsung products without the patented features. *See id.* at 24-

27. In the current litigation, the Court declined to exclude Dr. Hauser's testimony under Federal Rule of Evidence 702, partly because Samsung failed to brief the issue of the accuracy of the survey's descriptions of the asserted patents. *See id.* at 36.

Against this background in both lawsuits regarding Dr. Hauser's conjoint survey techniques, Apple's instant motion makes only cursory arguments about how the conjoint survey evidence demonstrates causal nexus. Apple devotes only two paragraphs in its opening brief to Dr. Hauser's conjoint study, one of which targets Samsung's lack of comparable survey evidence. *See Mot.* at 12-13. On the other hand, Samsung points to extensive critiques of Apple's conjoint study by two of its experts, both at trial and in declarations submitted for purposes of this motion.

At trial, Dr. Reibstein testified that Dr. Hauser's conjoint study was flawed because the study "omitted the major factors and major drivers of sales." Tr. at 2071:15-2072:10. Dr. Reibstein testified that none of the patented technologies appeared in an independent review of online smartphone advertising. *See id.* at 2073:4-2074:11; *see also* Reibstein Decl. ¶¶ 53-55. Dr. Reibstein also testified that he performed an independent "pretest" in which he screened another set of participants "in the same way that Professor Hauser did," but also tested for participant confusion as to Dr. Hauser's questions, and found that each participant expressed confusion about at least one patented feature. Tr. at 2080:3-2086:19; *see also* Reibstein Decl. ¶¶ 34, 45-47 (describing pretest). Dr. Reibstein opined that the conjoint study produced nonsensical results, such as the conclusion that the patented word correction feature (corresponding to the '172 patent) was worth about \$102 on a phone that

cost \$149. *Id.* at 2100:17-2101:16. Dr. Reibstein acknowledges that these dollar figures corresponding to willingness to pay are “not strictly additive” because the aggregate willingness to pay may be “either higher or lower than the sum of the willingness to pay estimates for the individual features,” but maintains that these results are “unreasonably large.” Reibstein Decl. ¶ 92 n.130. Additionally, Dr. Reibstein and Samsung’s technical experts testified that the descriptions of the patented features in Apple’s conjoint study overstated the scope of the claimed features and improperly included noninfringing alternatives. *See id.* ¶¶ 13-24, 53 (“Professor Hauser’s conjoint surveys here did not include numerous features that Samsung prominently highlighted to consumers.”); Tr. at 1798:9-1801:14 (Jeffay testimony on survey description of the ’647 patent), 1978:15-1982:1 (Greenberg testimony on survey description of the ’721 patent), 2029:8-2031:2 (Wigdor testimony on survey description of the ’172 patent).

Apple insists that conjoint studies are generally reliable and widely used, and that Samsung should have tested Dr. Hauser’s results with Samsung’s own conjoint studies. *See Reply* at 8. Apple further notes that Dr. Reibstein admitted at trial that he could not explain why certain participants in his pretest were “confused” about descriptions of patented features in Dr. Hauser’s survey. *See Tr.* at 2136:10-20; *Reply* at 8. Dr. Reibstein also admitted that he did not disclose statistical validity tests for his pretest. *See Tr.* at 2142:10-2143:10. These admissions cast some doubt on Dr. Reibstein’s pretest and conclusions regarding confusion. Moreover, during the preliminary injunction proceedings in the instant case, Samsung’s expert Michael Wagner criticized Apple for *not* putting forth “conjoint analyses” to quantify customer demand for

the infringing features. Wagner Decl. (ECF No. 131) ¶ 116 (“Apple has put forth no surveys, conjoint analyses, or hedonic regressions to prove this critical link.”); *see also* Tr. at 2488:14-2490:20 (Chevalier testimony: “Q. So just so the jury has the chronology down, we have Mr. Wagner on behalf of Samsung suggesting that a conjoint analysis can be used, correct? A. Well, among other things.”).

Apple also argues that Samsung’s alternative consumer studies were unreliable. *See* Reply at 8. The Court agrees that Samsung’s alternative studies were not convincing. Dr. Chevalier conducted a “sentence-counting” exercise that involved taking online reviews of smartphones, converting them to individual sentences, and counting the number of references to patented and unpatented features. *See* Tr. at 2375:14-2380:3. From the results, she concluded that the “top drivers of smartphone purchases” are unpatented features such as phone carrier, price, and battery life. *Id.* at 2379:19-2380:3. Dr. Erdem performed an “eye-tracking” study where she “tracked the movements of the eyes of consumers” as they viewed a mimicked shopping website for smartphones. *Id.* at 2295:6-2298:13. Dr. Erdem concluded that “major attributes” affected consumer choices, not “minor attributes.” *Id.* at 2304:5-19.

However, both of these Samsung studies had significant problems. Dr. Chevalier’s study tallied “mentions” of features without attempting to distinguish positive and negative statements. *Id.* at 2479:11-14. Dr. Chevalier’s study also counted spurious “reviews” that were unintelligible (*e.g.*, *id.* at 2482:16-25: “This phone betrayed me. When I was sleeping, it slapped me and Seerei said a bad werd.”) or for fake products (*id.* at 2484:2-21: “I was sold a fake.”).

Dr. Erdem's study did not include any of Apple's patented features, and attempted only to estimate how consumers view "major" and "minor" attributes. *See id.* at 2301:7-2302:2, 2321:2 11. Dr. Erdem concluded that Samsung's near-field communication capability was a minor phone feature, yet Samsung views this feature as important. *See id.* at 2317:13-2318:15. Dr. Erdem's study also identified 21 features that were supposedly unimportant, but Dr. Reibstein stated that 13 of those same features appeared often on consumer websites. *See id.* at 2343:8-17. Moreover, both Drs. Chevalier and Erdem conceded that, to their knowledge, no court in the United States has approved their respective study methodologies. *See id.* at 2477:11-15 (Chevalier), 2347:14-24 (Erdem). Overall, the Court does not find Samsung's competing consumer research persuasive.

However, the flaws in Samsung's studies do not relieve Apple of its burden to demonstrate consumer demand for the patented features, or remedy the limitations of Apple's conjoint study. Apple's criticisms of the analyses of Drs. Reibstein, Chevalier, and Erdem do not rebut Samsung's critiques of Dr. Hauser's techniques or show that Apple's conjoint study in this case establishes a causal nexus. The weight of the evidence shows that Apple's conjoint study fails to demonstrate that the features claimed in the '647, '721, and '172 patents drive consumer demand for Samsung's infringing products.

b. The Parties' Perceptions of the Patented Features

Next, Apple claims that the evidence shows that both Samsung and Apple viewed the patented features as important to customers. Apple argues that causal nexus exists because "Samsung views the patented

features as important to consumers” and “Samsung’s own conduct confirms that the patented features are important to consumers,” citing evidence that Samsung copied and praised the infringing features. Mot. at 13, 14. Similarly, Apple argues that it “views its patented features claimed in the ’647 and ’721 patents as critical elements of an Apple user’s unique experience.” *Id.* at 14.

The Federal Circuit has previously observed, in connection with Apple’s allegations of copying by Samsung, that: “While the evidence that Samsung’s employees believed it to be important to incorporate the patented feature into Samsung’s products is certainly relevant to the issue of nexus between the patent and market harm, it is not dispositive. That is because the relevant inquiry focuses on the objective reasons as to why the patentee lost sales, not on the infringer’s subjective beliefs as to why it gained them (or would be likely to gain them).” *Apple I*, 678 F.3d at 1327-28; *see also Apple III*, 735 F.3d at 1367 (“Apple’s evidence of copying by Samsung may be relevant, but it is insufficient by itself to establish the requisite causal nexus.”). Thus, the parties’ subjective beliefs about what drives consumer demand are relevant to causal nexus, but do not independently satisfy the inquiry.

Turning to Apple’s specific allegations, Apple first claims that Samsung’s internal pre-litigation documents reveal Samsung’s valuation of the infringing features. For the ’647 patent, Apple cites an internal Samsung report that shows iPhone screens and notes the “[n]eed to improve usability by providing Links for memo contents” (PX146 at 37); an internal Samsung document that copied a figure from the publication of one of the ’647 patent’s inventors

(PX107 at 52); and Samsung's user manuals (PX233 at 362; PX237 at 823). Regarding the '721 patent, Apple points to other internal Samsung documents showing that Samsung tried to create unlocking designs based on the iPhone (e.g., PX119; PX121); testimony from Samsung engineer Youngmi Kim regarding the value of designs for unlocking (Tr. at 1729:3-11); and Samsung e-mails noting that certain carriers disapproved of the noninfringing "circle lock" alternative (PX181 at 5). Moreover, the jury found that Samsung willfully infringed the '721 patent. ECF No. 1884 at 7. As to the '172 patent,⁶ Apple refers to feedback documents indicating that some users criticized certain Samsung keyboard and word-correction designs (PX168 at 4; PX169 at 4; PX219 at 104).

Apple's cited evidence indicates that Samsung paid close attention to, and tried to incorporate, certain iPhone features. While indicative of copying by Samsung, this evidence alone does not establish that the infringing features drove customer demand for Samsung's smartphones and tablets. *See Apple III*, 735 F.3d at 1367. Some of the cited Samsung documents show that Samsung valued numerous other noninfringing features. For example, Apple refers to one page from a Samsung manual as an example of Samsung instructing customers on how to use a feature that infringes the '647 patent. PX233. However, that manual is over 1300 pages and describes dozens of unaccused features. Thus, the

⁶ For purposes of this litigation, Apple does not claim that it practices the '172 patent, and does not claim that Samsung copied any features from the '172 patent

existence of instructions for an individual feature does not necessarily show that the feature drives demand.

Next, Apple argues that Samsung continued to use the infringing features in Samsung products, despite receiving notice of the '647, '721, and '172 patents and the filing of this lawsuit. According to Apple, "Samsung's unwillingness to remove the infringing features from its products only further reinforces the value of, and consumer demand for, Apple's patented inventions." Mot. at 14. While Samsung has continued to sell infringing products following the start of this litigation, Samsung might have had other reasons for doing so. Samsung has maintained that it did not need to remove any features because it reasonably believed that it did not infringe any valid patents. Before, during, and after trial, Samsung vigorously contested validity and infringement of all three patents at issue here. Moreover, as explained above, Samsung's subjective beliefs are not dispositive of causal nexus. As this Court found before, "though evidence that Samsung attempted to copy certain Apple features may offer some limited support for Apple's theory, it does not establish that those features actually drove consumer demand." *Apple, Inc. v. Samsung Elecs. Co.*, 909 F. Supp. 2d 1147, 1156 (N.D. Cal. 2012).

Apple also argues that its own use of the patented features in its products and advertisements demonstrates that the features are important to consumers. See Mot. at 14-15. Apple identifies only evidence relating to the '647 and '721 patents. For the '647 patent, Apple cites a few lines of testimony from Apple engineer Thomas Deniau, who described his work on "data detectors" and stated that "[m]ost of Apple's products use data detectors." Tr. at 791:15-18. However, Mr. Deniau was not presented as an expert

witness and did not directly equate asserted claim 9 of the '647 patent with "data detectors." Moreover, his testimony that most Apple products use this feature does not establish that data detectors drive consumer demand. For example, most of Apple's products also use batteries, but that does not mean that batteries drive demand for those products. *See Apple II*, 695 F.3d at 1376 (noting laptop battery as an example of a necessary feature that does not drive demand). For the '721 patent, Apple cites testimony from Apple Vice President Gregory Christie and Senior Vice President of Worldwide Marketing Philip Schiller, who noted that Apple has featured "slide-to-unlock" in its marketing efforts. *See Tr.* at 600:23-601:15 (Christie, saying he personally considered slide-to-unlock "pretty important"), 432:20-433:18 (Schiller, describing decision to feature slide-to-unlock at beginning of advertisement). This testimony is probative of the value of the slide-to-unlock feature, but as with Apple's other evidence, it does not demonstrate demand by consumers for Samsung's infringing products.

c. Lost Profits

Samsung argues that Apple cannot show irreparable harm from lost sales because the jury's damages verdict implicitly rejected Apple's claim for lost profits. Samsung's theory is that the jury must have rejected Apple's demands for lost profits and chosen a lump sum royalty instead because it awarded only a small percentage of what Apple requested. Samsung also makes the related argument that Dr. Velturo "effectively conceded" a lack of causal nexus for the '172 and '721 patents because he did not seek diminished-demand lost profits. *Opp'n* at 7-8.

Samsung invites the Court to deconstruct the verdict to determine whether the jury awarded lost profits to Apple, which may provide information about harm due to lost sales. The parties dispute whether such an exercise is appropriate for purposes of this motion. “[W]hen equitable claims are joined with legal claims and have factual questions in common, the judge’s determination of the equitable claims can not deprive the litigants of their right to a jury trial on factual questions.” *Therma-Tru Corp. v. Peachtree Doors Inc.*, 44 F.3d 988, 994-95 (Fed. Cir. 1995) (characterizing *Beacon Theatres, Inc. v. Westover*, 359 U.S. 500, 510-11 (1959)). If the jury in fact rejected Apple’s claims for lost profits, the Court would be bound by that factual determination for the purposes of determining equitable relief, such as a permanent injunction.

Apple argues that the jury’s verdict is not binding on the question of lost sales harm because the verdict did not explicitly reject Apple’s lost profits claims, and that the Court is not permitted as a matter of law to “deconstruct” the jury’s findings. Reply at 6. However, the jury’s factual findings need not be explicit in order to be binding. The *Therma-Tru* court overturned the district court’s judgment based on the need to avoid “conflict with the *implied* findings underlying the jury verdicts[.]” 44 F.3d at 995 (emphasis added); *see also Miller v. Fairchild Indus., Inc.*, 885 F.2d 498, 507 (9th Cir. 1989) (“the Seventh Amendment requires the trial judge to follow the jury’s implicit or explicit factual determinations”). Apple cites to *Telcordia Technologies, Inc. v. Cisco Systems, Inc.*, 612 F.3d 1365 (Fed. Cir. 2010), claiming that “parties cannot read findings into [a] jury verdict ‘in the absence of an express statement in the verdict.’” Reply at 6 (quoting *Telcordia*, 612 F.3d at 1378). This twists the holding in *Telcordia*, where

the Federal Circuit held: “District courts have broad discretion to interpret an ambiguous verdict form, because district courts witness and participate directly in the jury trial process. The district court was in a position to assess whether the verdict figure represented past infringement as well as ongoing infringement.” 612 F.3d at 1378. The *Telcordia* trial court interpreted the jury’s verdict, and the language quoted by Apple merely reflects the Federal Circuit’s unwillingness to overturn that interpretation on appeal. *Id.* (“In the absence of an express statement in the verdict, this court cannot determine whether the jury compensated Telcordia for all of Cisco’s infringing activities . . . the district court did not abuse its discretion in interpreting the verdict form.”). Apple’s two other cases are inapposite because they addressed deconstruction or “reverse engineering” of a jury verdict, but in the context of a motion for judgment as a matter of law, not the binding effect of a jury verdict on a court’s fact finding for the purposes of equitable relief. *See Yeti by Molly, Ltd. v. Deckers Outdoor Corp.*, 259 F.3d 1101, 1107-08 (9th Cir. 2001); *DDR Holdings, LLC v. Hotels.com, L.P.*, 954 F. Supp. 2d 509, 530 (E.D. Tex. 2013).

While it may be legally permissible to dissect the verdict under certain circumstances, the Court declines Samsung’s invitation to do so here for purposes of evaluating lost sales harm. Samsung insists that the jury awarded a lump-sum royalty to compensate Apple for all future infringement based on calculations by its expert Dr. Chevalier. Dr. Chevalier claims that the jury’s allocation of damages between the ’647, ’721, and ’172 patents and between the accused products for each patent, and the fact that the jury did not grant a uniform per-unit royalty for all products, demonstrates a lump-sum verdict. *See*

Chevalier Decl. ¶ 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. However, Dr. Chevalier's analysis is speculative at best. The verdict form did not require the jury to denote which damages theories it applied. *See* ECF No. 1884 at 9-10. Moreover, Dr. Chevalier's analysis assumes that the jury applied the same theory to all products for all patents. Apple also notes that the jury could have chosen not to award lost profits because it could not ascertain them with reasonable certainty, and not because Apple did not actually lose sales to Samsung. Apple's expert Dr. Vellturo also submits a declaration contesting Dr. Chevalier's conclusion that the jury awarded a lump sum. *See* Vellturo Decl. (ECF No. 1919-4) ¶ 17 ("It is not possible to state definitively how the jury arrived at its damages award of \$119.625 million.").

Moreover, even if Samsung's hypothesis about a lump-sum royalty were correct, such a finding does not dispose of the irreparable harm inquiry. Samsung asserts that "there can be no irreparable harm due to lost sales because there are no lost sales." Opp'n at 4. This misstates the law. As Apple notes, a jury finding of lost profits is not a prerequisite for finding irreparable harm. *See Mytee Prods., Inc. v. Harris Research, Inc.*, 439 F. App'x 882, 887 (Fed. Cir. 2011) ("We have never held, however, that in order to establish irreparable harm a patentee must demonstrate that it is entitled to lost profits."); *see also Apple*, 909 F. Supp. 2d at 1159-60 ("The fact that the jury was able to put a number on the harm Apple has suffered in terms of sales already lost directly to Samsung does not necessarily mean that those damages captured the full extent of Apple's harm. Indeed, if this were the

case, no Court would ever award both damages and an injunction for the same infringement, but Courts do so routinely.”). Where lost sales did not form either an explicit or implicit part of the jury’s verdict, the Court would not be barred from finding lost sales for the purposes of fashioning equitable relief. *See i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 861 (Fed. Cir. 2010), *aff’d*, 131 S. Ct. 2238 (2011) (affirming permanent injunction based on lost market share where the jury awarded royalty damages). Irrespective of a jury’s factual finding with respect to lost sales, a court might still find irreparable harm that stems from sources other than lost sales. *See Mytee Prods.*, 439 F. App’x 882 at 888 (finding irreparable harm to patentee because “the market share enjoyed by [the patentee’s] franchisees would be threatened by the presence of a competitor using the same technology.”); *Douglas Dynamics*, 717 F.3d at 1344-45 (finding irreparable harm to patentee’s reputation from infringement). Furthermore, a factual finding that Apple did not lose sales *in the past* does not necessarily mean that Apple will not lose sales *in the future*.

However, the Court need not deconstruct the verdict as Samsung proposes, for Apple has not shown the requisite irreparable harm, as discussed above. After considering all of Apple’s evidence in combination, *see Apple III*, 735 F.3d at 1368, the Court concludes that Apple has failed to demonstrate irreparable harm due to lost sales, nor any causal nexus between Samsung’s infringement and the alleged harm.

4. Summary of Irreparable Harm

After careful examination of all the evidence, the Court concludes that Apple fails to prove that “the infringing feature[s] drive[] consumer demand for the

accused product[s].” *Apple II*, 695 F.3d at 1375. Apple’s argument that the causal nexus requirement does not apply to reputational harm overextends *Douglas Dynamics* and contravenes the Federal Circuit’s guidance on irreparable harm. Apple has not demonstrated that it will suffer irreparable harm to its reputation or goodwill as an innovator without an injunction. Nor has Apple shown that it will suffer lost sales specifically due to Samsung’s infringement of the three patents at issue. For these reasons, the irreparable harm factor favors Samsung and disfavors an injunction.

B. Adequacy of Legal Remedies

“This factor requires a patentee to demonstrate that ‘remedies available at law, such as monetary damages, are inadequate to compensate’ the patentee for the irreparable harm it has suffered.” *Apple III*, 735 F.3d at 1368 (quoting *eBay*, 547 U.S. at 391).

1. Whether Alleged Harms Can be Quantified

First, the parties disagree about whether it is possible to measure monetary damages for Apple’s alleged lost sales and reputational injuries. As to reputational harm, Samsung accuses Apple of relying only on attorney argument, and cites Dr. Erdem’s declaration, which states that there are accepted industry techniques for assigning monetary values to “brand equity.” See Erdem Decl. ¶¶ 41-43. In response, Apple cites cases that have found money damages inadequate to remedy reputation-related harms. See Reply at 10. In *Douglas Dynamics*, the court found damages inadequate “for at least the reputation loss Douglas has suffered from Buyers’s infringement,” in light of evidence regarding the parties’ relative

market share. 717 F.3d at 1345. In *Southern Snow Manufacturing Co. v. SnoWizard Holdings, Inc.*, a district court followed *Douglas Dynamics* and found legal remedies inadequate for “reputation loss” that the patentee had shown was the result of the infringement in question. No. 06-9170, 2014 WL 1652436, at *7 (E.D. La. Apr. 24, 2014). Similarly, in *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, another district court determined that the patentee established irreparable harm to its reputation, and then found “the loss of customer goodwill cannot be compensated by a reasonable royalty payment.” No. 2:07-cv-00331, 2013 WL 3043668, at *7-8 (D. Nev. June 17, 2013). However, these cases share a common denominator: in each case, the patentee provided evidence to support the court’s conclusion. By contrast, in the instant case, Apple offers no evidence that its alleged reputational harm cannot be remedied.

As to lost sales, Samsung notes that courts in other contexts have found that monetary remedies can adequately compensate harm due to lost revenues. Samsung also claims that the fact that Apple’s damages expert Dr. Vellturo was able to estimate damages for downstream sales and ecosystem effects shows that any such harm is quantifiable. *See* Opp’n at 16. Samsung’s arguments are unpersuasive. Samsung does not tie the facts of the cases it cites to the circumstances here. Samsung’s contention that Apple’s request for damages precludes injunctive relief suggests that damages and an injunction can never be awarded simultaneously—a proposition that has been rejected. *See Apple*, 909 F. Supp. 2d at 1160. This also contradicts Samsung’s earlier argument that Apple cannot demonstrate irreparable harm due to lost sales unless the jury awards lost profits, which requires the jury to place a number on such harm. *Cf.* ECF No. 221

at 78 n.9 (noting inherent tension between showing likelihood, but also incalculability, of lost market share). Here, Apple has cited evidence tending to show that lost market share and downstream sales may be difficult to quantify. *See* Tr. at 448:8-449:4 (Schiller testimony on ecosystem effects). Dr. Veilturo has explained that he was not able to completely quantify ecosystem effects in his damages models. *See* Veilturo Decal. ¶ 22. Additionally, this Court has previously found that Apple’s alleged lost sales would be hard to quantify and remedy with damages. *See* ECF No. 221 at 70 (noting that loss of market share to Samsung “would be difficult to quantify or recapture”); 1846 Injunction Order at 37 (finding Apple’s alleged lost sales “difficult to quantify”).

Accordingly, the Court determines that Apple has not shown that its supposed reputational injury cannot be compensated by damages, but Apple has shown that its alleged lost sales harm would be difficult to calculate and remedy.

2. Apple’s Licenses

Samsung points out that Apple previously offered to license the asserted patents to Samsung and other competitors, and argues that this activity demonstrates that money damages are adequate. *See* Opp’D at 16-18. A patentee’s willingness to license its technology is relevant to the adequacy of legal remedies. *See Active Video Networks, Inc. v. Verizon COMMC’ns, Inc.*, 694 F.3d 1312, 1339 (Fed. Cir. 2012). However, the Federal Circuit has cautioned that evaluation of a patent owner’s licensing efforts must account for “any relevant differences from the current situation,” such as whether the licensees were Apple’s competitors in the smartphone market, and whether the licenses

involved agreements to settle litigation. *Apple III*, 735 F.3d at 1370.

As explained above, Apple granted rights to [REDACTED] to competitors in the smartphone market, licensing the [REDACTED] to Nokia and HTC, and the [REDACTED] to HTC.⁷ See ECF Nos. 1895-12 (HTC), 443-19 (Nokia). In the prior litigation, Samsung used these same licenses as evidence that Apple was willing to license the asserted patents in that case, and was therefore willing to accept monetary compensation for those inventions. This Court stated:

Both the Nokia and HTC agreements resulted from litigation settlements. Moreover, the Nokia license “was a ‘provisional license’ for a limited ‘standstill’ period, and the HTC agreement excluded HTC products that were ‘clones’ of Apple’s products.” Because of these special conditions, the Nokia-Apple and HTC-Apple licenses provide little insight into whether Apple would be willing to provide Samsung unencumbered access to the patented features for money. Therefore, the Court holds that Apple’s other licenses do not support a finding that damages are an adequate remedy.

1846 Injunction Order at 36 (citations omitted). Samsung does not argue that any of this analysis has changed for [REDACTED], and acknowledges this Court’s finding that the litigation settlement

⁷ Apple preemptively addressed two additional licenses of [REDACTED] to IBM and Microsoft. See Mot. at 16. Samsung does not rely on those licenses in its Opposition, so the Court does not address them

context of those two licenses “diminishes their probative value.” Opp’n at 18. At oral argument, Samsung’s counsel confirmed that this Court’s prior analysis (with which Samsung disagrees) would be the same in this case. *See* July 10, 2014 Hearing Tr. (ECF No. 1949) at 73-74. Furthermore, Samsung’s expert Dr. Chevalier acknowledged at trial that “Apple is, in general, very reluctant to license their intellectual property.” Tr. at 2433:9-17. The Court finds no reason to depart from its previous analysis of the same licenses.

Samsung also contends that Apple offered to license the ’647 patent to Samsung in August 2010, prior to this litigation, when Apple presented a slideshow that listed the ’647 patent and stated: “Samsung needs a license to continue to use Apple patents in infringing smartphones.” PX132 at 15, 23. In response, Apple notes that the same presentation stated that “Apple has not authorized the use of any of these patents” (*id.* at 10), and there is no other evidence that Apple presented licensing terms to Samsung, or that Apple would have included the ’647 patent among other patents identified. In *Apple III*, the Federal Circuit noted that any offers by Apple to license asserted patents to Samsung “may be quite relevant to the injunction analysis.” 735 F.3d at 1370 n.7. Here, the Court finds that Apple’s presentation provides some indication that Apple might have been willing to license Samsung, but did not amount to a formal licensing offer. Apple’s references to a “license” and “Samsung’s choice to use Android *without a license*” (PX132 at 2 (emphasis added)) suggest that Apple might have been willing to discuss licenses to at least some of its intellectual property. The presentation is also labeled “Provided for Information and Business Settlement Purposes Only.” However, Apple did not

identify license terms or specific patents for licensing to Samsung. The presentation is also consistent with a demand to cease and desist from infringement. Even to the extent that the August 2010 presentation reveals some willingness by Apple to negotiate a license, this does not outweigh the additional evidence and this Court's prior findings that Apple is reluctant to license its patents.

3. Summary of Adequacy of Monetary Remedies

The Court concludes that damages for Apple's alleged irreparable harm in connection with alleged lost sales are difficult to quantify. As the Court determined in the 1846 Injunction Order, Apple's past licensing behavior demonstrates a reluctance to license Apple's patents to Samsung, and several factors distinguish Apple's licenses to HTC and Nokia from the present circumstances. Moreover, Samsung has not established that Apple offered to license the '647 patent to Samsung in August 2010.

However, this determination does not overcome Apple's failure to demonstrate a causal nexus between its alleged harm and Samsung's infringement. As before, the Court will not issue a permanent injunction based on irreparable harm that Samsung's infringement did not cause, even if monetary remedies will not compensate Apple for that irreparable harm. *See* 1846 Injunction Order at 37. Apple bears the burden of showing that legal remedies are inadequate to compensate for the specific alleged irreparable harm. *See eBay*, 547 U.S. at 391 (listing as the first two factors a patentee must show for an injunction "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for *that injury*") (emphasis

added); *Apple III*, 735 F.3d at 1371 (“Of course, if, on remand, Apple cannot demonstrate that demand for Samsung’s products is driven by the infringing features, then Apple’s reliance on lost market share and downstream sales to demonstrate the inadequacy of damages will be substantially undermined.”). To award an injunction to Apple in these circumstances would ignore the Federal Circuit’s warning that a patentee may not “leverage its patent for competitive gain beyond that which the inventive contribution and value of the patent warrant.” *Id.* at 1361 (quoting *Apple II*, 695 F.3d at 1375) (internal quotation mark omitted). The Court ultimately finds that—despite Apple’s apparent unwillingness to license the patents-in-suit to Samsung—monetary remedies would more appropriately remedy Samsung’s infringement than would an injunction. Accordingly, the second *eBay* factor favors Samsung.

C. Balance of Hardships

The balance of hardships factor “assesses the relative effect of granting or denying an injunction on the parties.” *i4i*, 598 F.3d at 862. An injunction “may deter future harm, but it may not punish.” *Hynix Semiconductor Inc. v. Rambus Inc.*, 609 F. Supp. 2d 951, 969 (N.D. Cal. 2009). Here, Samsung’s admissions at trial about the ease of removing or designing around the infringing features, combined with the relatively narrow scope of, and sunset provision in, Apple’s requested injunction, show that Samsung will not face any hardship from the injunction. Accordingly, the balance of hardships favors Apple and the entry of an injunction.

The parties focus their arguments on Samsung’s likely hardships in light of the scope of Apple’s proposed injunction. In the first lawsuit between these

parties (Case No. 11-CV-1846), Apple sought an “extremely broad” injunction that would “prevent the sale of 26 specific products.” *Apple*, 909 F. Supp. 2d at 1162. Here, however, Apple seeks a narrower injunction against only “Infringing Features,” defined as:

- (1) for the ’647 patent, the data detection/linking feature accused at trial as implemented in Samsung’s Admire, Galaxy Nexus, Galaxy Note, Galaxy Note II, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, Galaxy S III, and Stratosphere products;
- (2) for the ’721 patent, the slide-to-unlock feature accused at trial as implemented in Samsung’s Admire, Galaxy Nexus, and Stratosphere products; and
- (3) for the ’172 patent, the autocorrect feature accused at trial as implemented in Samsung’s Admire, Galaxy Nexus, Galaxy Note, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, and Stratosphere products.

Proposed Order at 1. The injunction would apply only to activities involving the “software or code capable of implementing any Infringing Feature,” and not smartphone or tablet products in their entirety. *Id.* at 2. Additionally, the injunction includes a 30-day “sunset provision” to delay its effect: “the enforcement of this Permanent Injunction shall be stayed until thirty (30) days after entry of this Order.” *Id.* Apple claims that the injunction is narrowly tailored to avoid “seeking to bar entire product lines from the marketplace.” Mot. at 17.

Given the scope of Apple’s proposed order, Apple claims that Samsung faces no hardship at all because

Samsung said that it can easily remove or design around the infringing features. *Id.* at 17-18. The Court agrees with Apple. At trial, Samsung's witnesses repeatedly told the jury that design-arounds would be simple or already exist. For the '172 patent's "slide-to-unlock" invention, Samsung explained that it already has alternatives such as the "puzzle" and "ripple" unlock interfaces, and is "selling lots of these phones without using any Apple slide to unlock feature." Tr. at 399:22-400:18. As to the '721 patent's "autocorrect" feature, Samsung represented at trial that Samsung has already developed a "non-infringing keyboard" that has "since been installed on many Samsung phones" and has been "an option on five of the phones that Apple accuses in this case." *Id.* at 384:8-14. Regarding the '647 patent, Google engineer Dianne Hackborn said that "it shouldn't take more than a day" to remove the accused pop-up menu, *id.* at 1587:25-1588:11, and Samsung's expert Dr. Kevin Jeffay agreed that such a change would take "on the order of a day," *id.* at 1797:21-1798:8. Then, at closing argument, Samsung's counsel addressed the amount of time needed to design around the asserted patents for purposes of estimating damages, and told the jury: "And we wouldn't need four months. You know, we're talking about Samsung, one of the, you know, greatest, largest, most important technology companies in the world. They could do these changes, if they had to do it, in one month." *Id.* at 3336:2-5.

Additionally, Apple claims that the one-month sunset provision further limits any hardship to Samsung because the delay matches the time that Samsung told the jury it would need to implement design-arounds. *See Mot.* at 19; Tr. at 3336:2-8. The Federal Circuit has observed that "a delayed injunction may be more likely to prevent only

infringing *features* rather than the sale of entire *products*, because the defendant would have time to implement a noninfringing alternative.” *Apple III*, 735 F.3d at 1363; *see also Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1339 (Fed. Cir. 2013) (affirming injunction with 18-month sunset period); *Broadcom Corp. v. Qualcomm, Inc.*, 543 F.3d 683, 704 (Fed. Cir. 2008) (same, for 20-month sunset period). Thus, the sunset period in Apple’s proposed injunction further limits any possible hardship to Samsung.

Samsung does not attempt to rebut Apple’s arguments regarding ease of design-arounds. Nor does Samsung dispute that it could accomplish all relevant design-arounds within the sunset period. In light of these repeated admissions, Samsung fails to demonstrate that it would suffer any hardship. *See, e.g., Douglas Dynamics*, 717 F.3d at 1345 (“If indeed Buyers had a non-infringing alternative which it could easily deliver to the market, then the balance of hardships would suggest that Buyers should halt infringement and pursue a lawful course of market conduct.”); *Brocade*, 2013 WL 140039, at *5 (“A10’s witnesses also stated at trial that A10 could easily design around Brocade’s patented claims. The hardship A10 would suffer, therefore, is minimal.”); *Halo Elecs.*, 2013 WL 3043668, at *10 (finding little hardship to defendant that “testified at trial that it could switch to a different, non-infringing design to meet its customers’ needs”).

Despite these admissions, Samsung asserts that the injunction “lacks specificity, is overly broad and extends beyond the permissible scope of an injunction under Federal Circuit case law.” Opp’n at 19. These arguments are unpersuasive. Apple’s proposed injunction targets only specific features, not entire products.

Other courts have applied similar injunctions. *See, e.g., i4i*, 598 F.3d at 862 (affirming finding that infringer’s hardship was minimal because the injunction affected only “one of thousands of features”); *Brocade*, 2013 WL 140039, at *5 (holding that an injunction against practice of features that “do not drive demand” was not overly burdensome).

Samsung also claims the injunction is “not limited to the specific adjudicated software at trial such as, for [the] ’647 patent, the Messenger and Browser applications.” Opp’n at 19. Samsung is correct that Apple’s proposed injunction lists only the features accused at trial “and/or any feature not more than colorably different” without mention of specific applications. However, Samsung has failed to show why this omission renders Apple’s proposed injunction overly broad. Apple has limited the scope of the injunction to use of infringing features as accused at trial. Moreover, focusing on specific features rather than existing applications may reasonably prevent future infringement. *See Streck, Inc. v. Research & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1293 (Fed. Cir. 2012) (holding that an injunction against “otherwise infringing the asserted claims” was not overly broad); *Signtech USA, Ltd. v. Vutek, Inc.*, 174 F.3d 1352, 1359 (Fed. Cir. 1999) (holding injunction against “any further infringement” was not overly broad).

Samsung also fears that Apple will initiate contempt proceedings and force Samsung to demonstrate that future products are “colorably different.” Opp’n at 19. However, the “not more than colorably different” provision is standard in injunctions. *See TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 882 (Fed. Cir. 2011) (“Thus, the party seeking to enforce the injunction must prove both that the newly

accused product is not more than colorably different from the product found to infringe and that the newly accused product actually infringes.”). Therefore, Samsung fails to identify any likely hardship specific to Apple’s proposed order, only the general inconvenience and uncertainty that results from any injunction.

Samsung additionally argues that beyond the use of specific features, the injunction improperly prevents Samsung from “implementing,” “advertising,” or providing “assistance” for its infringing features. Opp’n at 19. However, an injunction need not be limited only to the sale of infringing products. *See NLRB v. Express Pub’g Co*, 312 U.S. 426, 435 (1941) (“A federal court has broad power to restrain acts which are of the same type or class as unlawful acts which the court has found to have been committed or whose commission in the future, unless enjoined, may fairly be anticipated from the defendant’s conduct in the past.”); *Broadcom Corp. v. Emulex Corp.*, 2012 U.S. Dist. LEXIS 129524, at *30 (C.D. Cal. Mar. 16, 2012) (“The Court rejects the notion that the injunction must be limited to the type of conduct which was found to infringe; namely, selling infringing devices.”). Samsung has admitted that it can easily remove or design around the infringing features, and has not shown that it faces any hardship refraining from related advertising or other activity. Samsung argues that Apple’s proposed injunction would disrupt Samsung’s contractual relationship with carriers and consumers. Opp’n at 19. However, Apple represents that its proposed injunction would not apply to end users or others not acting in concert with Samsung. *See Reply* at 14. Moreover, this Court has previously held that third-party retailers “assumed the risk of this type of disruption” and “should not be protected

. . . when they have been benefitting from Samsung's infringement." *See Apple*, 909 F. Supp. 2d at 1161-62; *see also Telebrands Direct Response Corp. v. Ovation Commc'ns, Inc.*, 802 F. Supp. 1169, 1179 (D.N.J. 1992).

Finally, Samsung argues that Apple's proposed injunction "includes no carve-out for repairs." Opp'n at 19. However, Apple represents that the proposed injunction does not enjoin repairs for products already included in the jury's damages award, and that Apple would be "willing to make clear that the injunction does not preclude Samsung from performing repairs on those devices." Reply at 15. Based on these representations, Samsung's objection appears moot.

As to Apple's hardships, Apple contends that "Apple has been forced to compete against products that contain its own patented technologies." Mot. at 17. The Federal Circuit has held that requiring a patentee to "compete against its own patented invention . . . places a substantial hardship" on the patentee, for purposes of the balance of hardships factor. *Robert Bosch*, 659 F.3d at 1156; *see also Sealant Sys. Int'l v. TEK Global S.R.L.*, No. 5:11-CV-00774-PSG, 2014 U.S. Dist. LEXIS 31528, at *102 (N.D. Cal. Mar. 7, 2014) ("AMI faces substantial hardship because it must compete with its own patented invention in the marketplace."). As noted above, it is undisputed that Apple and Samsung have been "fierce" direct competitors in the smartphone market. While Apple's likely hardship from Samsung's continued infringement does not rise to the level of irreparable harm, *see Apple II*, 695 F.3d at 1375 (noting that causal nexus requires "that the infringing feature drives consumer demand for the accused product"), Samsung faces no hardship, as explained above.

Samsung repeatedly told the jury that designing around the asserted claims of the three patents at issue would be easy and fast. In light of those admissions, and the narrow tailoring of, and sunset provision in, the requested injunction, Samsung has failed to articulate any hardship. As the Federal Circuit has held, if the infringer “had a non-infringing alternative which it could easily deliver to the market, then the balance of hardships would suggest that [the infringer] should halt infringement and pursue a lawful course of market conduct.” *Douglas Dynamics*, 717 F.3d at 1345. For the above reasons, the balance of hardships favors Apple.

D. Public Interest

“This factor requires a plaintiff to demonstrate that ‘the public interest would not be disserved by a permanent injunction.’” *Apple III*, 735 F.3d at 1371 (quoting *eBay*, 547 U.S. at 391). Courts have recognized that “the touchstone of the public interest factor is whether an injunction, both in scope and effect, strikes a workable balance between protecting the patentee’s rights and protecting the public from the injunction’s adverse effects.” *i4i*, 598 F.3d at 863.

Apple repeats its argument from the parties’ prior lawsuit that an injunction will promote the public’s interest in enforcing patents against a direct competitor, and will benefit the public by “encouraging investment in innovation.” Mot. at 19. As before, the Court agrees with Apple that the public interest does favor the enforcement of patent rights to promote the “encouragement of investment-based risk.” *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1383 (Fed. Cir. 2006); see also *Apple*, 909 F. Supp. 2d at 1162 (quoting *id.*); *Douglas Dynamics*, 717 F.3d at 1346 (finding public interest disserved by an infringer

“competing in the marketplace using a competitor’s patented technology”). However, as the Federal Circuit observed, “the public’s interest in enforcing patent rights must also be weighed with other aspects of the public interest.” *Apple III*, 735 F.3d at 1372 (citing *ActiveVideo*, 694 F.3d at 1341).

Samsung claims that an injunction will “depriv[e] the public of product choices created by a thriving level of competition.” Opp’n at 20. The Federal Circuit has stated that it is appropriate to “consider the scope of Apple’s requested injunction relative to the scope of the patented features and the prospect that an injunction would have the effect of depriving the public of access to a large number of non-infringing features.” *Apple III*, 735 F.3d at 1372-73. In *Apple III*, Apple sought broadly to enjoin sales of over two-dozen products. *Id.* at 1372. Here, as explained above, Apple’s proposed injunction is narrower and targets only “software and code” for the “Infringing Features” accused at trial. Thus, there is substantially less risk that the injunction will deprive the public of access to “a large number of non-infringing features,” particularly given Samsung’s representations about the ease and speed of designing around the patents at issue.

Samsung claims that enjoining the accused features may at least temporarily restrict consumers’ choices of smartphones or smartphone features. However, any such effect would be minimal because of Apple’s proposed sunset provision and Samsung’s repeated representations at trial about the ease and speed with which Samsung could implement design-arounds. Moreover, as this Court noted in connection with the much broader permanent injunction that Apple previously requested, “[c]onsumers will have

substantial choice of products, even if an injunction were to issue. Apple and Samsung, despite being direct competitors, are not the only suppliers of mobile phones in the market, nor are Samsung's infringing phones the only phones Samsung offers." *Apple*, 909 F. Supp. 2d at 1162. Furthermore, Apple predicts that an injunction will promote product diversity by forcing Samsung to design around the patents. *See* Mot. at 20. Samsung itself stated repeatedly at trial that Samsung could offer multiple design-arounds in lieu of Apple's patented features. *See* Tr. at 3336:2-5. Thus, an injunction may prompt introduction of new alternatives to the patented features.

As before, Samsung argues that an injunction would create an administrative burden on the Court, as it would require the Court's continuing supervision to enforce. *See* Opp'n at 20. This is likely true, though on its own, it does not carry significant weight. *See Apple*, 909 F. Supp. 2d at 1163. Moreover, the relatively narrow scope of Apple's proposed injunction reduces the likelihood of burdensome enforcement efforts. Balancing all of the considerations that the parties have identified, the Court concludes that the public interest factor favors Apple.

E. Summary

Weighing all of the factors, the Court concludes that the principles of equity do not support a permanent injunction here. First and most importantly, Apple has not satisfied its burden of demonstrating irreparable harm and linking that harm to Samsung's exploitation of any of Apple's three infringed patents. Apple has not established that it suffered significant harm in the form of either lost sales or reputational injury. Moreover, Apple has not shown that it suffered any of these alleged harms *because* Samsung infringed

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Apple's patents. The Federal Circuit has cautioned that the plaintiff must demonstrate a causal nexus between its supposed harm (including reputational harm) and the specific infringement at issue. Apple has not demonstrated that the patented inventions drive consumer demand for the infringing products.

Furthermore, the balance of the remaining *eBay* factors do not warrant an injunction here. Apple has not demonstrated that money damages are inadequate compensation for the infringement in this case. Although the public interest factor favors Apple and Apple's narrowly tailored injunction request tilts the balance of hardships in Apple's favor, the Court determines that these factors do not overcome the lack of irreparable harm. Apple's motion is DENIED.

IT IS SO ORDERED.

Dated: August 27, 2014

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

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APPENDIX F

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1171, 2015-1195, 2015-1994

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Cross-Appellant,

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellants.

Appeals from the United States District Court for the
Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

ON PETITION FOR REHEARING EN BANC

Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK,
MOORE, O'MALLEY, REYNA, WALLACH, CHEN,
HUGHES, and STOLL, *Circuit Judges*.*

PER CURIAM.

* Circuit Judge Taranto did not participate.

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ORDER

Appellants Samsung Electronics Co., Ltd., et al., filed a petition for rehearing en banc. The petition was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for rehearing en banc is denied.

The mandate of the court will issue on December 5, 2016.

FOR THE COURT

November 28, 2016/

Date

/s/ Peter R. Marksteiner

Peter R. Marksteiner

Clerk of Court

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APPENDIX G

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

[Filed 12/16/2015]

2014-1802

APPLE INC., A CALIFORNIA CORPORATION,
Plaintiff-Appellant

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,
Defendants-Appellees

Appeals from the United States District Court
for the Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

ON PETITION FOR REHEARING EN BANC

Before PROST, *Chief Judge*, NEWMAN, LOURIE,
DYK, MOORE, O'MALLEY, REYNA, WALLACH, TARANTO,
CHEN, HUGHES, and STOLL, *Circuit Judges*.

PER CURIAM.

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ORDER

Appellees Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. filed a petition for rehearing en banc. A response to the petition was invited by the court and filed by appellant Apple Inc. The petition and response were first referred to the panel that heard the appeal and a majority of the panel granted the petition for the limited purpose of amending the court's opinion. Thereafter, the petition, response, and amended opinions were sent to the en banc court.

IT IS ORDERED THAT:

- (1) The petition for rehearing en banc is denied.
- (2) The mandate of the court will issue on December 23, 2015.

FOR THE COURT

December 16, 2015
Date

/s/ Daniell E. O'Toole
Daniel E. O'Toole
Clerk of Court

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APPENDIX H

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

[Filed 09/16/2015]

2014-1802

APPLE INC., A CALIFORNIA CORPORATION,

Plaintiff-Appellant

v.

SAMSUNG ELECTRONICS CO., LTD.,
A KOREAN CORPORATION, SAMSUNG ELECTRONICS
AMERICA, INC., A NEW YORK CORPORATION,
SAMSUNG TELECOMMUNICATIONS AMERICA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY,

Defendants-Appellees

Appeals from the United States District Court
for the Northern District of California in
No. 5:12-cv-00630-LHK, Judge Lucy H. Koh.

ON PETITION FOR REHEARING EN BANC

Before PROST, *Chief Judge*, MOORE, and
REYNA, *Circuit Judges*.

PER CURIAM.

ORDER

Appellees Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (“Samsung”) filed a petition for rehearing en banc. A response to the petition was invited by the court and filed by appellant Apple, Inc. The petition and response were referred to the panel that heard the appeal.

IT IS ORDERED THAT:

- 1) Samsung’s petition for rehearing is granted by a majority of the panel for the limited purpose of modifying the previously filed majority opinion. Page 17 of the original opinion reads: “Apple did not establish that that these features were the exclusive or significant driver of customer demand, which certainly would have weighed more heavily in its favor. We conclude that this factor weighs in favor of granting Apple’s injunction.” The corrected opinion reads:

Apple did not establish that these features were the exclusive driver of customer demand, which certainly would have weighed more heavily in its favor. Apple did, however, show that “a patented feature is one of several features that cause consumers to make their purchasing decisions.” *Apple III*, 735 F.3d at 1364. We conclude that this factor weighs in favor of granting Apple’s injunction.

The dissenting opinion was also amended. Samsung’s petition is denied in all other respects.

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- 2) The prior opinions in this appeal, which issued on September 17, 2015, and were reported at *Apple Inc. v. Samsung Elecs. Co., Ltd.*, 801 F.3d 1352 (Fed. Cir. 2015), are withdrawn and replaced with the revised opinions accompanying this order.

December 16, 2015
Date

FOR THE COURT

/s/ Daniell E. O'Toole
Daniel E. O'Toole
Clerk of Court