

United States District Court  
For the Northern District of California

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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

APPLE, INC., a California corporation,	)	Case No.: 12-CV-00630-LHK
	)	
Plaintiff,	)	ORDER GRANTING MOTION FOR
	)	PRELIMINARY INJUNCTION
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.	)	
	)	

Plaintiff Apple, Inc. (“Apple”) brings this motion for a preliminary injunction seeking to enjoin Defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively, “Samsung”) from “making, using, offering to sell, or selling within the United States, or importing into the United States” Samsung’s Galaxy Nexus smartphone. *See* Pl.’s Mot. Prelim. Inj., ECF No. 10 (“Mot.”). Although Apple’s Complaint asserts a total of eight patents and identifies seventeen accused products, Apple moves to preliminarily enjoin only the Galaxy Nexus smartphone, and moves to do so only on the basis of four patents: (1) U.S. Patent No. 8,086,604 (“the ’604 Patent”); (2) U.S. Patent No. 5,946,647 (“the ’647 Patent”); (3) U.S. Patent No. 8,046,721 (“the ’721 Patent”); and (4) U.S. Patent No. 8,074,172

1 (“the ’172 Patent”). The Court held a hearing on this motion on June 7, 2012. Having considered  
 2 the parties’ submissions, argument, and the relevant law, and for the reasons discussed herein,  
 3 Apple’s motion to preliminarily enjoin the Galaxy Nexus is GRANTED.

#### 4 **I. BACKGROUND**

5 Both in the United States and globally, Apple and Samsung have established themselves as  
 6 fierce competitors in the smartphone market and fierce adversaries in the courtroom. This  
 7 particular lawsuit, filed by Apple against Samsung on February 8, 2012, is but one action in a  
 8 worldwide constellation of litigation between the two companies. *See* Compl., ECF No. 1; Joint  
 9 Case Management Statement 8-10, Apr. 25, 2012, ECF No. 141 at 8-10 (identifying over 40 related  
 10 cases between the parties); Mot. at 6. Indeed, this Court is presiding over another lawsuit, *Apple v.*  
 11 *Samsung* (“*Apple I*”), No. 11-cv-01846 (N.D. Cal. filed Apr. 15, 2011), in which Apple previously  
 12 moved to preliminarily enjoin three earlier Samsung smartphone models (Samsung’s Galaxy S 4G,  
 13 Infuse 4G, and Droid Charge), as well as the Samsung Galaxy Tab 10.1 tablet, based on alleged  
 14 infringement of various Apple design and utility patents. In a May 14, 2011 ruling, the Federal  
 15 Circuit affirmed this Court’s denial of Apple’s motion to enjoin the three smartphones, but vacated  
 16 the portion of the Court’s decision regarding the Samsung Galaxy Tab 10.1 tablet, and remanded  
 17 for further proceedings. *See Apple v. Samsung*, 678 F.3d 1314 (Fed. Cir. 2012). Samsung  
 18 petitioned for rehearing and rehearing en banc, which was denied on June 19, 2012. On remand,  
 19 the Court granted the motion for a preliminary injunction on June 26, 2012.

20 The instant preliminary injunction motion, filed alongside the Complaint on February 8,  
 21 2012, seeks to enjoin Samsung’s Galaxy Nexus smartphone, which was released in the U.S. in  
 22 December 2011. Def.’s Opp’n to Mot. Prelim. Inj. (“Opp’n”) at 2. At the time this motion was  
 23 briefed, the Galaxy Nexus was the latest in Samsung’s Galaxy line of Android-based smartphones,  
 24 the first of which was released in 2009.<sup>1</sup> Opp’n at 2; Decl. of Christopher Vellturo (“Vellturo

25  
 26 <sup>1</sup> On June 6, 2012, the day before the scheduled hearing on this motion, Apple filed a Motion to  
 27 Supplement the Record Regarding Samsung’s Galaxy S III Product, seeking to expand the scope of  
 28 the requested injunction to include Samsung’s Galaxy S III smartphone, a smartphone that Apple  
 now also accuses of infringing the ’604 and ’647 patents. ECF No. 201. The Galaxy S III was  
 released in the United Kingdom on May 29, 2012, and had a U.S. release date of June 21, 2012.  
*See id.* On June 11, 2012, the Court denied Apple’s motion to supplement the record for this

1 Decl.”) ¶ 9 & Ex. 19. Android is a free, open-source mobile software platform developed by  
 2 Google, Inc. (“Google”) that any developer can use to create applications for mobile devices, and  
 3 that any handset manufacturer can install on a device. Opp’n at 2. Galaxy Nexus is the first  
 4 smartphone to run Android version 4.0, an operating system called “Ice Cream Sandwich,” and is  
 5 the first Android smartphone that will allow the phone to be interoperable with other Android-  
 6 based devices, including those running the Ice Cream Sandwich operating system. Velturo Decl. ¶  
 7 9. The version of Ice Cream Sandwich installed on the Galaxy Nexus is designed by Google.  
 8 Decl. of Sangbong Lee (“Sangbong Lee Decl.”) ¶¶ 3-4.

9 Apple accuses the Galaxy Nexus of infringing four patents: (1) the ’604 Patent, titled  
 10 “Universal Interface for Retrieval of Information in a Computer System,” which generally  
 11 describes a “unified search” feature; (2) the ’647 Patent, titled “System and Method for Performing  
 12 an Action on a Structure in Computer-Generated Data,” which generally describes a “links for  
 13 structures” feature; (3) the ’721 Patent, titled “Unlocking a Device by Performing Gestures on an  
 14 Unlock Image,” which generally describes a “slide to unlock” feature; and (4) the ’172 Patent,  
 15 titled “Method, System, and Graphical User Interface for Providing Word Recommendations,”  
 16 which generally describes a “word recommendations” or “auto correct” feature.

## 17 II. LEGAL STANDARD

18 Although the Patent Act authorizes district courts to grant injunctions to prevent the  
 19 infringement of patent rights, the owner of a valid and infringed patent is not entitled to an  
 20 injunction as a matter of right. *See* 35 U.S.C. § 283 (2006) (a federal court “*may* grant injunctions  
 21 *in accordance with the principles of equity* to prevent the violation of any right secured by patent,  
 22 on such terms as the court deems reasonable” (emphases added)); *eBay Inc. v. MercExchange,*  
 23 *L.L.C.*, 547 U.S. 388, 391-92 (2006). Rather, “the decision whether to grant or deny injunctive  
 24 relief rests within the equitable discretion of the district courts,” and “such discretion must be  
 25 exercised consistent with traditional principles of equity.” *eBay*, 547 U.S. at 394. The rule  
 26 enunciated in *eBay* is as applicable to preliminary injunctions as it is to permanent injunctions. *See*  
 27 \_\_\_\_\_  
 28 preliminary injunction motion with additional briefing or discovery regarding the Galaxy S III. *See*  
 ECF No. 213.

1 *Amoco Prod. Co. v. Vill. of Gambell, Ark.*, 480 U.S. 531, 546 n.12 (1987) (“The standard for a  
2 preliminary injunction is essentially the same as for a permanent injunction with the exception that  
3 the plaintiff must show a likelihood of success on the merits rather than actual success.”).  
4 Therefore, “[t]he grant or denial of a preliminary injunction under 35 U.S.C. § 283 is within the  
5 sound discretion of the district court.” *Abbott Labs. v. Andrx Pharms., Inc.*, 452 F.3d 1331, 1334  
6 (Fed. Cir. 2006) (citing *Amazon.com, Inc. v. Barnesandnoble.com*, 239 F.3d 1343, 1350 (Fed. Cir.  
7 2001)).

8 In light of the longstanding principles of equity that govern any request for injunctive relief,  
9 a party seeking a preliminary injunction must establish that: (1) it is likely to succeed on the merits  
10 of the underlying litigation; (2) it is likely to suffer immediate, irreparable harm in the absence of  
11 preliminary relief; (3) the balance of equities weighs in its favor; and (4) an injunction is in the  
12 public interest. *Winter v. Natural Res. Def. Council*, 555 U.S. 7, 20 (2008); *Abbott Labs.*, 452 F.3d  
13 at 1334 (citing *Polymer Techs., Inc. v. Bridwell*, 103 F.3d 970, 973 (Fed. Cir. 1996)). “[N]o one  
14 factor, taken individually, is necessarily dispositive.” *Chrysler Motors Corp. v. Auto Body Panels  
15 of Ohio, Inc.*, 908 F.2d 951, 953 (Fed. Cir. 1990). Rather, “the district court must weigh and  
16 measure each factor against the other factors and against the form and magnitude of the relief  
17 requested.” *Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1451 (Fed. Cir. 1988). Both the  
18 Supreme Court and the Federal Circuit have cautioned that because a preliminary injunction is  
19 granted before the defendant has had an opportunity to fully defend itself at trial, “a preliminary  
20 injunction is a drastic and extraordinary remedy that is not to be routinely granted.” *Intel Corp. v.  
21 ULSI Sys. Tech., Inc.*, 995 F.2d 1566, 1568 (Fed. Cir. 1993) (citing *Nutrition 21 v. United States*,  
22 930 F.2d 867, 869 (Fed. Cir. 1991); *Ill. Tool Works, Inc. v. Grip-Pak*, 906 F.2d 679, 683 (Fed. Cir.  
23 1990)); see *Munaf v. Geren*, 553 U.S. 674, 689-90 (2008) (“A preliminary injunction is an  
24 ‘extraordinary and drastic remedy’” that “is never awarded as of right.”) (quoting 11A Charles  
25 Alan Wright, Arthur R. Miller & Mary Kay Kane, *Federal Practice and Procedure* § 2948, at 129  
26 (2d ed. 1995)). Indeed, “a preliminary injunction . . . should not be granted unless the movant, *by a  
27 clear showing*, carries the burden of persuasion.” *Mazurek v. Armstrong*, 520 U.S. 968, 972 (1997)  
28 (emphasis in original) (internal quotation marks and citation omitted); see *Winter*, 555 U.S. at 22.

1 To establish a likelihood of success on the merits of its patent infringement claims, Apple  
2 must show that it will likely prove at trial that the Galaxy Nexus infringes “one or more claims of  
3 the patents-in-suit,” and must furthermore show that “at least one of those same allegedly infringed  
4 claims will also likely withstand the validity challenges presented” by Samsung. *Amazon.com*, 239  
5 F.3d at 1351; *accord Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir.  
6 2009). In assessing whether Apple has shown a likelihood of success on the merits, the Court  
7 views the evidence “in light of the burdens and presumptions that will inhere at trial.” *Titan Tire*,  
8 566 F.3d at 1376 (citing *Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal*, 546 U.S.  
9 418, 429 (2006)). Thus, with respect to infringement, Apple bears the burden of showing that it  
10 will likely prove at trial “by a preponderance of the evidence that one or more claims of the  
11 patent[s] read on the accused device literally or under the doctrine of equivalents.” *Cross Med.*  
12 *Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1310 (Fed Cir. 2005); *see also SRI*  
13 *Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1123 (Fed. Cir. 1985) (en banc). The  
14 parties’ burdens with respect to validity are somewhat different. Because a patent enjoys the same  
15 presumption of validity during preliminary injunction proceedings as it does at other stages of  
16 litigation, the initial burden of production is on Samsung, the alleged infringer, to come forward  
17 with evidence of invalidity. *Titan Tire*, 566 F.3d at 1377. If Samsung successfully does so, then  
18 Apple “has the burden of responding with contrary evidence, which of course may include analysis  
19 and argument,” and “persuad[ing] the court that, despite the challenge presented to validity,  
20 [Apple] nevertheless is likely to succeed at trial on the validity issue.” *Id.* If, “after weigh[ing] the  
21 evidence both for and against validity that is available at this preliminary stage in the proceedings .  
22 . . . the trial court concludes there is a ‘substantial question’ concerning the validity of the patent, . . .  
23 it necessarily follows that the patentee has not succeeded in showing it is likely to succeed at trial  
24 on the merits of the validity issue.” *Id.* at 1379. In other words, “[a] preliminary injunction should  
25 not issue if an alleged infringer raises a substantial question regarding either infringement or  
26 validity, i.e., the alleged infringer asserts an infringement or invalidity defense that the patentee has  
27 not shown lacks substantial merit.” *AstraZeneca LP v. Apotex, Inc.*, 633 F.3d 1042, 1050 (Fed.  
28 Cir. 2010).

**III. EVIDENTIARY ISSUES**

Samsung moves to strike the Reply Declaration of Dr. Christopher Velturo (“Velturo Reply Decl.”). *See* ECF No. 196. Samsung argues that this is new evidence that exceeds the scope of permissible rebuttal of Samsung’s opposition, and furthermore that Apple failed to timely produce Dr. Velturo for deposition. *Id.* at 2-3. Apple responds that: (1) Samsung’s objection is untimely under Civil Local Rule 7-3(d)(1); (2) Dr. Velturo’s Reply Declaration is responsive to Samsung’s arguments in opposition, and the attached exhibits are largely Samsung documents produced during discovery; and (3) Samsung could have sought an earlier deposition date for Dr. Velturo but instead delayed, and in any event Samsung has been at least equally uncooperative in producing its witnesses for deposition. *See* ECF No. 200 at 1-3.

As a general rule, new evidence presented in reply should not be considered without giving the non-movant an opportunity to respond. *See Provenz v. Miller*, 102 F.3d 1478, 1483 (9th Cir. 1996) (“[W]here new evidence is presented in a reply to a motion for summary judgment, the district court should not consider the new evidence without giving the non-movant an opportunity to respond.” (alteration and citation omitted)). After reviewing the declarations, evidence, and arguments at issue in Samsung’s objections, however, the Court finds that the evidence presented by Apple in Dr. Velturo’s Reply Declaration is not “new,” but rather appropriately responsive to arguments and evidence raised by Samsung in its opposition papers, in particular. In particular, the evidence is offered in rebuttal to Samsung’s argument that Apple is unlikely to be irreparably harmed absent an injunction. Moreover, the vast majority of exhibits attached to the Velturo Reply Declaration are Samsung’s own documents, which were produced during discovery. Accordingly, Samsung’s objection is **OVERRULED**.

On June 1, 2012, and June 4, 2012, without seeking leave of the Court, Samsung filed two additional declarations in support of its opposition to Apple’s motion for a preliminary injunction. *See* ECF Nos. 195, 198. Apple objects to these two submissions as untimely and in violation of Civil Local Rule 7-3(d), which prohibits the filing of “additional memoranda, papers or letters” after a reply is filed, absent leave of the Court. *See* ECF No. 206 at 1. Because Samsung filed these two untimely declarations without leave of the Court, Apple’s objection is **SUSTAINED**.

#### 1 IV. DISCUSSION

##### 2 A. Likelihood of Success on the Merits

3 To establish a likelihood of success on the merits, “a patentee . . . ‘must demonstrate that it  
4 will likely prove infringement of one or more claims of the patents-in-suit, and that at least one of  
5 those same allegedly infringed claims will also likely withstand the validity challenges presented  
6 by the accused infringer.’” *AstraZeneca*, 633 F.3d at 1050 (quoting *Amazon.com*, 239 F.3d at  
7 1351). For the reasons discussed below, the Court concludes that Apple has shown that the ’604  
8 Patent, ’647 Patent, ’721 Patent, and ’172 Patent are likely valid and infringed.

##### 9 1. U.S. Patent No. 8,086,604 (Unified Search)

10 U.S. Patent No. 8,086,604 (“the ’604 Patent”), entitled “Universal Interface for Retrieval of  
11 Information in a Computer System,” was filed on December 1, 2004, and issued to Apple on  
12 December 27, 2011, as a continuation of U.S. Patent No. 6,847,959, which was filed on January 5,  
13 2000. ’604 Patent; Decl. of Dr. Nathaniel Polish Concerning U.S. Patent No. 8,086,604 (“Polish  
14 Decl.”) ¶ 38.

15 The ’604 Patent is directed to a universal computer interface that allows a user quickly to  
16 retrieve different types of desired information located on any of the various storage media  
17 accessible to the user’s computer system, including both the computer’s hard drive and the Internet,  
18 using a single, unified search interface. More specifically, the ’604 Patent is directed to “a  
19 universal interface which uses a plurality of heuristic algorithms to identify an item of information  
20 (e.g., document, application or Internet web page) in response to at least one information  
21 descriptor.” ’604 Patent 1:18-21.

22 The invention disclosed in the ’604 Patent overcomes two different problems in the prior  
23 art, both relating to a computer user’s need to quickly search for desired information. First, prior  
24 art did not provide for a single interface allowing a computer user to search for desired information  
25 across different types of information storage systems. *Id.* at 2:9-13. For example, some computer  
26 operating systems provided interfaces for searching for files stored locally on a computer.  
27 Meanwhile, web browser applications enabled a user to utilize search engines provided by various  
28 websites. However, there had been no combination of desktop find routines that presented a single

1 interface allowing a user to search simultaneously across different types of information storage  
2 systems. *See id.* Thus, a user had to access a different interface to search for different types of  
3 information depending on that information's stored location.

4 Second, the prior art lacked sufficient search criteria to effectively filter information  
5 available, often yielding long and cumbersome keyword-based search results. *Id.* at 1:40-45; *id.* at  
6 1:60-2:4. The inventors of the '604 Patent identified a need for technology that "allows the  
7 computer to help the user determine such additional criteria or to automatically provide additional  
8 criteria, so that search results have a higher percentage of items that are of interest to the user." *Id.*  
9 at 2:1-4. Prior to the '604 Patent, "there [had been] no program which [was] able to process the  
10 user's input and then determine, using many different factors, including use of the Internet, the  
11 intent of the user as to the file to be retrieved." *Id.* at 2:14-17. To that end, the '604 Patent is  
12 directed to a universal computer interface that employs a plurality of "heuristic algorithms" to help  
13 filter the user's searches across multiple information storage systems and to display only the most  
14 relevant search results, thereby making a user's search more efficient and personalized.

15 In one preferred embodiment, the '604 system relies on a "retrieval manager" component  
16 that receives search terms from the user, either in the form of text or speech, and dispatches that  
17 input to a plurality of "plug-in modules." *See id.* at 4:1-12 & Fig. 2. Each of these modules has an  
18 associated heuristic search algorithm, which the module employs to locate information within the  
19 module's respective area of search that is responsive to the user's input. *See id.* at 4:24-25. For  
20 instance, one module may be configured to search the titles of local documents that pertain to the  
21 search terms. Another module may be configured to index and search the contents of locally stored  
22 files for relevant matches. A third module may search a list of the most recently accessed files,  
23 applications, and web sites. A fourth module may employ a search engine to locate Internet web  
24 pages whose content matches the user's search terms. *See id.* at 4:15-23. The results from the  
25 modules are returned to the retrieval manager, which in turn presents the results to the user,  
26 potentially after employing an additional heuristic to determine which results are most relevant.  
27 *See id.* at 4:26-30. The '604 system enables searching to occur on portions of the user's input as  
28

1 they are received, potentially returning relevant results before the user has entered the complete  
2 search terms. *See id.* at 6:55-7:5; *id.* at 10:17-22.

3 Apple accuses Samsung's Galaxy Nexus phones of infringing claims 6 and 19 of the '604  
4 Patent by enabling a user to perform searches across multiple information sources, using a variety  
5 of heuristic algorithms, with a single interface. The accused feature in the Galaxy Nexus is the  
6 Google Quick Search Box ("QSB"). Polish Decl. ¶¶ 13, 49-76; *id.* Ex. 3. Claim 6 of the '604  
7 Patent recites:

8 An apparatus for locating information in a network, comprising:  
9 an interface module configured to receive an inputted information descriptor  
10 from a user-input device;  
11 a plurality of heuristic modules configured to search for information that  
12 corresponds to the received information descriptor, wherein:  
13 each heuristic module corresponds to a respective area of search and  
14 employs a different, predetermined heuristic algorithm  
15 corresponding to said respective area, and  
16 the search areas include storage media accessible by the apparatus;  
17 and  
18 a display module configured to display one or more candidate items of  
19 information located by the plurality of heuristic modules on a display  
20 device.

21 '604 Patent 8:26-41. Claim 19 of the '604 Patent recites:

22 The apparatus of claim 6, wherein the interface module is configured to receive  
23 portions of the information descriptor as the portions are being inputted, and  
24 wherein the heuristic modules are configured to search for information that  
25 corresponds to the portions of the information descriptor as the portions  
26 are being received.

27 *Id.* at 10:17-22. The '604 Patent has not previously been asserted in any litigation, nor has it been  
28 previously construed by any court or adjudicator. Polish Decl. ¶ 48.

#### 29 a. Infringement

30 Determining patent infringement involves a two-step process. Claim construction is the  
31 first step, wherein the court resolves any disputes regarding the meaning and scope of the claim  
32 terms, "and when necessary [explains] what the patentee covered by the claims, for use in the  
33 determination of infringement." *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed.  
34 Cir. 1997). Claim construction is a question of law to be determined by the court. *Markman v.*

1 *Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370  
2 (1996). In the second step, the trier of fact must “determine[] whether every claim limitation, or its  
3 equivalent, is found in the accused device.” *Roche Palo Alto LLC v. Apotex, Inc.*, 531 F.3d 1372,  
4 1377 (Fed. Cir. 2008) (citation omitted).

### 5 **i. Claim Construction**

6 Here, the parties disagree as to the meaning of two claim terms that appear in claims 6 and  
7 19: (1) “each” of a plurality of heuristic modules; and (2) “heuristic algorithm.” Where the parties  
8 dispute the scope of a claim term, the court has a duty to construe the term. *O2 Micro Int’l Ltd. v.*  
9 *Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361-62 (Fed. Cir. 2008). A claim term is generally  
10 given its “ordinary and customary meaning,” that is, “the meaning that the term would have to a  
11 person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*,  
12 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc). In construing disputed terms, the court looks  
13 first to the claims themselves, read in context, for “[i]t is a ‘bedrock principle’ of patent law that  
14 ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’”  
15 *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111,  
16 1115 (Fed. Cir. 2004)). Importantly, however, “the person of ordinary skill in the art is deemed to  
17 read the claim term not only in the context of the particular claim in which the disputed term  
18 appears, but in the context of the entire patent, including the specification.” *Id.* at 1313; *see also*  
19 *Markman*, 52 F.3d at 979 (claims must be read “in view of the specification, of which they are a  
20 part”). Because the specification must contain a description of the invention sufficiently clear “to  
21 teach and enable those of skill in the art to make and use the invention,” *Phillips*, 415 F.3d at 1323,  
22 the specification is “‘always highly relevant’” and “‘[u]sually [] dispositive; it is the single best  
23 guide to the meaning of a disputed term,’” *id.* at 1315 (quoting *Vitronics Corp. v. Conception,*  
24 *Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *accord Eon-Net LP v. Flagstar Bancorp*, 653 F.3d  
25 1314, 1320 (Fed. Cir. 2011).

26 The court should also consider, if it is in evidence, the patent’s prosecution history, which  
27 consists of the complete record of proceedings before the United States Patent and Trademark  
28 Office (“PTO”) and includes the prior art references cited during the examination. *Phillips*, 415

1 F.3d at 1317. Although the prosecution history is generally less useful than the specification for  
 2 claim construction, the prosecution history nevertheless “can often inform the meaning of the claim  
 3 language by demonstrating how the inventor understood the invention and whether the inventor  
 4 limited the invention in the course of prosecution, making the claim scope narrower than it  
 5 otherwise would be.” *Id.* (internal citations omitted). For example, “where the patentee has  
 6 unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution  
 7 disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the  
 8 surrender.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003).

9 Finally, the court is also authorized to consider extrinsic evidence in construing claims,  
 10 such as “expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at  
 11 980. While the court may look to sources extrinsic to the patent and prosecution history, such  
 12 evidence is considered “less significant than the intrinsic record” and “less reliable than the patent  
 13 and its prosecution history in determining how to read claim terms.” *Phillips*, 415 F.3d at 1317-18  
 14 (internal quotation marks and citation omitted). Thus, while extrinsic evidence may be useful in  
 15 claim construction, ultimately “it is unlikely to result in a reliable interpretation of patent claim  
 16 scope unless considered in the context of the intrinsic evidence.” *Id.* at 1319. Any expert  
 17 testimony “that is clearly at odds with the claim construction mandated by the claims themselves,  
 18 the written description, and the prosecution history” will be significantly discounted. *Id.* at 1318  
 19 (quoting *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998)).

20 **(a) “each” of a plurality of heuristic modules**

21 The parties disagree as to the scope of the limitation that the apparatus must comprise “a  
 22 plurality of heuristic modules . . . wherein: each heuristic module corresponds to a respective area  
 23 of search and employs a different, predetermined heuristic algorithm,” which appears in  
 24 independent claim 6 and, by incorporation, dependent claim 19 of the ’604 Patent. ’604 Patent  
 25 8:30-35; *see id.* at 10:17-22. Samsung argues that this claim limitation should be construed as  
 26 requiring that, “however many heuristic modules there are, each one must use a different  
 27 algorithm,” i.e., “every algorithm must be different.” Opp’n at 9 (citing Decl. of Dr. Jaime  
 28 Carbonell (“Carbonell Decl.”) ¶ 98); *id.* at 10. Under Samsung’s proposed construction, the

1 limitation is satisfied only if *every* heuristic module employs a different heuristic search algorithm  
2 from the other modules. *Id.*

3 Apple, by contrast, rejects the notion that “each” in this context means “every.” Instead,  
4 Apple argues that the term “each” must be read in reference to the preceding phrase, “a plurality of  
5 heuristic modules,” such that the claim requires only that each of a plurality of heuristic modules  
6 (i.e., at least two) uses a different heuristic algorithm. Under Apple’s proposed construction, the  
7 limitation is satisfied so long as “each of at least two modules (i.e., a plurality) employs a different  
8 algorithm, regardless of what additional ones do.” Pl.’s Reply Br. in Supp. of Mot. Prelim. Inj.  
9 (“Reply”) at 2.

10 Applying the basic principles of claim construction described above to this disputed claim  
11 term, the Court concludes that the claim language and specification support Apple’s proposed  
12 construction, and that Samsung has pointed to no prosecution disclaimer or other evidence that  
13 warrants a contrary construction. The claim language recites an apparatus *comprising*, among  
14 other things, “a plurality of heuristic modules.” ’604 Patent 8:26-30. The term “plurality” means  
15 “at least two.” *ResQNet.com, Inc. v. Lansa, Inc.*, 346 F.3d 1374, 1382 (Fed. Cir. 2003); *see York*  
16 *Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1575 (Fed. Cir. 1996) (“The term  
17 means, simply ‘the state of being plural.’”). Claim 6 imposes a further limitation on the “plurality  
18 of heuristic modules,” requiring that “each heuristic module . . . employs a different, predetermined  
19 heuristic algorithm.” *Id.* 8:33-35. Thus, the claim language supports Apple’s argument that the  
20 “each” requirement modifies “plurality of heuristic modules.” Consistent with Federal Circuit  
21 precedent, “each” of “a plurality of heuristic modules” means “each of at least two modules,” not  
22 “each of every module.” *See ResQNet*, 346 F.3d at 1382 (construing “each of a plurality of fields”  
23 to mean “each of at least two fields,” not “every field”).

24 Furthermore, “comprising” indicates an open-ended transition term that “is well understood  
25 to mean ‘including but not limited to.’” *CIAS Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360  
26 (Fed. Cir. 2007). The use of the term “comprising” in claim 6 signifies that the claim ““does not  
27 exclude additional, unrecited elements or method steps.”” *Id.* (quoting *Georgia-Pacific Corp. v.*  
28 *United States Gypsum Co.*, 195 F.3d 1322, 1327-28 (Fed. Cir. 1999)). Thus, the Court agrees with

1 Apple that the presence of additional, identical heuristic algorithms, beyond the required two  
2 different heuristic algorithms, does not remove an accused device from the scope of the '604  
3 Patent. In light of the plain meaning of "each" as used in claim 6, the Court finds inapposite  
4 Samsung's citation to *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 264 F.3d 1326, 1332 (Fed.  
5 Cir. 2001), for the proposition that the accused device cannot include additional elements  
6 inconsistent with the claim limitations. See Opp'n at 12. Here, the presence of additional, non-  
7 unique heuristic algorithms beyond the requisite two different ones is not inconsistent with the  
8 limitations of claim 6, because claim 6 requires only that "each of at least two" heuristic modules  
9 employ different heuristic algorithms, not that "every" heuristic module employ a different  
10 heuristic algorithm.

11 Samsung argues that the specification does, in fact, support its proposed construction,  
12 pointing to a disclosed embodiment wherein "[t]he heuristic of each plug-in module is different."  
13 '604 Patent 5:13-14. The Court disagrees. It is a well-established principle of claim construction  
14 that "[w]hen consulting the specification to clarify the meaning of claim terms, courts must not  
15 import limitations into the claims from the specification." *Trading Techs. Int'l, Inc. v. eSpeed,*  
16 *Inc.*, 595 F.3d 1340, 1352 (Fed. Cir. 2010) (citing *Abbotts Labs. v. Sandoz, Inc.*, 566 F.3d 1282,  
17 1288 (Fed. Cir. 2009)). Courts must not limit the broader claim language to a disclosed preferred  
18 embodiment "unless the patentee has demonstrated a clear intention to limit the claim scope using  
19 'words or expressions of manifest exclusion or restriction.'" *Liebel-Flarsheim Co. v. Medrad, Inc.*,  
20 358 F.3d 898, 906 (Fed. Cir. 2004) (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313,  
21 1327 (Fed. Cir. 2002)). Here, Apple has manifested no clear intention to limit the claim scope to  
22 the second embodiment disclosed in the specification. To the contrary, the specification elsewhere  
23 describes an embodiment comprised of "a plurality of plug-in modules 22<sub>1</sub>-22<sub>n</sub>," wherein "[e]ach  
24 plug-in module has *an associated* heuristic which it employs to locate information that corresponds  
25 to the user input." '604 Patent 4:12-15 (emphasis added). Had the inventors intended to require  
26 not simply an associated heuristic, but a *different* heuristic algorithm for every plug-in module,  
27 they knew how to and would have so specified. Indeed, Apple's statements during prosecution of  
28 the '604 Patent confirm that the portion of the specification on which Samsung focuses is but "one

1 embodiment,” and not an exhaustive or delimiting description of the claim scope. *See* Carbonell  
2 Decl. Ex. EE [Oct. 23, 2007 Remarks] at 11 (Apple describing the invention as disclosing “a  
3 plurality of plug-in modules 22<sub>1</sub>-22<sub>n</sub>, each plug-in module having an associated heuristic algorithm  
4 . . . ,” and then explaining that “[i]n one embodiment, the heuristic algorithm of each plug-in  
5 module is different”).

6 Finally, Samsung has cited nothing from the prosecution history that contradicts the plain  
7 and ordinary meaning of the claim term, as analyzed above, or that otherwise supports Samsung’s  
8 position. Samsung relies on two Federal Circuit cases, *In re Skvorecz*, 580 F.3d 1262 (Fed. Cir.  
9 2009), and *Board of Regents v. BENQ America Corp.*, 533 F.3d 1362 (Fed. Cir. 2008), but both  
10 cases are readily distinguishable. In *In re Skvorecz*, the Federal Circuit reversed an anticipation  
11 rejection by the PTO upon finding that the applicant had argued for a narrow claim scope,  
12 requiring “each wire leg” of a wire chafing stand to have a laterally displacing offset. 580 F.3d at  
13 1267-68. In *Board of Regents*, the prosecution history narrowly defined the claim term “each pre-  
14 programmed code” in order to overcome anticipation by the prior art. 533 F.3d at 1373. The  
15 Federal Circuit held that the Board could not then “rely on the word ‘comprising’ to broaden the  
16 scope of a claim phrase that was limited during prosecution so as to gain allowance of the patent.”  
17 *Id.*

18 Here, by contrast, Samsung has adduced no evidence that Apple argued for a narrow claim  
19 scope during prosecution that would preclude the broad construction apparent on the face of the  
20 patent. Samsung argued at the June 7, 2012 hearing that Apple distinguished U.S. Patent No.  
21 7,020,670 to Andreoli, et al. (“Andreoli”) during prosecution on the basis of the “each” limitation.  
22 June 7, 2012 Hr’g Tr. (“Tr.”) at 27:12-28:2. Samsung points to an excerpt from Apple’s response  
23 to an Office Action dated July 23, 2007, in which Apple argued to the PTO that “Andreoli does not  
24 describe, however, that *each* of the local and remote search operations employ a different heuristic  
25 algorithm to search an associated relevant area of search for information that corresponds to the  
26 search request, in accordance with amended claim 1.” Carbonell Decl. Ex. EE [Oct. 23, 2007  
27 Remarks] at 13. The following sentence, however, provides the context for Apple’s prosecution  
28 statement: “That is, the algorithms described in Andreoli and referenced by the Office go to the

1 formation of the search request and not to how the local and remote search operations employed by  
 2 the processor perform a search of the repositories on the network.” *Id.* This contextual sentence,  
 3 as well as the context provided by Apple’s other comments in response to various Office Actions,  
 4 in which Apple discusses at length Andreoli’s failure to disclose a plurality of *heuristic* as opposed  
 5 to merely *logical* algorithms, makes clear that Apple was not distinguishing Andreoli based on the  
 6 narrow construction of “each” that Samsung advocates. *See generally* Carbonell Decl. Ex. EE.  
 7 Thus, as in *ResQNet*, “[the] prosecution record evinces no ‘clear and unmistakable’ disavowal of  
 8 claim scope that would compel a result different than the claim language.” *ResQNet*, 346 F.3d at  
 9 1383 (citing *Omega Eng’g*, 334 F.3d at 1326).

10 Accordingly, this Court construes “a plurality of heuristic modules . . . wherein: each” in  
 11 claim 6 and dependent claim 19 of the ’604 Patent to mean “each of at least two heuristic modules”  
 12 and not “each of every heuristic module.”

13 **(b) “heuristic algorithm”**

14 Although the parties do not specifically brief claim construction of the terms “heuristic” or  
 15 “heuristic algorithm,” which appear in claim 6 and, by incorporation, dependent claim 19,  
 16 Samsung insists that the parties’ understanding of this important claim term diverges and that  
 17 construction is therefore necessary. Samsung argues that a “heuristic” “has to be based on some  
 18 human judgment or human knowledge.” Tr. at 30:14-15. Thus, under Samsung’s proposed  
 19 construction, a “heuristic algorithm” is “limited to algorithms that employ a ‘rule of thumb’ or  
 20 some prior specific human knowledge, or one of several items of human judgment embedded in the  
 21 algorithm.” Carbonell Decl. ¶ 84. Apple has been less than clear as to how, exactly, it defines  
 22 “heuristic.” Apple’s expert Dr. Nathaniel Polish (“Dr. Polish”) does not set forth a claim  
 23 construction analysis, but he at times appears to use the term as meaning something that  
 24 “attempt[s] to get the searcher what she is looking for within [its] particular area of search.” Reply  
 25 Decl. of Dr. Nathaniel Polish (“Polish Reply Decl.”) ¶ 43; *but see* Decl. of Daniel C. Posner  
 26 (“Posner Decl.”) Ex. 3 [Polish Dep.] at 50:7-24 (explaining that he applied an understanding of  
 27 “heuristic algorithm” as “a rule of thumb or an algorithm that would give you a result that would  
 28 help you towards your answer”). When pressed at the hearing for its proposed construction of

1 “heuristic,” Apple responded that it is “a rule of thumb . . . it’s a best guess of what the result is.”  
2 Tr. at 32:4-8; *see also id.* at 35:3-5 (defining a “heuristic algorithm” as “an algorithm that is  
3 designed to provide the best guess, based on the information, of what the user is looking for”). To  
4 the extent the parties appear to disagree as to the scope of this claim term, the Court has a duty to  
5 construe it. *See O2 Micro*, 521 F.3d at 1361-62.

6 The term “heuristic algorithm” appears frequently throughout the claim terms and the  
7 remainder of the specification. Claim 6 recites: “a plurality of heuristic modules configured to  
8 search for information that corresponds to the received information descriptor, wherein: each  
9 heuristic module corresponds to a respective area of search and employs a different, predetermined  
10 heuristic algorithm corresponding to said respective area.” ’604 Patent 8:30-35. It is a bedrock  
11 principle of claim construction that “[c]laims must be ‘interpreted with an eye toward giving effect  
12 to all terms in the claim.’” *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249,  
13 1257 (Fed. Cir. 2010) (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006)).  
14 Applying that principle to claim 6, it is apparent that “heuristic module” and “heuristic algorithm”  
15 correspond to different requirements. Thus, to the extent Apple implies that any search algorithm  
16 employed within a respective area of search is heuristic simply by virtue of its association with a  
17 corresponding “heuristic module,” the Court declines to adopt a construction of “heuristic  
18 algorithm” that would render the “heuristic” modifier superfluous. *See id.*; *Elekta Instrument S.A.*  
19 *v. O.U.R. Scientific Int’l, Inc.*, 214 F.3d 1302, 1305-07 (Fed. Cir. 2000) (refusing to adopt a claim  
20 construction that would render claim language superfluous). In other words, a module is not  
21 “heuristic” simply because it employs a “heuristic algorithm,” nor is an algorithm “heuristic”  
22 simply because it is employed by a “heuristic module.”

23 However, the Court is still left with the task of construing “heuristic algorithm.” The  
24 specification is not particularly illuminating in this regard. In the Detailed Description of the  
25 Invention, the inventors describe their invention as “a universal interface in which user inputs are  
26 received and provided to a plurality of separate heuristic algorithms to locate at least one item of  
27 information.” ’604 Patent 3:26-29. The specification goes on to explain that an information  
28 retrieval manager dispatches the user input to a plurality of plug-in modules, each of which has an

1 associated heuristic for searching within its respective search area. *Id.* at 4:11-15, 4:24-25. Once  
2 the modules have obtained search results responsive to the user input, the modules send the results  
3 back to the retrieval manager, which may then employ additional global heuristics to determine  
4 what results to provide to the user. *See id.* at 3:26-30, 5:54-56. Although the specification refers  
5 frequently to the use of “heuristics” to conduct the searches within each module’s search area, the  
6 specification does not provide further explanation as to how “heuristics” is defined.

7 The Court therefore turns next to the file history. During prosecution of the ’604 Patent,  
8 there were five sets of amendments to claim 6. *See* Carbonell Decl. Ex. EE. Of particular  
9 importance are Apple’s arguments to the Examiner that prior art U.S. Patent No. 7,020,670 to  
10 Andreoli et al. (“Andreoli”) does not anticipate because Andreoli fails to disclose a plurality of  
11 modules, each of which employs a “different heuristic algorithm.” *See generally* Carbonell Decl.  
12 Ex. EE. In response to the Office Action dated July 23, 2007 rejecting all then-pending claims,  
13 Apple distinguished Andreoli based on Andreoli’s use of logical, “constraint satisfaction  
14 algorithm[s],” rather than heuristic algorithms. Carbonell Decl. Ex. EE [Oct. 23, 2007 Remarks] at  
15 13. Apple clearly disavowed Andreoli’s way of processing search requests, namely “formulating  
16 the requests using logic as a common language. In particular, Andreoli describes using logic  
17 fragments, called ‘feature constraints,’ and efficient constraint solving algorithms.” *Id.* Ex. EE  
18 [Oct. 23, 2007 Remarks] at 12-13 (citation omitted). In response to an Office Action dated January  
19 25, 2008, rejecting all then-pending claims, Apple again emphasized the use of different heuristic  
20 algorithms and argued that the algorithms disclosed in Andreoli differed only logically, not  
21 heuristically:

22 [C]onstraint satisfaction algorithms used by the brokers are based on the same  
23 search request and feature constraints. But these algorithms only logically differ  
24 from one another – not heuristically. As such, each broker does not employ “a  
25 different heuristic algorithm” for each repository searched. Therefore, Andreoli  
26 does not teach or suggest Applicant’s claimed “plurality of heuristic modules . . .  
employ[ing] a different heuristic algorithm corresponding to said respective area to  
search.”

27 Carbonell Decl. Ex. EE [Apr. 23, 2008 Remarks] at 8 (second alteration in original) (emphases  
28 omitted). In light of Apple’s assertion that Andreoli does not anticipate because its method is

1 based on “‘classical logic’ in which constraints are ‘algorithmically decidable,’” the Court cannot  
2 adopt a construction of “‘heuristic algorithm” that would encompass purely constraint satisfaction  
3 algorithms. *See* Carbonell Decl. Ex. EE [December 11, 2008 Remarks] at 10-11.

4 Beyond that narrow distinction, however, it appears that Apple advocated for, and the  
5 Examiner accepted, a broad construction of the term “‘heuristic algorithm.” In support of a broad  
6 meaning, Apple offered a variety of dictionary definitions of “‘heuristic,” which “‘include, for  
7 example, ‘using or arrived at by a process of trial and error rather than set rules,’ ‘used to describe  
8 a computer program that can modify itself in response to the user,’ and ‘a helpful procedure for  
9 arriving at a solution *but not necessarily a proof.*’” *Id.* (citing Microsoft Corporation, *Encarta*  
10 *World English Dictionary* (1999)) (emphasis in original). Apple also argued to the examiner that:

11 a “‘heuristic” is [a] “‘rule of thumb,’ based on domain knowledge from a particular  
12 application, that gives guidance in the solution of a problem. Unlike algorithms,  
13 heuristics cannot have proven performance bounds owing to their open-ended  
14 dependence on specific application knowledge; an example is ‘if the sky is cloudy  
then carry an umbrella.’ Heuristics may thus be very valuable most of the time but  
their results or performance cannot be guaranteed.”

15 *Id.* (citing John Dantith, *A Dictionary of Computing* (2004)). Ordinarily, “‘the rule that a court will  
16 give a claim term the full range of its ordinary meaning does not mean that the term will  
17 presumptively receive its broadest dictionary definition or the aggregate of multiple dictionary  
18 definitions.” *Free Motion Fitness, Inc. v. Cybex Int’l, Inc.*, 423 F.3d 1343, 1348-49 (Fed. Cir.  
19 2005) (internal citations omitted). Nonetheless, the dictionary definitions offered here are not  
20 extrinsic evidence but rather are part of the intrinsic record. Thus, Apple’s reliance on broad  
21 dictionary definitions, even while distinguishing the ’604 Patented invention from Andreoli, carries  
22 considerable weight.

23 Although Samsung argues that a heuristic algorithm may require “‘some prior specific  
24 human knowledge, or one of several items of human judgment embedded in the algorithm,”  
25 Carbonell Decl. ¶ 84, the Court finds no support for this construction in the intrinsic record or  
26 otherwise. Given that both parties appear to agree that a heuristic algorithm is one that employs a  
27 “‘rule of thumb,” for purposes of ruling on the pending motion, the Court construes “‘heuristic  
28

1 algorithm” to mean “a search algorithm that employs some ‘rule of thumb’ and does not consist  
2 solely of constraint satisfaction parameters.”

3 **ii. Literal Infringement**

4 Having determined the scope of the asserted patent claims, the Court must next determine  
5 whether the claims read on the accused product. To prove infringement, Apple points to a screen  
6 capture of the Google Quick Search Box on the Galaxy Nexus where, upon entry of a search term,  
7 the user is presented with search results from a number of different search areas, including the  
8 Internet, contacts stored on the phone, and recently visited websites. Mot. at 13. In support of its  
9 claim of infringement, Apple produces the declaration of its expert, Dr. Polish, who opines that the  
10 Quick Search Box satisfies every limitation of and thus infringes claims 6 and 19 of the ’604  
11 Patent. Polish Decl. ¶¶ 13, 49-76; *id.* Ex. 3; *see* Polish Reply Decl. ¶¶ 30-57. The parties dispute  
12 only whether the Quick Search Box satisfies the following limitation: that the apparatus contain “a  
13 plurality of heuristic modules . . . wherein: each heuristic module corresponds to a respective area  
14 of search and employs a different, predetermined heuristic algorithm corresponding to said  
15 respective area.” ’604 Patent 8:30-35; *see* Opp’n at 11-12.

16 Because the Court adopts Apple’s construction of the claim term “each,” the Court rejects  
17 Samsung’s argument that the Quick Search Box does not infringe because Apple failed to analyze  
18 five of the eight search modules. *See* Opp’n at 12. For the same reason, Samsung’s argument that  
19 five of the eight search modules on the Quick Search Box (ApplicationsProvider, Books, Browser,  
20 Music, and Videos) [REDACTED]  
21 [REDACTED], and therefore all use the same algorithm, is unavailing. *See* Opp’n at 13 (citing Decl. of  
22 Bjorn Bringert (“Bringert Decl.”) ¶ 7). Under the Court’s construction of “each,” the Quick Search  
23 Box feature can infringe claims 6 and 19 of the ’604 Patent so long as at least two heuristic  
24 modules each employ a different heuristic algorithm, even if other heuristic modules employ non-  
25 unique heuristic algorithms. Thus, Samsung’s only remaining non-infringement argument is that  
26 Apple has failed to identify even two different “heuristic algorithms” corresponding to two  
27 different heuristic modules.  
28

1 Apple's expert Dr. Nathaniel Polish identifies eight different default search areas of the  
2 Quick Search Box that he asserts are the requisite "heuristic modules": (1) Google: Google Search  
3 suggestions; (2) Apps: Names of installed applications; (3) Books: Books in your library; (4)  
4 Browser: Bookmarks and web history; (5) Messaging: Text in your message; (6) Music: Artists,  
5 albums and tracks; (7) People: Names of your contacts; and (8) Videos: Rented movies. *See* Polish  
6 Decl. ¶ 61. Dr. Polish's infringement analysis focuses on only three of these eight modules: (1)  
7 Google search; (2) People; and (3) Browser history. Dr. Polish asserts that these three search  
8 modules satisfy the disputed limitation of claim 6 because they "map exactly to the examples in the  
9 patent specification." Polish Reply Decl. ¶ 21; *see also* Polish Decl. ¶ 66. Specifically, Apple  
10 asserts that "the Browser module . . . implements the heuristic module described in the patent  
11 specification as '[a] third module 22<sub>3</sub> [that] can maintain a list of the files, applications and web  
12 sites which were most recently accessed, and search this list for a match.' The People module . . .  
13 implements the heuristic module described in the patent specification as '[a] second module 22<sub>2</sub>  
14 [that] may index and search the contents of files on the local and/or network storage volumes.'  
15 Lastly, the Google module . . . implements the heuristic module described in the patent  
16 specification as, [y]et another module [that] might employ a search engine to locate Internet web  
17 pages which match the user input.'" Polish Reply Decl. ¶ 22 (alterations in original) (quoting '604  
18 Patent 4:17-23). Apple further asserts that the Galaxy Nexus infringes every element of claim 19  
19 of the '604 Patent because the Quick Search Box begins to provide search results as the user's  
20 information descriptor is incrementally inputted. *See* Polish Decl. ¶ 76.

21 The Court agrees with Samsung that Apple cannot rely on the mere fact that, for example,  
22 the Browser module "can maintain a list of the files, applications and web sites which were most  
23 recently accessed, and search this list for a match." Polish Reply Decl. ¶ 22. As discussed above  
24 in the Court's claim construction analysis, the sheer fact that the Browser module "search[es] this  
25 list for a match" reveals nothing about *how* it searches, i.e., whether it searches heuristically or not.  
26 As Apple's own expert admits, it is possible to search a "heuristic module" in a non-heuristic  
27 manner. *See* Posner Decl. Ex. E [Polish Dep.] at 106:19-25. Samsung argues that, even as to the  
28 three modules Dr. Polish analyzed, Dr. Polish failed to identify that any of them employed

1 *heuristic* algorithms, and he failed to identify any differences between the algorithms employed.  
2 *See* Carbonell Decl. ¶¶ 99-108. The Court therefore considers the infringement evidence presented  
3 by both parties with respect to each of the three modules in dispute.

4 With respect to the “Google” search module, Apple’s expert Dr. Polish asserts that the  
5 Google Search Suggestions module utilizes the Google search engine to generate results, and that  
6 the Google search module employs a different, predetermined heuristic algorithm than the one  
7 employed by the People or Browser modules. Polish Decl. ¶¶ 65-66. Samsung’s expert Dr.  
8 Carbonell effectively conceded during his deposition that the Google and People modules use  
9 different algorithms. Dr. Carbonell explained that, although he had not seen the algorithm internal  
10 to the Google search module because such code is proprietary to Google, he “believe[d]” that the  
11 Google and People modules employed different algorithms “because the people list of contacts is  
12 much smaller and more restricted [than the Google module].” Polish Reply Decl. Ex. 2 [Carbonell  
13 Dep.] at 138:20-139:8.

14 Apple’s burden, however, is to establish that the Google and People search algorithms are  
15 not only different, but different and heuristic. In support of its assertion that the Google module  
16 employs a heuristic algorithm, Apple points to various excerpts from Dr. Carbonell’s deposition  
17 that Apple views as conceding as much, claiming that “Dr. Carbonell testified that Internet search  
18 engine results are heuristic.” Polish Reply Decl. ¶ 52. While Apple’s characterization of Dr.  
19 Carbonell’s testimony appears compelling on its face, it misconstrues the factual record. The  
20 relevant portion of Dr. Carbonell’s testimony concerns only the algorithms employed by AltaVista,  
21 Lycos, and Yahoo! in the 1990s. Polish Reply Decl. Ex. 2 at 251:10-22. Moreover, Samsung’s  
22 expert does not opine on whether the Google search module employs a heuristic algorithm, and  
23 during his deposition, he refused to comment on the algorithm employed by Google due to his lack  
24 of personal knowledge. *See* Carbonell Decl. ¶ 106; Polish Reply Decl. Ex. 2 [Carbonell Dep.] at  
25 136:10-137:1. The source code used by the remote Google servers to generate responses is  
26 “proprietary to Google and kept confidential; it is not part of Ice Cream Sandwich and it is not  
27 available in the Android Open Source Project,” which perhaps explains why neither party’s expert  
28

1 was able to analyze the Google search engine source code for purposes of this motion. Bringert  
2 Decl. ¶ 6.

3 While one could perhaps infer that the Google search engine likewise employs heuristics  
4 from Dr. Carbonell's testimony about the heuristic mechanisms of other Internet search engines in  
5 the 1990s, Apple has offered no corroborating evidence that would raise such an inference above  
6 the level of mere speculation. Neither Samsung's expert nor Apple has established any  
7 relationship between the search algorithms used in AltaVista, Lycos, and Yahoo! in the 1990s, and  
8 the search algorithm used in the Google search engine today. Apple's own expert offers no  
9 testimony based on personal knowledge of Google's search engine, nor does he even offer  
10 testimony on search engines generally from which an inference about Google's search algorithms  
11 could be drawn. *See* Posner Decl. Ex. E at 111:15-20 (Q: Do you know what the algorithm is that  
12 corresponds to the search area of Google Search suggestions? A: I'd have to look at the code.  
13 Sitting here, I can't – I can't lay out for you what it is."). "[I]t is well settled that an expert's  
14 unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue  
15 of material fact." *Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1046 (Fed. Cir. 2000)  
16 (citation omitted). "A party may not avoid that rule by simply framing the expert's conclusion as  
17 an assertion that a particular critical claim limitation is found in the accused device." *Id.* (citing  
18 *Phillips Petroleum Co. v. Huntsman Polymers Corp.*, 157 F.3d 866, 876 (Fed. Cir. 1998)).  
19 Applying the burdens that would inhere at trial, the Court cannot say that Apple has shown a  
20 likelihood of proving by a preponderance of the evidence that the Google module on the Quick  
21 Search Box employs a heuristic algorithm.

22 With respect to the "People" search module, Samsung submits a declaration from Google  
23 software engineer Bjorn Bringert, who explains that the People [REDACTED]  
24 [REDACTED]. Bringert Decl. ¶ 7. Dr. Carbonell examined portions  
25 of the publicly available Android 4.0 source code associated with the People search module, and  
26 stated his opinion that the [REDACTED]  
27 [REDACTED], "do[es] not incorporate a rule of thumb or any particular human knowledge specific to  
28 the problem or the data or to the user," and thus is not heuristic. Carbonell Decl. ¶¶ 105-07.

1 Relying on Dr. Carbonell’s analysis, Samsung argues that the People module does not employ a  
2 heuristic algorithm, and thus Apple cannot prove infringement.

3 Apple provides compelling rebuttal evidence and argument. Samsung’s expert admitted  
4 that he limited his review of the code simply to the use of [REDACTED] and did not look at the specific  
5 code internal to the [REDACTED] algorithm in order to determine its actual implementation on the Galaxy  
6 Nexus. Polish Reply Decl. ¶ 46; *id.* Ex. 2 [Carbonell Dep.] at 140:18-141:13. Samsung’s expert  
7 further conceded that a logical algorithm, such [REDACTED], “could  
8 be used as part of a heuristic algorithm” if a heuristic were added to it. *Id.* Ex. 2 at 142:12-143:10.  
9 Meanwhile, Apple’s expert Dr. Polish reviewed the source code for the People module and found  
10 that, as implemented with the SuggestionProvider Java interface required for all applications on the  
11 Galaxy Nexus, the People module does perform a heuristic search. Polish Reply Decl. ¶ 47.  
12 Specifically, the People module heuristically ranks search results based on the user’s past  
13 interactions, ranking contacts that the user has selected in the past three days, followed by contacts  
14 that the user has selected in the past thirty days, above all other contacts that might respond to the  
15 user’s search query. Polish Reply Decl. ¶¶ 47-51; *id.* Ex. 7 at 1-3. Samsung’s own expert agreed  
16 that a search that ranked results based on past user selection would be heuristic. *See* Polish Reply  
17 Decl. Ex. 2 at 86:20-87:4. Thus, the Court finds Apple has shown that the People module searches  
18 heuristically.

19 Finally, with respect to the “Browser” search module, Mr. Bringert explains that the  
20 Browser application performs [REDACTED]  
21 [REDACTED]. Bringert Decl. ¶ 7. The algorithm used in the  
22 Browser application is therefore different from the algorithm used in the People module.  
23 Nonetheless, Dr. Carbonell examined portions of the publicly available Android 4.0 source code  
24 associated with the Browser search module, and stated his opinion that the [REDACTED]  
25 [REDACTED] employed by the Browser search module “do[es] not incorporate a rule of thumb or  
26 any particular human knowledge specific to the problem or the data or to the user,” and thus is not  
27 heuristic. Carbonell Decl. ¶¶ 105-07.  
28

1 Apple's rebuttal evidence and argument with regard to the Browser module is not as strong  
2 as it is with regard to the People module. Nonetheless, Apple does present the relevant portion of  
3 the Browser module source code and explains that the operative SQLiteDatabase.query() method  
4 "builds the SQL query using a particular set of heuristics," and then orders the query results based  
5 on date last visited. See Polish Reply Decl. Ex. 7 at 4-5. The Court finds that, based on its broad  
6 construction of the term "heuristic algorithm," the [REDACTED] as  
7 employed by the Browser module satisfies the "heuristic algorithm" limitation. Returning results  
8 based on date last visited is not strictly a "constraint satisfaction" parameter. Rather, by ordering  
9 results based on the user's most recently visited sites, the Browser search algorithm employs a rule  
10 of thumb that the user is more likely searching for a recently visited site than a site bookmarked  
11 long ago. Furthermore, the Browser search algorithm employs this sorting heuristic based solely  
12 on the user's past conduct, i.e., sites that the user has most recently chosen to visit. Samsung's  
13 expert agreed that "[i]f the system were to store information about prior user preferences, such as  
14 the user having selected some results and having not selected other results, . . . [and] that precedent  
15 – that information was then compiled into the future selection process, [then] [t]hat would use  
16 human judgment" and would be heuristic. Polish Reply Decl. Ex. 2 [Carbonell Dep.] at 86:20-  
17 87:4. Thus, even under Samsung's narrower construction requiring "human judgment" – which the  
18 Court has rejected – the Browser search algorithm is arguably heuristic. Based on the evidence  
19 available at this time, the Court concludes that the Browser search algorithm is not purely a  
20 constraint satisfaction algorithm but rather employs a rule of thumb to find the results most likely  
21 of interest to the user.

22 In sum, the Court finds that Apple has shown that the People and Browser modules likely  
23 employ different heuristic algorithms. Thus, even though Apple has not shown that the Google  
24 module also employs a heuristic algorithm, Apple has shown that the Quick Search Box on the  
25 Galaxy Nexus likely has at least two heuristic modules employing two different, predetermined  
26 heuristic algorithms. The sole disputed limitation is therefore satisfied. Accordingly, the Court  
27 finds that Apple has shown that the Galaxy Nexus likely infringes the '604 Patent.

28 **b. Invalidity Based on Anticipation and Obviousness**

1 The presumptive validity of the '604 Patent can be rebutted only by clear and convincing  
 2 evidence to the contrary. *See* 35 U.S.C. § 282; *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 424 F.3d  
 3 1276, 1281 (Fed. Cir. 2005) (citation omitted). A patent claim is invalid by reason of anticipation  
 4 if “the invention was known or used by others in this country, or patented or described in a printed  
 5 publication in this or a foreign country, before the invention thereof by the applicant for patent.”  
 6 35 U.S.C. § 102(a). A claim is anticipated under 35 U.S.C. § 102, and thus invalid, “if each and  
 7 every limitation is found either expressly or inherently in a single prior art reference.” *Bristol-*  
 8 *Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1374 (Fed. Cir. 2001) (internal  
 9 quotation marks and citation omitted); *accord Eli Lilly & Co. v. Zenith Goldline Pharm., Inc.*, 471  
 10 F.3d 1369, 1375 (Fed. Cir. 2006). To anticipate, the prior art reference must also “enable one of  
 11 ordinary skill in the art to make the invention without undue experimentation.” *Bard Peripheral*  
 12 *Vascular, Inc. v. W.L. Gore & Assocs.*, 670 F.3d 1171, 1184 (Fed. Cir. 2012) (citation omitted).

13 Samsung argues that claims 6 and 19 of the '604 Patent are invalid as anticipated by two  
 14 different prior art references: (1) the Wide Area Information Server (“WAIS”) system, published  
 15 no later than 1994; and (2) U.S. Patent No. 6,005,565 to Legall (“Legall” or “the '565 Patent”),  
 16 titled “Integrated Search of Electronic Program Guide, Internet and Other Information Resources.”  
 17 Having considered the WAIS and Legall reference and the parties’ arguments, and for the reasons  
 18 discussed below, the Court concludes that Apple has met its burden regarding the validity of the  
 19 '604 patent. *See Titan Tire*, 566 F.3d at 1379-80.

#### 20 i. WAIS

21 The WAIS system was a client-server search system in existence by the early 1990s. WAIS  
 22 allowed users to search and access information across a number of databases with a single  
 23 interface. *See* Carbonell Decl. ¶ 111 & Ex. GG. Two descriptions of WAIS, *Overview of Wide*  
 24 *Area Information Servers* (“WAIS Overview”) and *WAIS, A Sketch of an Overview* (“WAIS  
 25 *Sketch*”), were published in April 1991 and September 1991, respectively. Carbonell Decl. ¶ 112;  
 26 *id.* Exs. GG [“WAIS Overview”], HH [“WAIS Sketch”]. *WAIS Overview* explains how WAIS  
 27 works as follows: “The servers take a users [sic] question and do their best to find relevant  
 28 documents. The servers, at this point, do not ‘understand’ the users [sic] [E]nglish language

1 question, rather they try to find documents that contain those words and phrases and ranks then  
2 [sic] based on heuristics.” Carbonell Decl. Ex. GG. The *WAIS Sketch* discloses a public protocol  
3 that allows user clients to communicate with database servers containing a wide variety of  
4 information.<sup>2</sup> Through a single interface, that user is able to search multiple databases, with each  
5 server performing its own underlying search algorithm. As *WAIS Sketch* makes clear, “since  
6 WAIS really just specifies the protocol for the client and server to use for communication, the  
7 underlying search on the server could just as well use various natural language queries upon its  
8 information.” Carbonell Decl. Ex. HH at 1. A third document, *freeWAIS-sf*, published in 1995,  
9 appears to be targeted at server developers, and discusses use of synonym matching heuristics in a  
10 manner that suggests widespread, but optional, use of synonym matching in servers’ search  
11 algorithms. Carbonell Decl. ¶ 125 & Ex. JJ at 19. Samsung argues that because some of these  
12 search algorithms could be heuristic, the WAIS system discloses every element of claim 6 of the  
13 ’604 Patent. To illustrate this, Samsung’s expert viewed a reconstructed operational system  
14 assembled by Lyle Bickley, a technical consultant, which demonstrated how a server administrator  
15 could construct synonym files that search for either synonyms or homonyms to the input query,  
16 thus importing human knowledge into the search mechanism. Carbonell Decl. ¶¶ 114, 124-30; *see*  
17 *generally* Decl. of Lyle Bickley (“Bickley Decl.”).

18 The Court is not convinced that WAIS discloses every limitation of claim 6 of the ’604  
19 Patent, namely the “plurality of heuristic modules” limitation. According to Apple’s expert,  
20 “[m]odules are small software programs that are parts of a larger application,” meaning they “must  
21 be part of the application and not some service or server to which the application connects.” Polish  
22 Reply Decl. ¶ 73. This understanding of “module” is supported by the patent specification, and  
23 Samsung does not contend otherwise. *See* ’604 Patent 7:31-35 (“Thus, if a search engine is  
24 designed for use on the Internet to locate particular types of web pages, a plug-in module can also  
25 be designed to access that search engine and return results to the information retrieval manager.”);  
26 *id.* at 4:22-23 (“Yet another module might employ a search engine to locate Internet web pages  
27

28 <sup>2</sup> Some information freely accessible with the WAIS protocol included a patent archive, a collection of molecular biology abstracts, a cookbook, and the CIA World Factbook.

1 which match the user input.”). That is, a module accesses or employs a search engine, but is not  
2 itself a search engine. As Apple’s expert explains, in a WAIS system, when a user inputs a search  
3 string, the software component on the client side sends an identical query to all servers, but there  
4 are no modules on the client side for sending queries that are tailored to each server. Polish Reply  
5 Decl. ¶ 74. Thus, WAIS fails to disclose at least the limitation of a “plurality of heuristic modules”  
6 that employ different heuristic algorithms, and therefore does not anticipate claims 6 and 19 of the  
7 ’604 Patent.

## 8 ii. Legall

9 Legall was issued December 21, 1999, based on an application filed March 25, 1997. It  
10 discloses a system for searching “an electronic program guide and other information resources with  
11 one search.” Carbonell Decl. Ex. FF [’565 Patent], Abstract. Legall teaches, for example, using  
12 this search tool on a TV to search for information on the TV’s electronic program guide (“EPG”)  
13 and on a variety of Internet search engines with a single search. Carbonell Decl. ¶¶ 145-59.  
14 Samsung argues that Legall discloses every limitation of claim 6 of the ’604 Patent. Apple  
15 responds that Legall is not anticipatory because it discloses only one component that is used for  
16 searching, and therefore does not disclose “a plurality of heuristic modules.” Polish Reply Decl. ¶¶  
17 27, 76-83. Apple further argues that even if Legall discloses a plurality of modules, Samsung’s  
18 expert admitted Legall did not necessarily disclose that each of a plurality of modules employs a  
19 different heuristic algorithm. *Id.*

20 The Court agrees with Apple that the Legall reference fails to anticipate the ’604 Patent.  
21 Although Legall is directed to addressing a similar problem as is the ’604 Patent – that is, being  
22 able to perform searches across a variety of information platforms – Legall does not disclose a  
23 “plurality of heuristic modules,” nor does it disclose the use of at least two different *heuristic*  
24 algorithms. The specification of Legall explains that “[a]fter a search is initiated using the active  
25 filter specified [], the search mechanism conducts a search of the World Wide Web 506, and the  
26 EPG 508. . . . Using the filter specified, the system automatically generates the query to perform  
27 the search on the web and/or on the EPG.” ’565 Patent 4:19-26. Thus, contrary to Samsung’s  
28 expert’s assertion that Legall discloses a plurality of heuristic modules, the specification reveals

1 only a single “search mechanism.” Furthermore, Dr. Carbonell admitted at his deposition that,  
2 according to the description in Legall, the search tool for the EPG may, but need not be, heuristic.  
3 The specification of Legall explains that “the search is performed on the EPG using a search tool.  
4 The search tool may be a simple text search tool or database search tool, or a tool specifically  
5 written for searching the EPG.” ’565 Patent 4:31-34. As Samsung’s expert concedes, a simple  
6 string match text search, as described in the Legall specification, would not be a heuristic  
7 algorithm. Polish Reply Decl. ¶ 81 & Ex. 2 at 236:1-7.

8 Accordingly, because Legall does not disclose the limitation of claim 6 that the apparatus  
9 comprise a plurality of heuristic modules wherein each module employs a different, predetermined  
10 *heuristic* algorithm, it fails to anticipate claim 6 of the ’604 Patent.

### 11 **iii. Obviousness of Claim 19**

12 Finally, Samsung argues that claim 19, which adds the further limitation of incremental  
13 search functionality (i.e., the system begins searching while the user is still typing), is invalid for  
14 obviousness, because incremental search functionality was well known in the art by the priority  
15 date of January 5, 2000, and it would have been obvious to a person of ordinary skill in the art to  
16 use any of the known techniques for incremental search functionality in combination with either  
17 WAIS or Legall. Carbonell Decl. ¶¶ 140-44, 159-62. According to Samsung’s expert, this  
18 incremental search functionality was documented as early as 1978 by researchers at MIT.  
19 Carbonell Decl. ¶ 140 & Ex. MM. This search function was used, for example, in Microsoft’s  
20 WordPerfect 5.2, which was released on November 30, 1992. Carbonell Decl. ¶ 142 & Ex. PP.

21 A patent is invalid for obviousness “if the differences between the subject matter sought to  
22 be patented and the prior art are such that the subject matter as a whole would have been obvious at  
23 the time the invention was made to a person having ordinary skill in the art to which said subject  
24 matter pertains.” 35 U.S.C. § 103(a). “Obviousness is a question of law based on underlying  
25 findings of fact.” *In re Kubin*, 561 F.3d 1351, 1355 (Fed. Cir. 2009). The underlying factual  
26 inquiries include: (1) the scope and content of the prior art; (2) the differences between the prior art  
27 and the claims at issue; (3) the level of ordinary skill in the art; and (4) any relevant secondary  
28 considerations, such as commercial success, long felt but unsolved needs, and the failure of others.

1 *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 406 (2007) (citing *Graham v. John Deere Co.*, 383  
2 U.S. 1, 17-18 (1966)); *Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1332 (Fed. Cir. 2012).

3 Because the Court concludes that neither WAIS nor Legall anticipates independent claim 6,  
4 and Samsung's obviousness argument for invalidation of claim 19 relies on either WAIS or Legall  
5 in combination with other secondary references, the Court determines that neither WAIS nor Legall  
6 renders claim 19 obvious. In any event, although Samsung argues that the incremental search  
7 function could have been combined with WAIS or Legall, Samsung's expert offers no evidence  
8 that a person of ordinary skill in the art would have found this combination to be obvious. Dr.  
9 Carbonell cites three different references that allegedly demonstrate the prior existence of  
10 incremental search functionality: (1) EMACS text-editors, used by MIT researchers as early as  
11 1978 ("EMACS"); (2) WordPerfect 5.2 for Windows, released November 30, 1992 ("WordPerfect  
12 5.2"); and (3) U.S. Patent No. 6,049,796 to Siitonen, filed February 24, 1997, and issued April 11,  
13 2000 ("Siitonen"). See Carbonell Decl. ¶¶ 140-43 & Exs. MM, NN, OO, PP. However, even  
14 assuming that these three secondary references disclose the incremental search functionality of  
15 claim 19, Samsung offers no evidence that one of ordinary skill in the art would have found it  
16 obvious to combine the incremental search functionality of these secondary references with WAIS  
17 or Legall. See Carbonell Decl. ¶¶ 140-44, 159-62. "[A] patent composed of several elements is  
18 not proved obvious merely by demonstrating that each of its elements was, independently, known  
19 in the prior art." *KSR*, 550 U.S. at 418. Rather, the party challenging the patent's validity must  
20 "identify a reason that would have prompted a person of ordinary skill in the relevant field to  
21 combine the elements in the way the claimed new invention does." *Id.*

22 As Apple's expert Dr. Polish explains, WAIS is a client-server search system, and Legall is  
23 a power search tool that enables a user to search an electronic program guide and other information  
24 resources with a single search. Polish Reply Decl. ¶ 100. Meanwhile, EMACS is a text editor,  
25 WordPerfect 5.2 is a spell checker memory, and Siitonen is a personal digital assistant ("PDA")  
26 contacts database. *Id.* ¶ 101. Samsung's expert Dr. Carbonell offers no more than a conclusory  
27 assertion that "[i]t would have been obvious to one of ordinary skill in the art at the time of the  
28 invention to include in WAIS a method of displaying incremental search results or real-time search

1 results as the user types his or her query,” because “[b]y the time of the invention, consumer access  
2 to broadband Internet connections was widespread.” Carbonell Decl. ¶ 144. Dr. Carbonell’s  
3 explanation for the supposed obviousness is a non sequitur, and furthermore does not even attempt  
4 to address any of the relevant secondary considerations identified in *KSR*. See Polish Reply Decl.  
5 ¶¶ 99-101 (pointing out deficiencies in Dr. Carbonell’s declaration). Samsung’s evidence in  
6 support of its obviousness defense thus falls far short of raising a substantial question of invalidity  
7 sufficient to overcome the presumption of validity.

8 In sum, Apple has shown that claims 6 and 19 of the ’604 Patent are likely both valid and  
9 infringed. Apple has therefore shown a likelihood of prevailing on the merits of the ’604 Patent.

## 10 **2. U.S. Patent No. 5,946,647 (Links for Structures)**

11 U.S. Patent No. 5,946,647 (“the ’647 Patent”), entitled “System and Method for Performing  
12 an Action on a Structure in Computer-Generated Data,” was filed on February 1, 1996, and issued  
13 on August 31, 1999. The ’647 Patent is directed to a computer-based system and method for  
14 detecting structures, such as phone numbers, post-office addresses, and dates, and performing  
15 actions on the detected structures. See ’647 Patent Abstract, 1:8-16. The ’647 Patent sought to  
16 overcome certain deficiencies in the prior art that inhibited a user’s ability to easily perform  
17 different desired actions on information encountered in a given application. Conventional systems  
18 existed to help search a file or document for information using pattern analysis, but upon  
19 identifying such information, the user would have to copy-and-paste that information into whatever  
20 field or application the user wished in order to use the information. ’647 Patent 1:42-50.

21 The ’647 system relies on an “analyzer server” component that is programmed to recognize  
22 a wide range of data patterns (called “structures” in the patent) in data from a wide range of files,  
23 such as text messages, emails, and web pages. Client applications (e.g., word processors) submit  
24 documents to the analyzer server for detection of structures. After the analyzer server recognizes  
25 structures in a document, it links each structure to operations (called “actions”) commonly  
26 performed on data of that type (such as linking phone numbers to the functions for calling or  
27 storing phone numbers in the address book). It then returns the list of detected structures and links  
28 to the client application.

1 Apple accuses Galaxy Nexus phones of infringing claims 1 and 8 of the '647 Patent. Apple  
 2 alleges that the web browser application in Ice Cream Sandwich on the Galaxy Nexus infringes  
 3 claims 1 and 8 by enabling a user to perform actions on detected structures, such as storing  
 4 information from a web page in the user's contacts, dialing a telephone number, or sending an  
 5 email, simply by selecting the information on a web page. Decl. of Dr. Todd Mowry ("Mowry  
 6 Decl.") ¶¶ 53-83 & Ex. 17 [Infringement Chart]. Claim 1 of the '647 Patent recites:

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

- 9 an input device for receiving data;
- 10 an output device for presenting the data;
- 11 a memory storing information including program routines including
  - 12 an analyzer server for detecting structures in the data, and for linking
  - 13 actions to the detected structures;
  - 14 a user interface enabling the selection of a detected structure and a
  - 15 linked action; and
  - 16 an action processor for performing the selected action linked to the
  - 17 selected structure; and
- 18 a processing unit coupled to the input device, the output device, and the
- 19 memory for controlling the execution of the program routines.

20 '647 Patent, 7:9-24. Claim 8 of the '647 Patent recites:

21 The system recited in claim 1, wherein the user interface highlights detected  
 22 structures.

23 '647 Patent, 7:51-52. This is not the first time that Apple has asserted these two claims against  
 24 accused infringers. The '647 Patent was the subject of an investigation by the International Trade  
 25 Commission ("ITC"), *Certain Personal Data and Mobile Communications Devices and Related*  
 26 *Software*, Inv. No. 337-TA-710, (July 15, 2011) (Final) ("the 710 Investigation). The '647 Patent  
 27 is also at issue in the case *Apple Inc. v. Motorola, Inc.*, No. 1:11-cv-08540 (N.D. Ill. filed Dec. 1,  
 28 2011), before Judge Richard A. Posner, sitting by designation in the U.S. District Court for the  
 Northern District of Illinois ("*Apple v. Motorola*").

#### 29 a. Infringement

30 As previously stated, determining infringement involves a two-step process: first the  
 31 disputed claim terms must be construed, and second it must be determined whether the claims read  
 32 on the accused device. *See Roche Palo Alto*, 531 F.3d at 1377.

**i. Claim Construction**

Claims 1 and 8 each require “an analyzer server for detecting structures in the data, and for linking actions to the detected structures.” ’647 Patent 7:16-17. Samsung argues that claim construction is needed for two terms: “analyzer server” and “linking actions to the detected structures.” These two terms were previously construed by both Judge Posner in *Apple v. Motorola* and by the ITC in the 710 Investigation. Samsung urges the Court to adopt the constructions for these two terms adopted by Judge Posner in *Apple v. Motorola* on March 19, 2012. *See* Decl. of Dr. Geoff Cohen Re: ’647 Patent (“Cohen ’647 Decl.”) Ex. K at 10. For purposes of this motion only, Apple does not oppose Samsung’s proposed constructions, as Apple maintains that the Galaxy Nexus infringes claims 1 and 8 of the ’647 Patent even under Samsung’s proposed constructions. Accordingly, for purposes of this motion only, the Court construes “analyzer server” to mean “a server routine separate from a client that receives data having structures from the client,” and construes “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 the detected structure.” Opp’n at 5-6 (citing Cohen ’647 Decl. Ex. K at 10).

**ii. Literal Infringement**

To establish infringement, Apple must show that every limitation set forth in a claim is found in the accused product. *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991). To show that the Ice Cream Sandwich web browser application on Galaxy Nexus phones infringes claims 1 and 8 of the ’647 Patent, Apple points to a screen capture of the web browser (“Browser”) on the Galaxy Nexus where, upon selection of a phone number found in a web page, a user is presented with actions to dial the number or add the number as a contact. Mot. at 11-12; *see* Mowry Decl. ¶¶ 53-83. Upon examining portions of the publicly available Android 4.0 source code and related documents, Apple’s expert Dr. Todd Mowry confirmed his opinion that the Galaxy Nexus Browser satisfies every limitation of claims 1 and 8 of the ’647 Patent, including having an “analyzer server” that “link[s] actions to the detected structures.” ’647 Patent 7:16-17. *See* Mowry Decl. ¶¶ 58-83; Reply Decl. of Dr. Todd Mowry (“Mowry Reply Decl.”) ¶¶ 77-110.

1 As further support for its infringement claim, Apple notes that in the 710 Investigation, the ITC  
 2 found that HTC devices infringe claims 1 and 8 of the '647 Patent. According to Apple's expert,  
 3 the infringing Android code at issue in the 710 Investigation and the Android code used in the  
 4 Galaxy Nexus are "identical in all relevant aspects."<sup>3</sup> Mowry Decl. ¶¶ 53-56; Mowry Reply Decl.  
 5 ¶¶ 54-56.

6 Samsung contests only the following claim limitation: that the system include "an analyzer  
 7 server for detecting structures in the data, and for linking actions to the detected structures." '647  
 8 Patent 7:16-17; *see* Opp'n at 8. Because the parties address "analyzer server" and "linking actions  
 9 to the detected structures" separately, the Court does as well.

10 **(a) "analyzer server"**

11 It appears that the Android system stores code to perform the accused functionality in  
 12 various external shared libraries on the Android platform, such as CacheBuilder, WebView, and  
 13 MenuItemImpl. *See* Mowry Decl. ¶¶ 67, 70; Mowry Reply Decl. ¶¶ 62-70; Cohen '647 Decl. ¶ 93.  
 14 Various client applications, such as the Browser application, can call on relevant code from these  
 15 libraries to perform the claimed structure detection and linking. *See* Mowry Reply Decl. ¶ 65.  
 16 Apple's expert opines that these external libraries are thus part of the "routine" of the code,  
 17 separate from the client, that perform the "analyzer server" function of detecting and linking to  
 18 structures. Mowry Reply Decl. ¶¶ 62-65, 74-76.

19 Samsung argues that the Galaxy Nexus does not satisfy the "analyzer server" element for  
 20 two reasons. First, Samsung argues that Apple fails to identify any single subroutine that performs  
 21 both detecting structures and linking actions. Opp'n at 8. Samsung complains that, although  
 22 Apple's expert Dr. Mowry points to a number of methods in the Galaxy Nexus that detect  
 23 structures, and to a number of other methods that allegedly create links to actions, Dr. Mowry fails  
 24 to identify a single program subroutine that performs both actions. *See* Cohen '647 Decl. ¶¶ 89-90.  
 25 The Court is not persuaded that the patent requires a *single* routine that performs both actions. As  
 26 Judge Posner noted, the inventors of the '647 Patent had a broad conception of the word "routine."

27 \_\_\_\_\_  
 28 <sup>3</sup> The ITC adopted different constructions of the two claim terms at issue, and thus its conclusions regarding infringement are of only limited relevance here.

1 See Cohen '647 Decl. Ex. K at 10. Judge Posner equated "routine" with the terms "module" and  
2 "component," defining it as "a piece of programming necessary to perform a specific function." *Id.*  
3 Apple's expert asserts that one of skill in the art would understand "a piece of programming  
4 necessary to perform a specific function" to include all of the code needed to execute that function,  
5 regardless of how the code is organized. Mowry Reply Decl. ¶ 60. Thus, the collection of assorted  
6 subroutines that comprise the analyzer server functions may fairly be said to constitute the analyzer  
7 server "routine" within the meaning of Samsung's proposed construction. Indeed, this is consistent  
8 with Judge Posner's understanding that "[r]outines often consist of subroutines." Cohen '647 Decl.  
9 Ex. K at 10.

10 Second, Samsung argues that the Galaxy Nexus lacks an "analyzer server" because there is  
11 no server routine in Ice Cream Sandwich that is "separate from a client;" rather, the accused  
12 functionality is an integral part of the Browser (i.e., the client) itself. Opp'n at 8 (citing Decl. of  
13 Cary Clark ("Clark Decl.") ¶¶ 4-17); see Cohen '647 Decl. ¶¶ 91-96. Samsung argues that a  
14 person of ordinary skill would understand "server" to mean "a program separate from the  
15 application in question, running as a separate process, that provides services to client applications."  
16 Cohen '647 Decl. ¶ 92. Because CacheBuilder, WebView, and MenuItemImpl are all executed as  
17 part of the client application, Samsung argues they are not "separate" from the client and thus  
18 cannot satisfy the "analyzer server" limitations.

19 The requirement that the analyzer server be "separate" from the client is supported by the  
20 patent's specification, which discloses in Figure 1 a "program" separate from the "application"  
21 (i.e., the client), wherein the program contains the analyzer server. See '647 Patent Fig. 1.  
22 Nonetheless, Judge Posner explained, and this Court agrees, that the term "analyzer server" means  
23 "a *code module* that is separate from client applications and provides structure detection and  
24 linking services to the client applications." Mowry Reply Decl. Ex. 3 [Posner Summ. J. Order] at 4  
25 (emphasis added). Judge Posner specifically "rejected Apple's argument that the terms ['server'  
26 and 'client'] describe separate machines," clarifying that "'server' and 'client' denote pieces of  
27 code in a computer." *Id.* To the extent that there may be relevant code intertwined with the client  
28 applications, Dr. Mowry explains that in any client-server relationship, there must be code in the

1 client that calls to the server. This “glue code,” however, simply allows the communication  
2 between the client and the server. Mowry Reply Decl. ¶¶ 67-70. The Court agrees that the  
3 presence of this “glue code” does not remove the accused device from the scope of the ’647 Patent.  
4 Cf. Mowry Reply Decl. Ex. 3 at 4-5 (rejecting a similar non-infringement argument made by  
5 Motorola upon finding evidence that “much [of the code] appears separate from and reused across  
6 the client applications”). Accordingly, even under Samsung’s proposed construction, the Ice  
7 Cream Sandwich browser on the Galaxy Nexus contains an “analyzer server.”

8 **(b) “linking actions to the detected structures”**

9 Samsung also argues that the Galaxy Nexus lacks an analyzer server that “link[s] actions to  
10 the detected structures.” ’647 Patent 7:16-17. For purposes of this motion, the Court has adopted  
11 Samsung’s proposed construction of this term, which requires “creating a specified connection  
12 between each detected structure and at least one computer subroutine that causes the CPU to  
13 perform a sequence of operations on the detected structure.” The central dispute here is over  
14 whether the claim term requires that the “specified connection” be accomplished through  
15 “pointers.” A pointer is a type of data that “points to” another value stored elsewhere in the  
16 computer memory using its address. Linking through pointers means storing the memory address  
17 of the code that performs the action relevant to the detected structure. *See* Cohen ’647 Decl. ¶ 242.  
18 Samsung asserts the Galaxy Nexus does not infringe the ’647 patent because the Ice Cream  
19 Sandwich Browser does not create pointers to any particular actions when it detects a structure.  
20 Opp’n at 8; *see* Clark Decl. ¶¶ 6-17. Instead, when a structure is detected, the Browser merely  
21 identifies it and enables it to be selected by the user. Opp’n at 8. That is, at the time of structure  
22 detection, no pointers to specific subroutines are created, and therefore, Samsung argues, no  
23 “linking” is performed.

24 The Court is not persuaded. While it is clear that linking for purposes of the ’647 Patent  
25 *may* be accomplished by pointers, the Court finds nothing in the ’647 Patent that *requires* the use  
26 of pointers. In construing “linking . . .” to require the creation of a “specified connection,” Judge  
27 Posner looked to the specification, which states that “upon detection of a structure, analyzer server  
28 links actions associated with the responsible pattern to the detected structure, using conventional

1 pointers.” Cohen ’647 Decl. Ex. K at 10; ’647 Patent 3:65-67. Nevertheless, the claim language  
2 itself does not require linking actions to structures through pointers. Experts for both Samsung and  
3 Apple agree that a “specified connection” may be formed by some mechanism other than pointers.  
4 See Mowry Reply Decl. ¶¶ 77-110; *id.* Ex. 10 [Cohen Dep.] at 140:17-142:9 (explaining that, while  
5 a conventional pointer is “a very strong example of a specified connection,” he could not say that a  
6 specified connection is “restricted to conventional pointers”). As the parties well know, it would  
7 be improper to import limitations from the specification into the claim. See *Trading Techs.*, 595  
8 F.3d at 1352 (citing *Abbott Labs. v. Sandoz, Inc.* (“*Sandoz*”), 566 F.3d 1282, 1288 (Fed. Cir.  
9 2009)). Accordingly, the Court concludes that the disclosure of linking through conventional  
10 pointers in the specification’s description of the preferred embodiment does not limit the broader  
11 claim language. See *Liebel-Flarsheim*, 358 F.3d at 905.

12 The Court finds that the Ice Cream Sandwich Browser does create a uniquely defined  
13 association between the detected structure and one or more actions, and thus satisfies the “linking”  
14 limitation. That a “specified connection” is formed is clear from the functionality of the Galaxy  
15 Nexus itself: clicking on a detected structure presents the user with a menu of options, any of  
16 which, if clicked on by the user, will perform the specified action. Accordingly, even under  
17 Samsung’s proposed construction of “linking,” Apple has shown a likelihood of establishing at trial  
18 by a preponderance of the evidence that the Ice Cream Sandwich Browser on Galaxy Nexus  
19 phones infringes claims 1 and 8 of the ’647 Patent.

#### 20 **b. Invalidity Due to Anticipation**

21 As explained above, a claim is anticipated under 35 U.S.C. § 102, and thus invalid, “if each  
22 and every limitation is found either expressly or inherently in a single prior art reference.” *Bristol-*  
23 *Myers Squibb*, 246 F.3d at 1374 (internal quotation marks and citation omitted). To anticipate, the  
24 prior art reference must also “enable one of ordinary skill in the art to make the invention without  
25 undue experimentation.” *Bard Peripheral Vascular*, 670 F.3d at 1184 (citation omitted). Samsung  
26 argues that claims 1 and 8 of the ’647 Patent are invalid as anticipated by three different prior art  
27 references: (1) the Newton Programmer’s Guide, published no later than 1994; (2) the Sidekick,  
28

1 sold in the United States beginning in 1983; and (3) Pandit, a U.S. Patent titled “Recognition of and  
2 Operation of Text Data.” The Court considers each reference in turn.

### 3 i. Newton Programmer’s Guide

4 Newton devices were handheld products designed by Apple to operate as personal digital  
5 assistants (“PDAs”), and the *Newton Programmer’s Guide* was published no later than 1994. *See*  
6 Cohen ’647 Decl. ¶¶ 135-36 & Ex. PP [Newton Programmer’s Guide]. The *Newton Programmer’s*  
7 *Guide* discloses an Intelligent Assistant system service “that attempts to complete actions for the  
8 user according to deductions it makes about the task that the user is currently performing.” Cohen  
9 ’647 Decl. Ex. PP at 1-9. For example, when a user entered “Call Bob” and then pressed the Assist  
10 button, Newton detected and parsed that phrase, and the Intelligent Assistant presented a menu of  
11 actions that included the option to dial a phone number associated with “Bob.” Cohen ’647 Decl. ¶  
12 144; Mowry Reply Decl. ¶ 154. If a user typed a phone number and then pressed an Assist button,  
13 the Intelligent Assistant would present a menu of options, including “call” or “fax.” Cohen ’647  
14 Decl. ¶ 146.

15 Samsung asserts that the *Newton Programmer’s Guide* discloses every limitation of claims  
16 1 and 8 of the ’647 Patent. *See* Cohen ’647 Decl. ¶¶ 135-54. However, Apple’s expert proffers a  
17 different opinion, explaining that the *Newton Programmer’s Guide* fails to anticipate claims 1 and  
18 8 of the ’647 Patent at least because the *Newton Programmer’s Guide* does not disclose “a user  
19 interface *enabling selection of a detected structure* and a linked action.” ’647 Patent 7:18-19  
20 (emphasis added); *see* Mowry Reply Decl. ¶¶ 161-62. Samsung’s expert contends that the *Newton*  
21 *Programmer’s Guide* discloses a user interface enabling the selection of a detected structure and a  
22 linked action because pressing the “Assist” button causes the Assistant to resolve the phrase  
23 entered by the user, resulting in an action. Cohen ’647 Decl. ¶ 151. The Court, however, is more  
24 persuaded by Apple’s expert’s explanation that the Assistant does not allow the user to “select” a  
25 detected structure. *Cf. Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 929 (Fed. Cir. 2012)  
26 (district courts have “wide discretion to weigh expert credibility”); *Conoco, Inc. v. Energy & Env’tl.*  
27 *Int’l, L.C.*, 460 F.3d 1349, 1362-63 (Fed. Cir. 2006) (“As for the relative weight given to the  
28 testimony of both sides’ expert witnesses, we accord the trial court broad discretion in determining

1 credibility . . .”). Rather than allow a user to select a detected structure, the Newton recognizes  
2 commands typed into a text box, such as “Call Bob,” and when the user presses the Assist button,  
3 the Newton then allows the user to select the linked action. In other words, the user must press the  
4 Assist button to tell the device to detect the structure; the structure is not already detected at the  
5 time the user selects it. *See* Mowry Reply Decl. ¶¶ 161-62. Accordingly, it appears that Newton  
6 does not disclose every limitation of claims 1 and 8 of the ’647 Patent and is not anticipatory. The  
7 Court therefore finds that Apple has shown it is likely to withstand a validity challenge based on  
8 the Newton reference.

### 9 **ii. Sidekick**

10 Sidekick was a software utility sold in the United States by Borland International beginning  
11 in 1983. *See* Cohen ’647 Decl. ¶ 118 & Ex. GG [Sidekick]. Sidekick’s Dialer feature detected  
12 phone numbers in computer data and linked those numbers to a subroutine that allowed the user to  
13 select the number and dial it using a modem. *See id.* ¶¶ 127-28. Samsung argues that Sidekick  
14 discloses every limitation of claims 1 and 8 of the ’647 Patent. *See id.* ¶¶ 118-34.

15 Apple replies that Sidekick fails to disclose, in particular, the limitation “linking actions to  
16 detected structures.” Mowry Reply Decl. ¶¶ 118-145. The Court agrees with Apple. Both Judge  
17 Posner and the ITC correctly recognized that the “linking” limitation refers to plural “actions” and  
18 plural “structures.” *Id.* ¶¶ 133-35; *see* Cohen ’647 Decl. Ex. K at 10-11 (“[T]he ability to link a  
19 structure to a single action still comports with the patent’s plural reference, so long as other  
20 structures are linked to other actions. An analyzer that links dates to the calendar and phone  
21 numbers to the phone book still ‘links structures to actions.’”). Sidekick only discloses detecting  
22 one type of data structure – phone numbers – and only discloses linking these phone numbers to  
23 one action – dialing. Mowry Reply Decl. ¶¶ 131-35, 141; *see generally* Cohen ’647 Decl. Ex. GG.  
24 Because the Sidekick Dialer appears to identify only a single type of structure and allows only a  
25 single operation to be performed on that structure, it does not disclose linking plural actions to  
26 plural structures. Accordingly, the Court finds that the Sidekick does not disclose every limitation  
27 of claims 1 and 8 of the ’647 Patent and therefore is not anticipatory.

### 28 **iii. Pandit**

1 U.S. Patent No. 5,859,636 to Pandit (“Pandit”) was issued on January 12, 1999, based on an  
2 application filed December 27, 1995. Pandit discloses a system for recognizing a predetermined  
3 class of text, such as a telephone number, fax number, or date, in a document, and then selecting  
4 and running operations relevant to that class of text. Cohen ’647 Decl. ¶ 205 & Ex. QQ [Pandit].  
5 Samsung argues that Pandit discloses every limitation of claims 1 and 8 of the ’647 Patent. Cohen  
6 ’647 Decl. ¶¶ 200-21.

7 Pandit was considered both by the ITC and by the PTO during reexamination of the ’647  
8 Patent. Mowry Reply Decl. ¶ 25. Although the PTO initially found claims 1 and 8 anticipated by  
9 Pandit during reexamination of the ’647 Patent,<sup>4</sup> it later allowed claims 1 and 8 after the applicants  
10 submitted a declaration pursuant to 37 C.F.R. § 1.131 to swear behind the Pandit reference as §  
11 102(a) prior art. *See* Cohen ’647 Decl. Ex. M [’647 Patent Reexamination] at 5-6; *see also* 37  
12 C.F.R. § 1.131.<sup>5</sup> The examiner reviewed Apple’s § 1.131 declaration and found that the attached  
13 exhibits of screen shots and email messages representing a working exhibit of the invention  
14 sufficiently supported an earlier date of reduction to practice of the invention that predated Pandit,  
15 thus disqualifying the Pandit reference as prior art. *See* Mowry Reply Decl. ¶¶ 202-03 & Ex. 4; *id.*  
16 Ex. 5 at 5-6.

17 Samsung has submitted no evidence that the applicant’s § 1.131 declaration was fraudulent  
18 or otherwise invalid. The Court therefore credits the patent holder’s sworn declaration that the  
19 inventors of the ’647 Patent conceived and reduced to practice the claimed invention before the  
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21 \_\_\_\_\_  
22 <sup>4</sup> On December 10, 2010, the PTO ordered *ex parte* reexamination for all claims of the ’647 Patent,  
23 and issued a non-final Office Action rejecting all claims of the ’647 Patent as anticipated by U.S.  
24 Patent No. 5,859,636 (“Pandit” or “the ’636 patent”). The ’636 Patent issued to Milind S. Pandit  
25 on January 12, 1999 from an application filed on December 27, 1995. *See* Mowry Reply Decl. Ex.  
26 4 at 1-2.

27 <sup>5</sup> Pursuant to 37 C.F.R. § 1.131, when any claim of an application or a patent under reexamination  
28 is rejected, the inventor or owner may submit “an appropriate oath or declaration to establish  
invention of the subject matter of the rejected claim prior to the effective date of the reference or  
activity on which the rejection is based.” 37 C.F.R. § 1.131(a) (2012). The regulations require that  
“[t]he showing of facts shall be such, in character and weight, as to establish reduction to practice  
prior to the effective date of the reference, or conception of the invention prior to the effective date  
of the reference coupled with due diligence from prior to said date to a subsequent reduction to  
practice or to the filing of the application.” 37 C.F.R. § 1.131(b) (2012).

1 Pandit's priority date. Accordingly, the Court finds that Pandit does not qualify as a prior art  
2 reference and therefore cannot anticipate the '647 Patent.

3 **c. Invalidity Due to Obviousness**

4 Finally, to the extent Newton, Sidekick, and Pandit do not anticipate claims 1 and 8 of the  
5 '647 Patent, Samsung argues that these prior art references render claims 1 and 8 of the '647  
6 obvious and thus invalid. Opp'n at 6. As previously stated, a patent may be invalid for  
7 obviousness "if the differences between the subject matter sought to be patented and the prior art  
8 are such that the subject matter as a whole would have been obvious at the time the invention was  
9 made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C.  
10 § 103(a). The Court should take into account "secondary considerations" such as "commercial  
11 success, long felt but unsolved needs, [and] failure of others" in order to determine whether the  
12 subject matter sought to be patented would have been obvious to one of ordinary skill in the art at  
13 the time of the invention. *KSR*, 550 U.S. at 406; *see Sud-Chemie, Inc. v. Multisort Techs., Inc.*, 554  
14 F.3d 1001, 1008 (Fed. Cir. 2009).

15 Samsung argues that, to the extent Sidekick fails to anticipate because it discloses linking  
16 only a single action to a single detected structure, rather than linking plural actions to plural  
17 structures, "it would have been obvious to a person of ordinary skill in 1996 to detect additional  
18 types of structures and/or to link multiple actions to the detected structures." Cohen '647 Decl. ¶  
19 129. Dr. Cohen's bare assertion that it would have been obvious to one of ordinary skill in the art  
20 does not adequately explain *why* it would have been an obvious improvement over the prior art, nor  
21 does Dr. Cohen discuss any relevant secondary obviousness considerations. Dr. Cohen's  
22 uncorroborated opinion is countered by Dr. Mowry's opinion that it would not have been obvious  
23 to one of ordinary skill in the art at the time to provide a system detecting multiple structures and  
24 furthermore linking multiple candidate actions to each detected structure. Mowry Reply Decl. ¶  
25 137. The Court finds that Dr. Mowry's opinion is supported by the fact that the '647 Patent  
26 inventors specifically highlighted prior art references similar to Sidekick as prior art which the  
27 patent overcame. *See* '647 Patent 1:52-65 (describing a system that is only able to detect telephone  
28 numbers and only able to allow dialing of those numbers); Mowry Reply Decl. ¶ 138. In light of

1 the burdens that would inhere at trial, the Court finds that Samsung has failed to raise a substantial  
2 question of invalidity based on the Sidekick reference.

3 Finally, Samsung asserts that even if Pandit does not qualify as prior art, “[a]t a minimum,  
4 Pandit is evidence of simultaneous invention that further supports its invalidity of the asserted  
5 claims.” Opp’n at 7-8 (citing *Geo. M. Martin Co. v. Alliance Mach. Sys. Int’l, LLC*, 634 F. Supp.  
6 2d 1024, 1036 (N.D. Cal. 2008), *aff’d*, 618 F.3d 1294 (Fed. Cir. 2010)). Pandit was filed on  
7 December 27, 1995, only five weeks before the ’647 Patent. Mowry Reply Decl. ¶ 201. Samsung  
8 is correct that secondary considerations of non-obviousness must be considered when present, and  
9 that “[i]n some rare instances, the secondary consideration of simultaneous invention might also  
10 supply ‘indicia of obviousness.’” *Geo. M. Martin*, 618 F.3d at 1304 (internal quotation marks and  
11 citations omitted). Evidence of “simultaneous inventions, made ‘within a comparatively short  
12 space of time,’ are persuasive evidence that the claimed apparatus ‘was the product only of  
13 ordinary mechanical or engineering skill.’” *Geo. M. Martin*, 618 F.3d at 1305 (quoting *Concrete  
14 Appliances Co. v. Gomery*, 269 U.S. 177, 184 (1925)); *but see Lindemann Maschinenfabrik GMBH  
15 v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1460 (Fed. Cir. 1984) (“Because the statute, 35 U.S.C.  
16 § 135, (establishing and governing interference practice) recognizes the possibility of near  
17 simultaneous invention by two or more equally talented inventors working independently, that  
18 occurrence may or may not be an indication of obviousness when considered in light of all the  
19 circumstances.”).

20 However, Samsung here proffers no evidence of any secondary considerations other than  
21 the Pandit reference itself and the other alleged anticipatory references, which the Court has  
22 already discussed above. In *Geo M. Martin*, the Federal Circuit affirmed the trial court’s  
23 obviousness analysis, notwithstanding the patent owner’s swearing behind a concurrent invention,  
24 the Tecasa machine. In doing so, however, the Federal Circuit emphasized that the evidence of a  
25 near-simultaneous invention was coupled with “strong evidence of obviousness based on [other  
26 references],” and observed that the patent holder’s swearing behind argument would have been  
27 more persuasive had the Tecasa machine “provided the only evidence of simultaneous invention.”  
28 618 F.3d at 1305-06. Here, as discussed, Samsung has not made a strong showing of obviousness

1 based on other references, and thus the Court is not persuaded that the simultaneity of the Pandit  
2 invention alone is sufficient to overcome the strong presumption of the '647 Patent's validity.

3 In sum, Apple has shown a likelihood of establishing both infringement and validity.  
4 Accordingly, Apple has shown a likelihood of success on the merits of its '647 Patent claim.

### 5 **3. U.S. Patent No. 8,046,721 (Slide to Unlock)**

6 U.S. Patent No. 8,046,721 ("the '721 Patent"), entitled "Unlocking A Device By  
7 Performing Gestures on an Unlock Image," was filed on June 2, 2009, and issued to Apple on  
8 October 25, 2011, as a continuation of a prior application filed on December 23, 2005, now U.S.  
9 Patent No. 7,657,849. The '721 Patent discloses an invention that allows a user to unlock a  
10 portable electronic device by using a predetermined gesture on a touch sensitive screen. *See*  
11 *generally* '721 Patent, col. 1. The '721 Patent was aimed at addressing a problem in portable  
12 devices that employ touch screens, namely "the unintentional activation or deactivation of  
13 functions due to unintentional contact with the touch screen." '721 Patent 1:38-40. Prior art  
14 disclosed several unlocking procedures, including "pressing a predefined set of buttons  
15 (simultaneously or sequentially) or entering a code or password." *Id.* at 1:47-50. In contrast, the  
16 '721 Patent disclosed "[t]he performance of the predefined gesture with respect to the unlock  
17 image [which] may include moving the unlock image to a predefined location and/or moving the  
18 unlock image along a predefined path." '721 Patent Abstract.

19 Apple claims that the Galaxy Nexus infringes upon two independent claims and two  
20 dependent claims of the '721 Patent. *See* Mot. at 14. Specifically, Apple claims that the Galaxy  
21 Nexus infringes on independent claim 7, dependent claim 8 (which depends from claim 7),  
22 independent claim 12, and dependent claim 15 (which depends from claim 12). Claims 7 and 8  
23 recite the following:

- 24 7. A portable electronic device, comprising:  
25 a touch-sensitive display;  
26 memory;  
27 one or more processors; and  
28 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:

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

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

'721 Patent 19:50-20:12. Claims 12 and 15 recite the following:

12. A computer readable storage medium storing one or more programs, the one or more programs comprising instructions, which when executed by a portable electronic device with a touch-sensitive display, cause the portable electronic device to perform a method comprising:

- detecting a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image;
- continuously moving the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the touch screen 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
- unlocking the hand-held electronic device if the [sic] moving the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to a predefined unlock region on the touch-sensitive display.

15. The computer readable storage medium of claim 12, wherein the unlock image is a single image.

'721 Patent 20:36-53; *id.* at 20:58-59.

**a. Infringement**

Apple alleges that the unlock feature on the Galaxy Nexus infringes claims 7, 8, 12, and 15 of the '721 Patent. For a patentee to establish that it is likely to succeed on the merits, it “must demonstrate that it will likely prove infringement of one or more claims of the patents-in-suit, and that at least one of those same allegedly infringed claims will also likely withstand the validity challenges presented by the accused infringer.” *AstraZeneca*, 633 F.3d at 1050 (citation omitted).

1 The infringement inquiry requires a two-step process: first the patented invention as defined by the  
2 claim language must be construed, and second, it must be determined whether the claims cover the  
3 accused device. *See Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792 (Fed. Cir. 1990). To  
4 establish infringement, Apple must show that every limitation set forth in a claim is found in the  
5 accused product. *Laitram*, 939 F.2d at 1535.

6 Apple provides the Declaration of Dr. Ravin Balakrishnan filed in support of Apple's  
7 motion for a preliminary injunction, a claim chart filed in support of the preliminary injunction  
8 motion, relevant portions of the Galaxy Nexus user guide, and the accused device itself, to  
9 establish that the Galaxy Nexus's unlock feature likely infringes the '721 Patent. *See* Decl. of Dr.  
10 Ravin Balakrishnan ("Balakrishnan Decl.") ¶¶ 53-96; *id.* Exs. 3-5. It appears that the Galaxy  
11 Nexus contains an unlock feature in which the user makes contact with an unlock image on the  
12 screen, which is a circle with a padlock in the center. When the user makes contact with the image,  
13 the circle enlarges and the padlock disappears. The user then moves the unlock image across the  
14 touch sensitive display from the first region to another region of the display. The device is  
15 unlocked when the circle is moved to the unlock region.

16 In support of its contention that the Galaxy Nexus does not infringe the '721 Patent,  
17 Samsung makes two arguments: (1) the asserted claims require a single unlock image, while the  
18 accused device displays two consecutive yet distinct unlock images; and (2) the asserted claims  
19 require continuous movement of the unlock image, but the unlock image on the accused device  
20 does not necessarily have continuous movement.

21 *Unlock Image.* Samsung's first argument turns on a claim construction argument.  
22 Samsung argues that the term "the unlock image" in both asserted independent claims must refer  
23 only to the same single "unlock image." The Galaxy Nexus, in contrast, has two unlock images:  
24 the first image is a circle with a padlock in the center, and the second image is an empty circle.  
25 Samsung argues that "the image at the original location [(the circled padlock)] is replaced with a  
26 new image [(an empty circle)] at the location of the contact," and therefore, the Galaxy Nexus does  
27 not infringe on the '721 Patent. Decl. of Dr. Geoff Cohen Re: '721 Patent ("Cohen '721 Decl.") ¶¶  
28 83-84; *see* Opp'n at 16.

1 In construing disputed terms, the court looks first to the claims themselves, for “[i]t is a  
2 ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the  
3 patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water*,  
4 381 F.3d at 1115). Generally, the words of a claim should be given their “ordinary and customary  
5 meaning,” which is “the meaning that the term[s] would have to a person of ordinary skill in the art  
6 in question at the time of the invention.” *Id.* at 1312-13.

7 First, Samsung argues that independent claims 7 and 12 refer first to “*an* unlock image” and  
8 then refer to “*the* unlock image.” Thus, Samsung argues that the claim language itself implies only  
9 a single unlock image may appear on the screen. While there may be some intuitive appeal to  
10 Samsung’s argument, this argument is undercut by the fact that disputed dependent claim 15  
11 requires that the “unlock image” is a “single image.” ’721 Patent 20:58-59. Under the claim  
12 differentiation doctrine, there is a presumption that dependent claims are narrower than the  
13 independent claims from which they depend. *See Phillips*, 415 F.3d at 1314-15. Thus, Samsung’s  
14 argument regarding the implicit meaning of the disputed claim term is undermined by the explicit  
15 language used in dependent claim 15.

16 Apple’s argument that “unlock image” may refer to more than one image is also supported  
17 by the specification. *See id.* at 1315 (quoting *Vitronics*, 90 F.3d at 1582 (the specification is  
18 “‘always highly relevant’” and “[u]sually [] dispositive; it is the single best guide to the meaning  
19 of a disputed term”). As Dr. Balakrishnan points out, Figures 11A-E demonstrate “an unlock  
20 gesture corresponding to *one of a plurality of unlock images*, according to some embodiments of  
21 the invention.” ’721 Patent 18:20-23 (emphasis added). As a general rule, “there is a strong  
22 presumption against a claim construction that excludes a disclosed embodiment.” *See In re Katz*  
23 *Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1324 (Fed. Cir. 2011). Thus, the  
24 specification further supports Apple’s view.

25 Samsung points to an interview summary in the prosecution history in which the applicant  
26 “suggested to modify the claim language of the unlock image to further clarify that the unlock  
27 image is singular and not multiple images.” *See Cohen* ’721 Decl. Ex. C. While Samsung is  
28 correct that the prosecution history is always relevant to claim construction and “can often inform

1 the meaning of the claim language by demonstrating how the inventor understood the invention  
2 and whether the inventor limited the invention in the course of the prosecution,” in this case, the  
3 prosecution history identified by Samsung does not require Samsung’s proposed construction of  
4 the disputed term. It appears that the limitation of the single image applies only to dependent  
5 claims 13-15. *See* Reply Decl. of Dr. Ravin Balakrishnan (“Balakrishnan Reply Decl.”) ¶¶ 44-45  
6 & Ex. 4. Accordingly, the term “unlock image” should not be construed as referring to only a  
7 single image, as Samsung argues.

8 Moreover, even if “unlock image” can only be a single image, the Galaxy Nexus still likely  
9 infringes the ’721 Patent. According to the specification, the unlock image can change form as the  
10 user interacts with the touchscreen: the unlock image can become animated or disappear as the user  
11 interacts with the device. Balakrishnan Reply Decl. ¶ 13; ’721 Patent 12:40-47. Thus, the fact that  
12 the unlock image on the Galaxy Nexus changes form as the user interacts with it to unlock the  
13 device is not inconsistent with the limitations of claims 7 and 12, even assuming that the claims  
14 require a single image.

15 *Continuous Movement.* Both independent claims 7 and 12 require that the unlock image  
16 continuously move in accordance with movement of the detected contact. For example, claim 7  
17 requires that the unlock image “continuously move . . . on the touch-sensitive display in accordance  
18 with movement of the detected contact while continuous contact with the touch-sensitive display is  
19 maintained.” *See e.g.*, ’721 Patent 19:59-20:2. Samsung argues that “the accused unlock image on  
20 the Galaxy Nexus does not move ‘continuously’” because the image “will follow the user’s finger  
21 only to a point, but then jump to the unlock region.” Opp’n at 16. Moreover, “the image will  
22 follow the user’s finger only within a certain bounded area of the touch screen,” but will not follow  
23 the user’s movement beyond this bounded area of the touch screen. *Id.*

24 It appears that Samsung is attempting to add additional limitations to the claim language.  
25 The claims only require that the unlock image move “continuously” on the touch sensitive display  
26 in accordance with movement of the detected contact while continuous contact with the touch-  
27 sensitive display is maintained. That the Galaxy Nexus contains additional elements – including a  
28 bounded region beyond which the unlock image does not go and a re-centering feature that allows

1 the circle to be re-centered around the unlocked padlock after the unlock image reaches the  
2 “predefined unlock region on the touch-sensitive display” – does not allow the Galaxy Nexus slide  
3 to unlock feature to avoid infringement of the ’721 Patent.

4 After reviewing the ’721 Patent, the declarations in support of the parties’ moving,  
5 opposition, and reply papers, and the accused device itself, the Court finds that Apple has  
6 established that it is likely to succeed at trial in establishing that the Galaxy Nexus infringes the  
7 ’721 Patent.

#### 8 **b. Validity**

9 Pursuant to 35 U.S.C. § 282, the ’721 Patent is presumed valid. Samsung challenges the  
10 validity of the ’721 Patent based on anticipation, obviousness, and indefiniteness of the claimed  
11 invention. *See* 35 U.S.C. §§ 102 (anticipation), 103 (obviousness). Samsung argues that the  
12 Plaisant video and accompanying papers anticipate all asserted claims. Alternatively, Samsung  
13 argues that the NeoNode prior art reference, either alone or in combination with the Plaisant  
14 reference, renders the claimed invention obvious. Finally, Samsung argues that all asserted claims  
15 are invalid because they are fatally indefinite. Each of Samsung’s arguments is addressed in turn.

#### 16 **i. Anticipation**

17 The Plaisant reference, which Samsung argues anticipates the ’721 Patent, is a paper and  
18 video demonstration showing the work done by Catherine Plaisant of Human-Computer Interaction  
19 Lab at the University of Maryland. Dr. Plaisant’s research focused on touch screen toggle switches  
20 as user interface control mechanisms. *See* Decl. of Dr. Catherine Plaisant (“Plaisant Decl.”) ¶¶ 7-9.  
21 Dr. Plaisant’s work was published in a paper in 1990, and the video showing various touch screen  
22 toggle switches was shown, and VHS copies were distributed, at the Human-Computer Interaction  
23 Lab 1991 annual symposium. *Id.* The video was shown again at the ACM SIGCHI conference in  
24 May 1992, and was available after the conference through the ACM website. *Id.* ¶¶ 10-13. Dr.  
25 Plaisant estimated that the number of attendees at the conference was probably more than 1,000.  
26 *Id.* ¶ 11.

27 As an initial matter, the Court finds that Samsung has established that the Plaisant paper  
28 and the accompanying video that was shown and distributed at the two conferences constitute prior

1 art for the purposes of 35 U.S.C. § 102. Public accessibility is the touchstone in determining  
2 whether a reference constitutes a ‘printed publication’ bar under 35 U.S.C. § 102. *See In re Hall*,  
3 781 F.2d 897, 899 (Fed. Cir. 1986). “[T]he question to be resolved in a ‘printed publication’  
4 inquiry is the extent of the reference’s ‘accessibility to at least the pertinent part of the public, of a  
5 perceptible description of the invention, in whatever form it may have been recorded.’” *In re*  
6 *Klopfenstein*, 380 F.3d 1345, 1348 n.2 (Fed. Cir. 2004) (citing *In re Wyer*, 655 F.2d 221, 226  
7 (C.C.P.A. 1981)).

8 In this case, Dr. Plaisant disseminated her paper (which was before the patent examiner), as  
9 well as the corresponding video, at two conferences, one of which was attended by approximately  
10 100 participants, and the second of which was attended by approximately 1,000 participants.  
11 Copies of the video were given to participants at the first conference, and were available for  
12 distribution at the second conference. Moreover, it appears that the video demonstrates the same  
13 content as the Plaisant paper. *Compare* Plaisant Decl. Ex. E *with* Ex. D. Based on the  
14 circumstances surrounding the video’s disclosure to members of the public, there was sufficient  
15 public accessibility and dissemination to conclude that the Plaisant video and paper are “prior art.”

16 The Plaisant reference discloses the use “of various touchscreen devices to control any  
17 device in the home, from lights, climate control, and door locks, to televisions, and A/V  
18 equipment.” Plaisant Decl. ¶ 15. The Plaisant reference discloses various touchscreen toggle  
19 switches that allow the user to control two-state devices. “The user interfaces, ranging from button  
20 type toggles to sliding toggles,” are described in the paper and the video. *See id.* Ex. D, Abstract.  
21 Indeed, the Plaisant reference discloses both a slider toggle and a rocker toggle which allow the  
22 user to change the state of something by using a sliding movement across a touch screen display.

23 For example:

24 In this toggle a sliding/dragging movement is required to change the position of the yellow  
25 pointer from one side of the toggle to the other. A simple three step animation shows the  
26 movement of the pointer along the slide. If the device is ON the pointer is on the ON side.  
27 Users can then grab the pointer and slide it to the other side. If the finger is released before  
28 reaching the other side the pointer springs back to its previous position. A click is heard  
when the state changes (high pitch for ON, low pitch for OFF).

Plaisant Decl. Ex. D at 5.

1 The Court agrees with Samsung that the Plaisant reference discloses some of the limitations  
2 of the asserted claims. For example, the Plaisant reference discloses: (1) detecting a contact with  
3 the touch-sensitive display at a first predefined location; and (2) continuously moving the image on  
4 the touch-sensitive display in accordance with movement of the contact while continuous contact  
5 with the touch screen is maintained.

6 However, the Plaisant reference does not disclose various limitations required in  
7 independent claims 7 and 12 of the '721 Patent. Apple has identified several ways in which the  
8 Plaisant reference departs from the '721 Patent. Specifically, the Plaisant reference does not  
9 disclose: (1) a touchscreen on a "hand-held electronic device," or (2) that the "unlock image" is "a  
10 graphical, interactive user-interface object with which a user interacts *in order to unlock the*  
11 *device.*" See '721 Patent 19:50, 20:3-6, 20:46-50 (emphasis added); see also Reply at 6.  
12 Accordingly, because the Plaisant reference does not disclose every limitation of the asserted  
13 claims, the Plaisant reference does not anticipate the '721 Patent.

#### 14 **ii. Obviousness**

15 As explained above, a patent may be invalid for obviousness. "Under § 103, the scope and  
16 content of the prior art are to be determined; differences between the prior art and the claims at  
17 issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this  
18 background, the obviousness or nonobviousness of the subject matter is determined." *KSR*, 550  
19 U.S. at 406 (citing *Graham*, 383 U.S. at 17-18). The Court should also take into account  
20 "secondary considerations" such as "commercial success, long felt but unsolved needs, [and]  
21 failure of others" in order to determine whether the subject matter sought to be patented would  
22 have been obvious to one of ordinary skill in the art at the time of the invention. *Id.*

23 Samsung argues that NeoNode, either alone or in combination with the Plaisant reference,  
24 renders the '721 Patent invalid based on obviousness. See Opp'n at 14. NeoNode N1 and N1m  
25 were mobile phones with touchscreens that were released at some point in the 2004-2005 time  
26 period. Cohen '721 Decl. ¶ 138. As an initial matter, the Court must determine whether NeoNode  
27 is a proper prior art reference pursuant to 35 U.S.C. § 102. At the hearing, Apple clarified its  
28 position that NeoNode is not a "prior art" reference because Samsung has not provided sufficient

1 evidence that the NeoNode meets any of the requirements under 35 U.S.C. § 102. *See* 35 U.S.C.  
2 §102(a); Reply at 6; Balakrishnan Reply Decl. ¶ 101.

3 At trial, Samsung will bear the burden of establishing that NeoNode meets the requirements  
4 of one of the subsections of 35 U.S.C. § 102 by the priority date of December 2005. *Allied*  
5 *Colloids Inc. v. Am. Cyanamid Co.*, 64 F.3d 1570, 1574 (Fed. Cir. 1995); *see also* 35 U.S.C. §  
6 102(a) (“the invention was known or used by others in this country, or patented or described in a  
7 printed publication in this or a foreign country, before the invention thereof by the applicant for  
8 patent”); 35 U.S.C. § 102(b) (“the invention was patented or described in a printed publication in  
9 this or a foreign country or in public use or on sale in this country, more than one year prior to the  
10 date of the application for patent in the United States,”); 35 U.S.C. § 102(g)(2) (“before such  
11 person’s invention thereof, the invention was made in this country by another inventor who had not  
12 abandoned, suppressed, or concealed it”).

13 While the Court agrees that the videos and documents provided by Samsung establish that  
14 NeoNode discloses several of the claimed limitations of the ’721 Patent, Apple is correct that the  
15 documentary evidence provided by Samsung does not establish that NeoNode is a proper prior art  
16 reference in the first instance. Samsung has only established that “NeoNode N1 and N1m were  
17 touch screen mobile devices released in 2004 and 2005.” Opp’n at 14 (citing Cohen ’721 Decl. ¶  
18 138). Although there is some evidence that NeoNode was offered for sale in Sweden around the  
19 relevant time period, Samsung has not provided evidence that NeoNode was “known or used by  
20 others in this country,” “patented or described in a printed publication in a foreign country,” “on  
21 sale in this country,” or “made in this country by another inventor” before December 2005. At the  
22 hearing, when pressed on whether NeoNode was actually available in the United States, Samsung  
23 conceded, “quite frankly, we’re – you know, we haven’t uncovered a specific sale. We know that  
24 it was available for sale. We know it could be imported. I don’t think we know where.” Tr. at 52.  
25 Attorney argument aside, Samsung has not met its burden of establishing that it is likely to prove  
26 that the NeoNode is a prior art reference by clear and convincing evidence.

27 Because the Court cannot conclude, based on the evidence before it, that NeoNode is a  
28 prior art reference, the Court may only look to the Plaisant reference to determine whether the

1 claimed subject matter was obvious in light of prior art. Samsung’s expert opines that “[e]ven if  
 2 Plaisant is found to not explicitly anticipate this claim element, it would have been obvious to  
 3 combine Plaisant with a handheld device as an unlocking mechanism.” Cohen ’721 Decl. ¶ 136.  
 4 However, Samsung’s expert fails to explain why such a combination would have been obvious.  
 5 The Plaisant reference was a terminal from which large devices such as heaters and home security  
 6 systems were connected and controlled. Balakrishnan Reply Decl. ¶ 76. Samsung has not  
 7 provided sufficient evidence that a person of ordinary skill in the art at the time would have applied  
 8 the sliding toggles found in Plaisant to a handheld device such as a cell phone. For example, one  
 9 of the main problems that the ’721 Patent sought to address was the inadvertent unlocking of a  
 10 portable electronic device. ’721 Patent 1:46-67. It is not clear that it would have been obvious to  
 11 someone of ordinary skill in the art to apply Plaisant to solve the unique problems of handheld  
 12 devices such as cell phones.

13 Accordingly, Apple has established that it is likely to withstand Samsung’s obviousness  
 14 challenge to the validity of the ’721 Patent based on the Plaisant reference.

### 15 **iii. Indefiniteness**

16 Samsung also argues that the asserted claims in the ’721 Patent are invalid because they are  
 17 fatally indefinite.<sup>6</sup> 35 U.S.C. § 112 requires that the “claims [of a patent] ‘particularly point[] out  
 18 and distinctly claim[] the subject matter which the applicant regards as his invention.’ “The  
 19 statutory requirement of particularity and distinctness in claims is met only when [the claims]  
 20 clearly distinguish what is claimed from what went before in the art and clearly circumscribe what  
 21 is foreclosed from future enterprise.” *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228,  
 22 236 (1942). Only claims “‘not amenable to construction or ‘insolubly ambiguous’ are indefinite.”  
 23 *Datamize LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citing *Novo*  
 24 *Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1353 (Fed. Cir. 2003)). “Thus, the definiteness  
 25 of claim terms depends on whether those terms can be given any reasonable meaning.” *Id.*  
 26

27 <sup>6</sup> At the hearing, Samsung clarified that it had withdrawn its argument that claims 12 and 15 are  
 28 invalid because they are mixed hybrid and apparatus claims. *See* Tr. at 57. Accordingly, the Court  
 will not address this argument.

1 Samsung argues that the term “unlock the device” is fatally indefinite. Opp’n at 15.  
2 However, the specification provides a definition that establishes when a device is “locked” and  
3 when it is “unlocked:”

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

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

13 ’721 Patent 7:64-8:45. The specification, therefore, provides guidance as to what it means when  
14 the device is “locked.” According to the specification, when the device is locked it is “powered on  
15 and operational but ignores most, if not all, user input.” The specification further describes what  
16 “most, if not all, user input” means. According to the specification, “the locked device responds to  
17 user input corresponding to attempts to transition the device to the user-interface unlock state or  
18 powering the device off, but does not respond to user input corresponding to attempts to navigate  
19 between user interfaces.” *Id.* at 8:12-17. While discerning whether a device is in a “locked” or  
20 “unlocked” state may be difficult in certain circumstances, it can hardly be said that the term meets  
21 the standard of indefiniteness such that it is “insolubly ambiguous” or “not amenable to  
22 construction.” The Court therefore does not find that the claim term is fatally indefinite.

23 Accordingly, Apple has met its burden of establishing that the ’721 Patent is likely  
24 infringed by the Galaxy Nexus, and that the ’721 Patent will likely withstand a validity challenge at  
25 trial.

#### 26 **4. U.S. Patent No. 8,074,172 (Word Recommendations)**

27 U.S. Patent 8,074,172 (the “’172 Patent”), entitled “Method, System, and Graphical User  
28 Interface For Providing Word Recommendations,” was filed on January 5, 2007, and issued on  
December 6, 2011. The ’172 Patent discloses an invention that provides word recommendations  
for users inputting text into a portable communication device, and allows the user to select the  
word recommendations suggested. *See generally* ’172 Patent Abstract. The ’172 Patent was aimed

1 at addressing a problem encountered in portable communication devices when users attempt to  
2 communicate by text, such as by email or short message service. Because portable communication  
3 devices restrict the size of the keyboard, users may make more mistakes when inputting text. “This  
4 makes the process of inputting text on the devices inefficient and reduces user satisfaction with  
5 such portable devices.” ’172 Patent 1:33-35.

6 Apple claims that the Galaxy Nexus infringes upon three independent claims of the ’172  
7 Patent. Mot. at 14-15. Specifically, Apple claims that the Galaxy Nexus infringes independent  
8 claims 18, 19, and 27. The claims are recited below:

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

11 a first area of the touch screen display that displays a current character string  
being input by a user with the keyboard; and

12 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  
13 replacement character string for the current character string;

14 wherein;

15 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;

16 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

17 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  
18 thereof displayed in the second area.

19 ’172 Patent 12:49-13:4.

20 19. A portable electronic device, comprising:

21 a touch screen display;

22 one or more processors;

memory; and

23 one or more programs, wherein the one or more programs are stored in the  
memory and configured to be executed by the one or more processors,  
one or more programs including:

24 instructions for displaying, in a first area of the touch screen display, a  
current character string being input by a user with the keyboard;

25 instructions for displaying, in a second area of the touch screen display  
26 separate from the first area, the current character string and a suggested  
replacement character string for the current character string;  
27

28

1 instructions for replacing the current character string in the first area with the  
 2 suggested replacement character string if the user activates a key on the  
 3 keyboard associated with a delimiter;  
 4 instructions for replacing the current character string in the first area with the  
 5 suggested replacement character string if the user performs a first gesture  
 6 on the suggested replacement character string displayed in the second  
 7 area; and  
 8 instructions for keeping the current character string in the first area if the  
 9 user performs a second gesture in the second area on the current  
 10 character string or the portion thereof displayed in the second area.

11 '172 Patent 13:5-34.

12 27. A portable electronic device, comprising:  
 13 one or more processors;  
 14 a touch screen display; and  
 15 computer readable memory comprising instructions that, when executed by the one  
 16 or more processors, perform operations comprising:  
 17 receiving a plurality of user inputs of characters through the keyboard, and  
 18 displaying a current character string as input by the user,  
 19 displaying a suggested replacement character string for the current character  
 20 string;  
 21 while both the current character string and the suggested replacement string  
 22 are displayed, receiving a further user input through a punctuation mark  
 23 key of the keyboard, and  
 24 in response to the further user input, replacing the current character string  
 25 with the suggested replacement character string, and appending a  
 26 punctuation mark at the end of the replacement character string, the  
 27 punctuation mark corresponding to the punctuation mark key through  
 28 which the further user input was received.

'172 Patent 14:35-55.

#### 19 **a. Infringement**

20 Apple alleges that the word recommendation feature in the Galaxy Nexus infringes claims  
 21 18, 19, and 27 of the '172 Patent. Claims 18 and 19 contain similar limitations: claim 18 is a claim  
 22 for a graphical user interface on a portable electronic device, while claim 19 is a claim for a  
 23 portable electronic device. Because the parties analyze claims 18 and 19 together, so too will the  
 24 Court, before then turning to discuss claim 27.

#### 25 **i. Claims 18 and 19**

26 Apple provides the Declaration of Dr. Karan Singh filed in support of Apple's motion for a  
 27 preliminary injunction, a claim chart filed in support of the preliminary injunction motion,  
 28 specifications and reviews of the Galaxy Nexus, and the accused device itself, to establish that the

1 Galaxy Nexus’s word recommendation feature likely infringes the ’172 Patent. *See* Decl. of Karan  
 2 Singh (“Singh Decl.”) ¶¶ 56-92 & Exs. 3-6. It appears that the Galaxy Nexus contains a word  
 3 recommendation feature which practices each of the limitations in claims 18 and 19 of the ’172  
 4 Patent. The Galaxy Nexus is a portable electronic device with a graphical user interface. *Id.* ¶¶ 57-  
 5 64, 72-82, 94-106. The user types a message in the text box (first area of the touch screen display).  
 6 *Id.* ¶¶ 65, 86-87. While typing, in an area above the keyboard which is visually distinct from the  
 7 first area (second area of the touch screen display), several words are displayed, including the text  
 8 as typed by the user (current string), as well as recommended words that the user may have  
 9 intended to type (suggested string). *Id.* ¶¶ 66, 88. The user may either select the current string or  
 10 the suggested string. The user may replace the current string with the suggested string by pressing  
 11 the “space” bar on the keyboard. *Id.* ¶¶ 68, 89. The user may also replace the typed text with the  
 12 suggested string in the first area by touching the suggested string displayed in the second area. *Id.*  
 13 ¶¶ 69, 90. Alternatively, the user can elect to keep the current character string in the first area by  
 14 touching the current character string in the second area. *Id.* ¶¶ 70, 91.

15 Samsung argues that Ice Cream Sandwich does not actually “replace” or keep the current  
 16 character string in the first area as is required under the limitations in claims 18 and 19. [REDACTED]

17 [REDACTED]  
 18 [REDACTED]  
 19 [REDACTED] Opp’n at 21.

20 The Court disagrees with Samsung’s argument. Fundamentally, claims 18 and 19 refer to what the  
 21 user views on the display screen, rather than the source code implementation of what the user sees.  
 22 Samsung points to no claim language or specification language that supports its position that the  
 23 term “replace” requires a type of source code implementation of what the claim language requires  
 24 from the viewpoint of the user’s experience. Indeed, both claims 18 and 19 refer to what is  
 25 displayed to the user on the screen of the portable electronic device: either the current string is  
 26 “kept” in the first area, or the recommended word “replaces” the current string in the display area.  
 27 Accordingly, the Court finds that Apple has established that it is likely to succeed on the merits of  
 28 its claim that the Galaxy Nexus infringes claims 18 and 19 of the ’172 Patent.

**ii. Claim 27**

1  
2 Dr. Singh also opines that the Galaxy Nexus's word recommendation feature infringes on  
3 claim 27 of the '172 Patent. The Galaxy Nexus's word recommendation feature appears to practice  
4 every limitation of claim 27. When the user types in characters through the keyboard, the character  
5 string is displayed. Singh Decl. ¶¶ 107-08. The device also displays a suggested word  
6 recommendation to replace the character string. *Id.* ¶¶ 109-10. When the user then inputs a  
7 punctuation mark through the keyboard, the current character string is replaced with both the  
8 suggested replacement word and the punctuation mark that was selected at the end of the suggested  
9 word. *Id.* ¶¶ 111-12.

10 As with claims 18 and 19, Samsung raises a similar argument with respect to  
11 noninfringement of claim 27 of the '172 Patent. Specifically, Samsung argues that claim 27 is  
12 directed to instructions that perform certain operations, and Dr. Singh, Apple's expert, never  
13 reviewed the source code or analyzed the algorithms used in Ice Cream Sandwich. Opp'n at 21.  
14 However, claim 27 describes a "computer readable memory comprising instructions that, when  
15 executed by one or more processors, perform operations." '172 Patent 14:37-40. The subsequent  
16 limitations thereafter refer only to operations that may be viewed from the perspective of the user.  
17 Thus, what is claimed, and correspondingly whether infringement occurs, may be evaluated  
18 without analysis of the source code. Samsung has offered no other argument in support of its non-  
19 infringement position. Accordingly, the Court finds that Apple has met its burden of establishing a  
20 likelihood of success on the merits of establishing infringement of claim 27 of the '172 Patent.

**b. Validity**

21  
22 Pursuant to 35 U.S.C. § 282, the '172 Patent is presumed valid. Samsung challenges the  
23 validity of the '172 Patent based on anticipation and obviousness of the claimed invention. *See* 35  
24 U.S.C. §§ 102 (anticipation), 103 (obviousness). Samsung argues that the Longe and Robinson  
25 references and the TextPlus User Guide anticipate all asserted claims. Alternatively, Samsung  
26 argues that the TextPlus and King prior art references, either alone or in combination with the other  
27 references, render the asserted claims obvious. Finally, Samsung argues that all asserted claims are  
28 invalid because they are fatally indefinite. Each of Samsung's arguments is addressed in turn.

1 **i. Anticipation**

2 *Longe/Robinson*. U.S. Patent Pub. No. 2006/0274051 (“*Longe*”) was filed on April 17,  
3 2006. A related patent, U.S. Patent No. 6,801,190 (“*Robinson*”), issued on October 5, 2004. *Longe*  
4 and *Robinson* disclose an auto-correction keyboard for devices that provide suggested word  
5 replacements as the user types. Although *Longe* and *Robinson* are two separate references, both  
6 parties discuss the references jointly, and so the Court will do the same.<sup>7</sup>

7 Samsung’s expert identifies several elements of *Longe/Robinson* that disclose limitations  
8 found in claims 18 and 19 of the ’172 Patent. Specifically, *Longe* discloses: (1) a first area that  
9 displays text being input by the user; and (2) a second area of the display separate from the first area  
10 that displays the current character string or a portion thereof and a suggested replacement character  
11 string for the current character string. See Decl. of Dr. Martin E. Kaliski (“*Kaliski Decl.*”) ¶¶ 115-  
12 16. Although Dr. Kaliski, Samsung’s expert, argues that *Longe* discloses all of the limitations in  
13 claims 18 and 19, after reviewing the declarations and the prior art, it does not appear that Dr.  
14 Kaliski’s interpretation of *Longe* is accurate. Specifically, it is not clear that *Longe* discloses that  
15 the current character string appears in both the first and second areas at the same time as the user is  
16 typing on the keyboard. See, e.g., *Kaliski Decl.* ¶ 113 & Fig. 1B. Therefore, many of the claim  
17 limitations are not disclosed in *Longe*, including (1) replacing the current character string in the first  
18 area with a suggestion selected from the second area, or (2) keeping the current character string in  
19 the first area if the user selects the current character string in the second area. See Reply Decl. of  
20 Dr. Karan Singh (“*Singh Reply Decl.*”) ¶¶ 41-52. Because some of the claim limitations found in  
21 claims 18 and 19 of the ’172 Patent are not disclosed in *Longe/Robinson*, claims 18 and 19 are not  
22 anticipated by this prior art reference.

23 Samsung also argues that *Longe/Robinson* anticipate claim 27 of the ’172 Patent. Claim 27  
24 is broader than claims 18 and 19 because, unlike claims 18 and 19, claim 27 does not require that  
25 the current character string appear in both the first and second areas of the display screen.  
26 However, claim 27 does require “while both the current character string and the suggested

27 \_\_\_\_\_  
28 <sup>7</sup> *Longe* is a continuation in part of the application that issued as U.S. Patent No. 7,030,863, which  
is itself a continuation in part of the application that issued to *Robinson*.

1 replacement string are displayed, receiving a further user input through a punctuation mark key of  
2 the keyboard, and in response to the further user input, replacing the current character string with  
3 the suggested replacement character string, and appending a punctuation mark at the end of the  
4 replacement character string, the punctuation mark corresponding to the punctuation mark key.”  
5 ’172 Patent 14:46-55. Thus, the user input of selecting a punctuation mark both “replaces” the  
6 current character string with the suggested string and appends the punctuation mark to the end of  
7 the suggested string.

8 *Longe* discloses a “keyboard of punctuation and symbols,” wherein “the selection of any  
9 character from the displayed alternate keyboard causes the Default word of the previously displayed  
10 word choice list to be output to the output text region 104 prior to outputting the selected  
11 character.” Kaliski Decl. ¶ 110 (citing *Longe* at [180]). Upon review of the relevant sections of  
12 *Longe*, it is not clear that *Longe* discloses “‘replacing’ the current character string” by selecting a  
13 punctuation mark; nor is it clear that a user can select a punctuation mark while both the user-input  
14 current character string and the suggested string are on the display, as required by claim 27. Singh  
15 Reply Decl. ¶ 55; *Longe* at [180] and [227]. Thus, it does not appear that *Longe* discloses every  
16 limitation of claim 27 of the ’172 Patent.

17 *TextPlus User Guide*. *TextPlus for the Palm OS Version 5.5 User’s Guide* (“*TextPlus*  
18 *User’s Guide*”) was a printed publication available in August 2004. Kaliski Decl. Ex. H. *TextPlus*  
19 disclosed the display of a word being entered by the user and, in a separate area, word and phrase  
20 suggestions. Word recommendations could be selected by tapping on them or by entering a space  
21 or punctuation mark.

22 Samsung argues that *TextPlus* anticipates all limitations of claim 27.<sup>8</sup> *See* Opp’n at 18.  
23 However, the *TextPlus User’s Guide* does not disclose the element that a punctuation mark is  
24 appended to the suggested string after the word is selected by the user. *See* Singh Reply Decl. ¶¶  
25 59-61. Including an appended punctuation mark to the end of a selected string is a limitation  
26 required in claim 27. ’172 Patent 14:50-55 (“[I]n response to the further user input, replacing the  
27 current character string with the suggested replacement character string, and appending a

28 <sup>8</sup> Samsung concedes that *TextPlus* does not anticipate claims 18 and 19.

1 punctuation mark at the end of the replacement character string, the punctuation mark  
2 corresponding to the punctuation mark key through which the further user input was received.”).  
3 Therefore, TextPlus does not anticipate claim 27.

#### 4 **ii. Obviousness**

5 As previously explained, a patent may be invalid for obviousness. “Under § 103, the scope  
6 and content of the prior art are to be determined; differences between the prior art and the claims at  
7 issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this  
8 background, the obviousness or nonobviousness of the subject matter is determined.” *KSR*, 550  
9 U.S. at 399 (citing *Graham*, 383 U.S. at 17-18). The Court should also take into account  
10 “secondary considerations” such as “commercial success, long felt but unsolved needs, [and] failure  
11 of others” in order to determine whether the subject matter sought to be patented would have been  
12 obvious to one of ordinary skill in the art at the time of invention. *Id.* Samsung argues that  
13 *Longe/Robinson TextPlus*, and *King* either alone, or in combination, render obvious all asserted  
14 claims.

15 *Claims 18, 19.* None of the three prior art references upon which Samsung relies anticipates  
16 claims 18 and 19. Nonetheless, the Court must still determine whether these references  
17 individually, or in combination, render claims 18 and 19 obvious.

18 As explained above, *Longe/Robinson* do not disclose that the current character string  
19 appears in both the first and second areas at the same time as the user is typing on the keyboard.  
20 Therefore, many of the claim limitations are not disclosed in *Longe/Robinson*, including (1)  
21 replacing the current character string in the first area with a suggestion selected from the second  
22 area, or (2) keeping the current character string in the first area if the user selects the current  
23 character string in the second area. Although Samsung’s expert, Dr. Kaliski, opines that  
24 *Longe/Robinson* “standing alone” render the asserted claims obvious, he essentially offers no  
25 reason or analysis for his opinion. *See* Kaliski Decl. ¶ 135. Samsung’s expert testimony is  
26 insufficient to overcome the presumption of validity that claims 18 and 19 enjoy, and therefore the  
27 Court will look to the other prior art references to determine if these references suggest the  
28 limitations that *Longe/Robinson* are lacking.

1 Even in combination with the *TextPlus* and *King* references, it is not clear that the subject  
2 matter of claims 18 and 19 would have been obvious to one of ordinary skill in the art at the time of  
3 invention. First, *TextPlus* lacks the element of displaying the current character string in two  
4 locations. *TextPlus* instead discloses a display with the current character string in only one area of  
5 the display. Second, *TextPlus* also does not require that the second area of the display always show  
6 the current character string, even if it is not a recognized word. Singh Reply Decl. ¶ 61. Nor does  
7 *TextPlus* disclose keeping the current character string by gesturing (touching) on the current  
8 character string as is required by claims 18 and 19. *Id.* ¶ 62.

9 Nor would it necessarily be obvious to one of ordinary skill in the art to look to *TextPlus*  
10 given the problem sought to be solved by the '172 Patent. *TextPlus* does not attempt to solve the  
11 same problem the inventors of the '172 Patent sought to solve: namely the increase in typing errors  
12 that arise in portable communication devices arising from the restricted size of the keyboard. '172  
13 Patent 1:27-37. Instead, *TextPlus* offered word or phrase completions based on the letters the user  
14 has already typed. Singh Reply Decl. ¶ 59. It does not, unlike the '172 Patent, offer suggestions for  
15 misspelled words. *Id.* Moreover, Dr. Singh argues, and persuasively so, that prior iterations of  
16 *TextPlus* disclosed displaying the current character string in two areas, but then abandoned this  
17 feature in the 2004 *TextPlus* iteration, thus abandoning the user interface feature claimed in claims  
18 18 and 19 that is absent from *Longe/Robinson*. Singh Reply Decl. ¶ 64. Thus, *TextPlus* teaches  
19 away from the claimed features.

20 Finally, the Court is unconvinced that U.S. Patent No. 5,953,541 (*King*) discloses displaying  
21 the current character string in both the first and second areas on the display screen as is required in  
22 claims 18 and 19. *See* Singh Reply Decl. ¶ 67. *King* was issued on September 14, 1999. Kaliski  
23 Decl. Ex. J. *King* discloses a reduced keyboard (three letters on each key) implemented on a touch  
24 screen display, with a “disambiguation system” for identifying which words the user intended to  
25 type. The user could select any of the words in the selection list by touching them, or by choosing  
26 the “Select” button or a punctuation mark. *King* displays *suggested character strings* in both the  
27 first and second areas, instead of *current character strings* in both the first and second areas. This  
28 feature in *King* was particularly tailored to the problems associated with character input using

1 reduced keyboards: “*King* always displays the suggested word in the first area because it assumes  
2 that the user-input character string will usually not reflect the character string the user actually  
3 intended to type.” Singh Reply Decl. ¶ 68. In sum, Samsung has not raised a substantial question  
4 regarding the validity of claims 18 and 19. Samsung has not established that it would have  
5 necessarily been obvious to one of ordinary skill in the art to combine the references in the manner  
6 proposed by Samsung.

7 *Claim 27.* Samsung argues that, even if *Longe/Robinson* does not anticipate claim 27, it is  
8 invalid as obvious in light of prior art. While *Longe/Robinson* disclose several of the limitations in  
9 claim 27, *Longe/Robinson* do not disclose “replacing the current character string with the suggested  
10 replacement character string, and appending a punctuation mark at the end of the replacement  
11 character string, the punctuation mark corresponding to the punctuation mark key.” ’172 Patent  
12 14:46-55. Moreover, *TextPlus* does not disclose appending the punctuation mark at the end of the  
13 suggested string. Instead, the punctuation mark is used purely as a selection mechanism. Singh  
14 Reply Decl. ¶ 60. As with claims 18 and 19, it is not clear that it would have been obvious to one  
15 of ordinary skill in the art to combine elements in order to reach the subject matter of claim 27, or  
16 that combining elements would have led one of ordinary skill in the art to replace the current  
17 character string with the suggested string and append the punctuation mark at the end of the  
18 replacement string. *See id.* ¶¶ 71-72. In sum, Samsung has not raised a substantial question  
19 regarding the validity of claim 27. Samsung has not established that it would have necessarily been  
20 obvious to one of ordinary skill in the art to combine references in the manner it has proposed.

### 21 **iii. Indefiniteness**

22 *Claims 18 and 27.* Samsung also argues that claims 18 and 27 in the ’172 Patent are invalid  
23 because they are impermissible hybrid claims. In *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430  
24 F.3d 1377, 1383-84 (Fed. Cir. 2005), the Federal Circuit found a single claim covering both an  
25 apparatus and a method of use of that apparatus as invalid and indefinite under section 112,  
26 paragraph 2. This is because “a manufacturer or seller of the claimed apparatus would not know  
27 from the claim whether it might also be liable for contributory infringement because a buyer or user  
28 of the apparatus later performs the claimed method of using the apparatus.” *Id.* at 1384. For

1 example, in *IPXL*, claim 25 read: “The *system of claim 2* [including an input means] wherein the  
2 predicted transaction information comprises both a transaction type and transaction parameters  
3 associated with that transaction type, and the *user uses the input means* to either change the  
4 predicted transaction information or accept the displayed transaction type and transaction  
5 parameters.” *Id.* at 1384 (emphasis in original). The Federal Circuit held that it was unclear  
6 whether infringement occurred when one created the system or when the user actually used the  
7 input means.

8 The Federal Circuit has since limited *IPXL* and clarified that it is only when the public  
9 cannot discern when infringement occurs that the *IPXL* rule applies. For example, in  
10 *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367 (Fed. Cir. 2008), the  
11 Federal Circuit overturned a district court’s determination of claim invalidity under the *IPXL* rule  
12 barring hybrid claims. There, the court concluded that “method claim preambles often recite the  
13 physical structures of a system in which the claimed method is practiced.” *Id.* at 1374. Similarly,  
14 where the claims require capability, not actual use, or describe functional limitations, such claims  
15 are not invalid based on the *IPXL* rule. *See Yodlee v. Cashedge*, No. C 05-01550 SI, 2006 WL  
16 3456610, at \*4 (N.D. Cal. Nov. 29, 2006).

17 Claims 18 and 27 are not indefinite hybrid claims. Claim 18 describes: “A graphical user  
18 interface . . . comprising: a first area of the touch screen display that displays a current character  
19 string being input by a user with the keyboard . . . wherein; the current character string in the first  
20 area is replaced with the suggested replacement character string if the user activates a key on the  
21 keyboard associated with a delimiter.” ’172 Patent 12:49-63. Claim 18 claims an apparatus that has  
22 the capability of performing certain steps if activated by the user. Whether the user actually  
23 performs the functions is “of no import.” *Yodlee*, 2006 WL 3456610, at \*4. Thus, there is no  
24 confusion as to whether infringement occurs upon manufacture of the device or the user’s use of the  
25 device, and the *IPXL* rule does not apply.

26 Similarly, claim 27 describes: “A portable electronic device, comprising . . . computer  
27 readable memory comprising instructions that, when executed by the one or more processors,  
28 perform operations comprising: receiving a plurality of user inputs . . . and displaying a current

1 character string as input by the user, . . . [and] in response to the further user input, replacing the  
2 current character string . . . .” ’172 Patent 14:35-51. As with claim 27 above, the patentable subject  
3 matter is the apparatus, which has the *capability* of performing certain steps when certain user  
4 inputs are received. Like *Microprocessor Enhancement*, the functional limitations on the method  
5 claim do not create ambiguity regarding when infringement might occur. Accordingly, Samsung  
6 has not met its burden of raising a substantial question of invalidity with respect to claims 18 and  
7 27.

8 *Claims 19 and 27.* Alternatively, Samsung argues that Claims 19 and 27 are indefinite  
9 because they do not disclose claimed algorithms. Samsung argues that claims 19 and 27 are means-  
10 plus-function claims under 35 U.S.C. § 112 ¶ 6. As such, Samsung argues that the specification  
11 must disclose the algorithm to be performed. According to Samsung, because the patent does not  
12 disclose any algorithm to perform the “instructions,” claims 19 and 27 are invalid. Opp’n 20-21.  
13 Apple argues that these claims are *Beauregard* claims that do not require the disclosure of an  
14 algorithm. *See In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995).

15 Samsung is correct that in certain means-plus-function claims, the specification must  
16 “disclose an algorithm for performing the claimed function.” *Net MoneyIN, Inc. v. VeriSign, Inc.*,  
17 545 F.3d 1359, 1367 (Fed. Cir. 2008); *Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 521  
18 F.3d 1328, 1333 (Fed. Cir. 2008). The specification can express the algorithm “in any  
19 understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any  
20 other manner that provides sufficient structure.” *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d  
21 1323, 1340 (Fed. Cir. 2008) (internal citation omitted).

22 However, before determining whether the specification is required to disclose an algorithm,  
23 the Court must first determine whether claims 19 and 27 are means-plus-function claims. “Means-  
24 plus-function claiming applies only to purely functional limitations that do not provide the structure  
25 that performs the recited function.” *Phillips*, 415 F.3d at 1311 (citing *Watts v. XL Sys. Inc.*, 232  
26 F.3d 877, 880-81 (Fed. Cir. 2000)). “[A] claim term that does not use ‘means’ will trigger the  
27 rebuttable presumption that [35 U.S.C.] § 112 ¶ 6 does not apply.” *CCS Fitness v. Brunswick*  
28 *Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002). The Federal Circuit has made clear that “the

1 presumption flowing from the absence of the term ‘means’ is a strong one that is not readily  
2 overcome.” *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir.  
3 2004).

4 The term “means” is not invoked in either claim 27 or claim 19. Thus, Samsung must rebut  
5 the presumption that these claims do not invoke a means-plus-function analysis. Samsung has  
6 failed to do so. Indeed, similar claims that require “computer readable program code configured to  
7 cause a computer to . . .” have been found not to be means-plus-function claims. *See Versata*  
8 *Software, Inc. v. Sun Microsystems, Inc.*, No. 06-CV-358, 2008 WL 3914098, at \*13-14 (E.D. Tex.  
9 Aug. 19, 2008). The Court declines to construe these terms as means-plus-function claims.  
10 Therefore, Samsung has failed to show that it is likely to overcome the presumption of validity that  
11 claims 19 and 27 enjoy.

12 Accordingly, Apple has shown that it is likely to succeed on the merits at trial in its claims  
13 that the Samsung Galaxy Nexus infringes claims 18, 19, and 27 of the ’172 Patent.

#### 14 **B. Likelihood of Irreparable Harm**

15 As previously discussed, “[a]n injunction is a matter of equitable discretion; it does not  
16 follow from success on the merits as a matter of course.” *Winter*, 555 U.S. at 32 (citing  
17 *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 313 (1982)). The Supreme Court has made clear  
18 that the right to exclude afforded under the Patent Act does not displace the district court’s  
19 discretion to grant or deny injunctive relief in accordance with traditional principles of equity.  
20 *eBay*, 547 U.S. at 391-92. One of these equitable principles requires that the plaintiff make “a  
21 clear showing” that it is at risk of “substantial and immediate irreparable injury” in the absence of  
22 relief. *Apple*, 678 F.3d at 1325 (internal quotation marks and citations omitted). Furthermore,  
23 “[t]o show irreparable harm, it is necessary to show that the infringement caused harm in the first  
24 place.” *Id.* at 1324. Thus, to prevail on its request for the extraordinary remedy of preliminary  
25 injunctive relief, Apple must clearly show that (1) irreparable harm will result absent the requested  
26 relief, and (2) “some causal nexus” exists between the infringement and the alleged irreparable  
27 harm. *Id.* at 1327.

1 The Supreme Court has rejected the use of categorical rules in fashioning equitable relief,  
2 and the Federal Circuit has likewise held that it is error to rely exclusively on a single factor in  
3 determining whether a plaintiff has demonstrated irreparable harm. *See eBay*, 547 U.S. at 392-93;  
4 *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1149-51 (Fed. Cir. 2011). Accordingly,  
5 the Court addresses each of the party's arguments in turn and then considers the evidence in  
6 totality.

### 7 **1. Irreparability**

8 Apple's theory of irreparable harm here is that Samsung uses Apple's unlicensed patents to  
9 compete with and steal market share from Apple, particularly with respect to capturing all-  
10 important first-time smartphone purchasers, causing incalculable and unrecoverable loss of market  
11 share in both the smartphone market and in collateral downstream markets, such as apps, tablets,  
12 and music downloads. More specifically, Apple alleges that it will suffer three types of irreparable  
13 harm if the Court does not immediately enjoin the manufacture, use, sale, offers to sell, or  
14 importation of the Galaxy Nexus: (1) long-term loss of market share in the smartphone market; (2)  
15 loss of sales of other Apple products due to downstream and network effects; and (3) loss of  
16 goodwill.

#### 17 **a. Long-Term Loss of Market Share**

18 First, Apple asserts that the Galaxy Nexus incorporates key patented features and that sales  
19 of the Galaxy Nexus, especially to all-important first-time smartphone customers, will permanently  
20 reduce Apple's market share in the smartphone market. Mot. at 16. It is well settled that loss of  
21 market share to a competitor as a result of infringing conduct may support a finding of irreparable  
22 harm. *Robert Bosch*, 659 F.3d at 1153-54; *Polymer Techs.*, 103 F.3d at 975-76. Indeed, courts are  
23 most likely to grant an injunction when the plaintiff and defendant are direct competitors in the  
24 same market, because in that context, the potential harm in allowing the defendant to continue its  
25 infringing conduct may be the greatest. *See i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 861  
26 (Fed. Cir. 2010); *Robert Bosch*, 659 F.3d at 1153. As the moving party, Apple bears the burden of  
27 making "a prima facie showing of lost market share," though this showing need not be made with  
28 direct evidence. *Robert Bosch*, 659 F.3d at 1154.

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1 Samsung argues that Apple has failed to show evidence of lost market share – or even any  
2 lost sales, for that matter – attributable to the Galaxy Nexus. Samsung makes a variety of  
3 arguments in this regard. First, Apple offers no data or projections showing the past or future  
4 effect of the Galaxy Nexus on its sales or market share, and thus Apple’s conjecture of lost market  
5 share is purely speculative. Second, Apple’s speculation about lost market share is premised on a  
6 faulty and grossly overblown hypothetical by its expert, Dr. Velluro. Third, recent data of Apple’s  
7 persistent success since the launch of the Galaxy Nexus belies any claim of irreparable harm, or  
8 even of lost sales. Fourth, past sales data show that fluctuations in Apple’s sales figures are  
9 attributable to the timing of a new Apple product’s release. Thus, Samsung argues, the data  
10 undermines Apple’s theory that Samsung’s alleged infringement is responsible for any lost sales,  
11 and illustrates that any theoretical lost market share can be regained with release of a new Apple  
12 product. Opp’n at 23-25.

13 Of course, the mere potential of lost sales alone does not demonstrate irreparable harm, for  
14 if such were the case, an injunction would issue in every case of infringement. *See Abbott Labs.*,  
15 452 F.3d at 1348; *Ill. Tool Works*, 906 F.2d at 683; *see also Automated Merchandising Sys., Inc. v.*  
16 *Crane Co.*, 357 Fed. Appx. 297, 300-01 (Fed. Cir. 2009) (“[L]ost sales standing alone are  
17 insufficient to prove irreparable harm. . . . Lost sales (without more) are presumed to be  
18 compensable through damages, so they do not require injunctive relief.”). Nevertheless, the  
19 Federal Circuit has not required a plaintiff to produce direct evidence of specific consumers who  
20 would have bought plaintiff’s product but for the alleged infringer’s product. For example, in  
21 affirming the district court’s finding of irreparable injury in *i4i*, the Federal Circuit held that “*i4i*  
22 was not required to prove that its specific customers stopped using *i4i*’s products because they  
23 switched to the infringing Word products.” *i4i Ltd. P’ship*, 598 F.3d at 862.

24 The Court finds that ample evidence supports Apple’s prima facie case that its risk of lost  
25 sales is more than merely speculative or conjectural. That Apple and Samsung are direct  
26 competitors in the smartphone market cannot be genuinely disputed. *See Velluro Reply Decl. Ex.*  
27 35 at SAMNDCA00258697 ( [REDACTED] );  
28 [REDACTED]; *see Decl. of Arthur Rangel* (“Rangel

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1 Decl.”) Ex. 3 at 16 ( [REDACTED]  
2 [REDACTED]), 24 ( [REDACTED]  
3 [REDACTED]). Independent commentators have described the Galaxy Nexus as “the  
4 most credible competitor to the iPhone so far.” Velturo Decl. ¶ 68 & Ex. 101. Although Samsung  
5 points to the fact that the Galaxy Nexus was only one of 315 Android models sold by 32 different  
6 manufacturers in the fourth quarter of 2011, *see* Opp’n at 22, evidence shows that Samsung is now  
7 Apple’s largest smartphone competitor worldwide and is rapidly becoming Apple’s largest  
8 smartphone competitor in the U.S. market. Velturo Decl. ¶¶ 24-25 & Ex. 40 (“Samsung is now  
9 well positioned alongside Apple in a two-horse race at the forefront of one of the world’s largest  
10 and most valuable consumer electronics markets.”). Indeed, Samsung’s own internal documents  
11 suggest that Samsung itself [REDACTED]  
12 [REDACTED], and confirm that part of Samsung’s overall business strategy is centered around  
13 “[REDACTED]” in order to [REDACTED]”  
14 *See* Velturo Reply Decl. Ex. 35 at SAMNDCA00258729 ( [REDACTED]  
15 [REDACTED]  
16 [REDACTED]”), \*697 ( [REDACTED]  
17 [REDACTED]), \*791 (“ [REDACTED]  
18 [REDACTED]”); *id.* Ex. 48 at SAMNDCA11545934 (“ [REDACTED]  
19 [REDACTED]”); *id.* Ex. 57 at S-ITC-50057696 (“ [REDACTED]  
20 [REDACTED]”). Samsung’s internal documents further demonstrate that Samsung [REDACTED]  
21 [REDACTED]  
22 [REDACTED]. *See id.* Ex. 53 at S-ITC-  
23 500047403 ( [REDACTED]  
24 [REDACTED]); *id.* Ex. 35 at SAMNDCA00258798 ( [REDACTED]  
25 [REDACTED]); *id.*  
26 Ex. 36 at SAMNDCA00261825 ( [REDACTED]  
27 [REDACTED]  
28 [REDACTED]

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[REDACTED]”); *id.* Ex. 57 at S-  
 ITC-500057724 (“ [REDACTED]  
 [REDACTED]  
 [REDACTED]”). In any event, “[w]hile the existence of a two-player market may  
 well serve as a substantial ground for *granting* an injunction – e.g., because it creates an inference  
 that an infringing sale amounts to a lost sale for the patentee – the converse is not automatically  
 true, especially where, as here, it is undisputed that the patentee has sought to enforce its rights  
 against other infringers in the market.” *Robert Bosch*, 659 F.3d at 1151. Thus, “without additional  
 facts showing that the presence of additional competitors renders the infringer’s harm reparable,  
 the absence of a two-supplier market does not weigh against a finding of irreparable harm.” *Id.*;  
*see also Pfizer, Inc. v. Teva Pharms. USA, Inc.*, 429 F.3d 1364, 1381 (Fed. Cir. 2005) (The “fact  
 that other infringers may be in the marketplace does not negate irreparable harm.”).

As evidence that Apple is likely to lose market share to Samsung in the absence of an  
 injunction, Apple points to the fact that [REDACTED]  
 [REDACTED]  
 [REDACTED] Velturo Decl. ¶ 23 &  
 Ex. 29 at 8, 18. Apple opines that “[j]ust as Samsung was able to capture and increase critical  
 market share with its prior infringing smartphones, Samsung undoubtedly will do so again now  
 with the new infringing Galaxy Nexus,” Mot. at 18, which independent commentators have  
 characterized as ‘the most credible competitor to the iPhone so far,’” Velturo Decl. ¶ 68 & Ex.  
 101. Apple argues that “even if Apple’s overall market share *increased* while the Galaxy Nexus  
 was sold, lost iPhone sales due to sales of the Galaxy Nexus would result in Apple losing some  
 additional portion of market share that Apple would have enjoyed but for Samsung’s  
 infringement.” Mot. at 18.

Samsung counters that Apple’s speculation regarding market loss is based on an unreliable  
 hypothetical projection by Dr. Velturo that distorts the actual facts. While Samsung’s attack on  
 the reliability of Dr. Velturo’s hypothetical that the Galaxy Nexus would sell 20 million units is  
 well taken, the Court does not find Dr. Velturo’s hypothetical to be material to Apple’s showing of

1 irreparable harm. The actual sales figures reflect that Samsung had already sold [REDACTED] Galaxy  
 2 Nexus phones to carriers or Google as of May 4, 2012. Velturo Reply Decl. ¶ 65 & Ex. 5  
 3 [Geklinsky Dep.] at 68:20-69:6. A Samsung employee reported that Samsung has generated over a  
 4 [REDACTED] dollars of revenue. Furthermore, in Samsung’s brief on bond, Samsung  
 5 estimates that between July 2012 and June 2013, it will sell approximately [REDACTED] units of the  
 6 Galaxy Nexus in the United States, at an average profit rate of [REDACTED] per unit. Samsung’s Brief  
 7 Re: Bond (“Samsung Bond Br.”); *see* Decl. of Corey Kerstetter (“Kerstetter Decl.”) ¶¶ 2-3. Even if  
 8 the Galaxy Nexus has perhaps not sold as well as anticipated, the Court is not persuaded by  
 9 Samsung’s evidence that the competitive impact of the Galaxy Nexus is only negligible or so  
 10 insignificant as to preclude injunctive relief.

11 Samsung also argues that Apple cannot show irreparable harm because it has remained a  
 12 market leader even since the release of the Galaxy Nexus. *See* Decl. of Michael J. Wagner  
 13 (“Wagner Decl.”) ¶¶ 25, 27-28. Samsung points to evidence showing that the iPhone is the  
 14 dominant smartphone in the U.S. with a [REDACTED]  
 15 [REDACTED]. *See id.* & Figs. 1-3. In the fourth quarter of 2011, when the Galaxy Nexus was released in  
 16 the U.S., [REDACTED]. Posner Decl. Ex.  
 17 CC. Moreover, [REDACTED]  
 18 [REDACTED]. Wagner Decl. ¶ 73 & Fig. 13. In  
 19 conjunction with this evidence, Samsung’s expert Dr. Wagner offers an alternative explanation for  
 20 the variations in Apple’s market share. According to Mr. Wagner, [REDACTED]  
 21 [REDACTED]  
 22 [REDACTED]  
 23 [REDACTED]  
 24 [REDACTED]  
 25 [REDACTED] Wagner Decl. ¶ 24 & Fig.

26 1. Thus, Samsung’s expert posits that fluctuations in Apple’s market share are more likely  
 27 attributable to Apple’s own conduct than to the release of the Galaxy Nexus or of any other  
 28 particular Android product. Mr. Wagner explains that there are myriad complex and

1 interconnected factors that affect consumers' purchasing decisions and shape the market, which  
2 Mr. Wagner says Apple's expert Dr. Vellturo failed to take into account in opining on irreparable  
3 harm.

4 Although the Court appreciates that the dynamics of the smartphone market are  
5 multifaceted and that it is therefore difficult for Apple to establish a direct relationship between a  
6 particular competitor's product and specific lost sales, the Court is not persuaded by Samsung's  
7 argument that Apple's continued success in the market precludes a finding of irreparable harm.  
8 Not only has Apple presented un rebutted evidence that Apple and Samsung compete directly for  
9 first-time smartphone customers, but Apple has also presented compelling evidence that any loss of  
10 market share to Samsung now as a result of an infringing product would be difficult to quantify or  
11 recapture.

12 Apple makes clear that its loss of market share argument is not based solely on projected  
13 lost sales during the next 18 to 24 months. Rather, "given the critical juncture in which first-time  
14 buyers are moving to smartphones as well as platform stickiness . . . Apple will lose significant  
15 long-term market share." Reply at 9. Apple argues that its loss of market share to Samsung's  
16 infringing product cannot be compensated by money damages, because loss of market share during  
17 this "critical juncture" of the rapidly expanding smartphone market will have incalculable and  
18 irreversible long-term effects. Apple contends that "smartphone adoption is accelerating and has  
19 entered a critical phase wherein an unprecedented portion of mobile device customers will make  
20 their initial choice of a smartphone and associated operating system platform, a choice that will  
21 likely dictate their future purchases as well." Vellturo Decl. ¶¶ 27. Not only do industry data and  
22 analyst reports indicate that a significant percentage of U.S. mobile phone users will be switching  
23 from basic "feature phones" to smartphones over the next several years, which will create a huge  
24 opportunity for both Apple and Samsung to capture market share, but furthermore, "platform  
25 stickiness" means that the initial capture of market share is likely to lead to high rates of market  
26 share retention. See Vellturo Decl. ¶¶ 24-25, 37 & Ex. 33 (characterizing the U.S. mobile market  
27 as a "two-horse race between Apple and Android, as BlackBerry's lead slips away").  
28

1 Apple has presented ample evidence that the smartphone market is a rapidly growing one  
 2 and that the consumer base is likely to expand significantly over the next few years. Apple’s  
 3 expert, Dr. Christopher Velluro, analyzed industry data from the International Data Corporation  
 4 (“IDC”) on shipments of mobile phones for the period 2004Q1 through 2011Q3, and found that  
 5 mobile phone shipments are in a high growth period, while “feature phone” shipments are  
 6 declining. Velluro Decl. ¶ 18. Data projections show that significant adoption of smartphones by  
 7 current feature phone users will continue to take place over approximately the next 18 to 24  
 8 months. For example, the Yankee Group analyzed and projected U.S. market share by mobile  
 9 phone type from 2003 through 2015. While basic feature phones comprised 86% of the U.S.  
 10 mobile phone market in 2009, compared to 14% market share for smartphones, the Yankee Group  
 11 projects that by 2015, basic feature phones will retain only 10% of the U.S. mobile phone market  
 12 share, while smartphones will surge to comprise 90% of the U.S. mobile phone market share.  
 13 Velluro Decl. ¶ 19 & Attach. D.

14 Another industry report states that the number of U.S. smartphone users grew nearly 49%  
 15 between the end of 2009 and the end of 2010, and grew another 21.9% between the end of 2010  
 16 and the end of 2011. Velluro Decl. Ex. 33 at 1. From 2009 to 2011, the number of U.S.  
 17 smartphone users grew from 40.4 million users to 73.3 million users. That industry report projects  
 18 that the number of smartphone users will grow another 15.1% from the end of 2011 to the end of  
 19 2012, and another 10.7% from the end of 2012 to the end of 2013, reaching 93.4 million users by  
 20 the end of 2013. *Id.* Smartphone adoption will continue after 2013 but at a somewhat more  
 21 modest pace, with the number of smartphone users growing only another 15.5% between the end of  
 22 2013 and the end of 2015. *Id.*

23 In fact, Samsung’s internal documents reveal that [REDACTED]  
 24 [REDACTED]  
 25 [REDACTED]  
 26 [REDACTED]  
 27 [REDACTED]. Velluro Reply Decl. ¶ 11 & Exs. 35, 40. Moreover, Samsung’s own documents reflect  
 28 [REDACTED]

1 [REDACTED]. See Velturo Reply Decl. Ex. 53 at S-ITC-500047435 (“[REDACTED]  
 2 [REDACTED]  
 3 [REDACTED]); *id.* Ex. 57 at S-ITC-500057724 ([REDACTED]  
 4 [REDACTED]”). Samsung’s own  
 5 documents also reveal that [REDACTED]  
 6 [REDACTED] See *id.* Ex. 37 at  
 7 SAMNDCA00268358 [REDACTED], \*372  
 8 [REDACTED]  
 9 [REDACTED] According to Samsung’s internal strategic planning documents, [REDACTED]  
 10 [REDACTED]  
 11 [REDACTED] *Id.* Ex. 37 at SAMNDCA00268372. In fact, Samsung’s growth strategy is to  
 12 [REDACTED] *Id.* Ex. 38 at  
 13 SAMNDCA00268778. Furthermore, Samsung’s documents observe that [REDACTED]  
 14 [REDACTED]  
 15 [REDACTED] *Id.* Ex. 38 at SAMNDCA00268780.

16 Samsung argues that, while Apple makes much fanfare of this “critical juncture” during  
 17 which smartphone manufacturers are competing for first-time customers, the evidence shows that  
 18 most purchasers of premium, high-end smartphones like the iPhone 4S or the Galaxy Nexus are not  
 19 first-time but rather repeat customers. However, [REDACTED]  
 20 [REDACTED]. Rangel  
 21 Decl. Ex. 3 at 13. Samsung’s expert likewise admitted that [REDACTED]  
 22 [REDACTED]. Velturo Reply Decl. ¶ 14  
 23 & Ex. 4 [Wagner Dep.] at 73:10-23. In light of the totality of the evidence on the record presented,  
 24 the Court finds that Samsung has failed to rebut Apple’s prima facie showing that it will suffer lost  
 25 market share in the absence of a preliminary injunction, due to the direct competition between  
 26 Samsung and Apple for critical first-time smartphone buyers over the next 18 to 24 months, whose  
 27 first purchasing decisions will largely predict their operating system allegiance for future  
 28 purchases. While a preliminary injunction cannot issue on “[a] mere showing that Apple might

1 lose some insubstantial market share as a result of Samsung’s infringement,” *Apple*, 678 F.3d at  
2 1324-25, Apple has adduced an abundance of evidence showing that it is at risk of suffering harm  
3 that is substantial, immediate, and irreparable, such that “remedies available at law, such as  
4 monetary damages, are inadequate to compensate for that injury.” *eBay*, 547 U.S. at 391; *see also*  
5 *Winter*, 555 U.S. at 22; *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 311 (1982). In other words,  
6 Apple has adequately shown a likelihood of irreparable harm in the form of lost market share and  
7 permanent loss of customers.

8 **b. Loss of Sales Due to Downstream and Network Effects**

9 Second, Apple argues that the harm to Apple resulting from loss of smartphone market  
10 share would radiate out in a multitude of other ways, reducing demand for other Apple products.  
11 Mot. at 20. Samsung argues that these downstream effects are quantifiable through ordinary  
12 damages calculations. Apple, as the movant here, bears the burden of providing “[s]ome evidence  
13 and reasoned analysis” for the inadequacy of monetary damages to compensate its alleged harms.  
14 *Nutrition 21*, 930 F.2d at 872. At the same time, “the simple fact that one could, if pressed,  
15 compute a money damages award does not always preclude a finding of irreparable harm.” *Celsis*  
16 *In Vitro*, 664 F.3d at 930.

17 In its Order Denying Apple’s Motion for a Preliminary Injunction in *Apple I*, this Court  
18 found that “potential customers that Apple loses to Samsung may have long-term effects that are  
19 difficult to calculate and may not be recaptured.” *Apple I*, 2011 WL 7036077, at \*20. Apple again  
20 argues here that, due to “platform stickiness” and brand loyalty, the impact of lost smartphone sales  
21 today will continue to reverberate incalculably into the future, not only in loss of smartphone  
22 market share, but also in lost “sales of tag-along products.” Reply at 11 (quoting *Apple I*, 2011 WL  
23 7036077, at \*20); *see* Vellturo Reply Decl. ¶¶ 123-27. Specifically, Apple argues that it will suffer  
24 lost sales in downstream product markets, including (1) future smartphone purchases; (2) other iOS  
25 products, such as iPad and iPod touch; (3) other Apple products, such as iMacs, MacBooks, and  
26 Apple TVs; and (4) digital media tied to lost sales of Apple products. Mot. at 21-23. In other  
27 words, the harmful effects to Apple’s smartphone market share will radiate outward to infect the  
28 competitiveness of Apple’s entire business.

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1 Apple’s expert opines that Galaxy Nexus users will be less likely to buy not only Apple  
 2 iPhones, but also iPad, iPod, iMac, and Macbook products, and will not download content, such as  
 3 apps and music, because apps and music are specific to the operating system for which they are  
 4 designed. Vellturo Reply Decl. ¶¶ 123-27. Although Apple does not present direct evidence that  
 5 consumers who purchase the Galaxy Nexus would have bought any of the above-described  
 6 categories of Apple products but for their purchase of the Galaxy Nexus, Apple does present  
 7 compelling circumstantial evidence supporting the plausibility of its downstream effects theory.  
 8 For example, consumer surveys and sales data confirm that the vast majority of iPhone owners use  
 9 apps from the iTunes App Store. Indeed, [REDACTED] and in  
 10 July 2011 alone, [REDACTED] were downloaded from the Apple iTunes App Store by  
 11 iPhone, iPad, and iPod Touch users worldwide. *See* Vellturo Decl. ¶¶ 57-58; *id.* Ex. 53 at 82. As  
 12 another example, [REDACTED]  
 13 [REDACTED]  
 14 [REDACTED]  
 15 [REDACTED]  
 16 [REDACTED] Vellturo Decl. ¶ 59; *id.* Ex. 53 at  
 17 109.

18 Although Samsung’s expert opines that Apple’s expert overstates the impact of platform  
 19 loyalty on future smartphone and tag-along product sales, *see* Wagner Decl. ¶¶ 84-103, Samsung’s  
 20 own internal documents acknowledge that [REDACTED]  
 21 [REDACTED],” Vellturo Reply  
 22 Decl. ¶¶ 21-22; *id.* Ex. 51 at S-ITC-003353324. Samsung’s document illustrates this with a  
 23 diagram showing that, [REDACTED]  
 24 [REDACTED]  
 25 [REDACTED]  
 26 [REDACTED]  
 27 [REDACTED]  
 28 [REDACTED] *Id.* All this further evidences the strong demand complementarity

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1 between sales of iPhones and sales of other iOS and Apple devices, reinforcing Apple’s claim that  
2 lost iPhone sales will impact downstream purchases, and furthermore that loss of these downstream  
3 sales, which include “new devices” that remain to be invented, will be difficult to quantify.

4 Apple has also presented evidence that these same demand complementarity forces are at  
5 work among Samsung customers. As noted, Samsung’s own documents acknowledge the  
6 importance of brand loyalty and the critical potential to sell to the installed base of smartphone  
7 consumers. See Velturo Reply Decl. Ex. 37 at SAMNDCA00268385 [REDACTED]

8 [REDACTED]; see also *id.* Ex. 38 at SAMNDCA00268778  
9 [REDACTED], \*780 [REDACTED]

10 [REDACTED]  
11 [REDACTED]). Samsung’s documents include a second flow chart depicting [REDACTED]  
12 [REDACTED], concluding that, as with Apple purchases, “[REDACTED]  
13 [REDACTED]  
14 [REDACTED].” *Id.* Ex. 35 at SAMNDCA002586752. Yet another Samsung  
15 document observes that [REDACTED]

16 [REDACTED]  
17 [REDACTED]. *Id.* Ex. 35 at SAMNDCA00258795; *id.* Ex. 40 at SAMNDCA00277035.

18 Moreover, Samsung’s strategic planning documents show that [REDACTED]

19 [REDACTED].”  
20 According to Apple’s expert Dr. Velturo, the Galaxy Nexus is the first Android smartphone to use  
21 an operating system that will allow the phone to be interoperable with other Android-based  
22 devices, such as tablets running the Android Ice Cream Sandwich operating system. Velturo Decl.

23 ¶ 9 & n.11. Apple introduces evidence that “[REDACTED]  
24 [REDACTED]

25 [REDACTED].” *Id.* ¶ 13. Samsung’s documents reveal the importance of [REDACTED]  
26 [REDACTED].” *Id.* Ex. 40 at

27 SAMNDCA00276992. As Mr. Velturo points out, Samsung’s advertising and promotional  
28 campaigns are increasingly [REDACTED]

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[REDACTED] *Id.* ¶ 13; *id.* Ex. 53 at S-ITC-500047401; *id.* Ex. 55 at S-ITC-500054993 [REDACTED]  
[REDACTED]

Apple also argues that it will suffer irreparable harm to the entire Apple “ecosystem” due to “network effects,” meaning not only would Apple lose sales of other Apple products to Galaxy Nexus users, but also the resultant smaller installed base of iPhone users would have ripple effects on other prospective Apple customers. As Apple’s expert explains, Facebook is a classic example of network effects, wherein Facebook was able to overtake competitor social networks as the size of the Facebook network expanded and thus became of greater value to non-participants. Velturo Decl. ¶ 52. In the context of the smartphone market, “network effects” means that customer demand for a given smartphone platform increases as the number of other users on the platform increases. *Id.* ¶ 50. Apple’s expert points to various third-party documents confirming industry recognition of the “‘tippy’ nature of smartphone platforms” and the fact that network effects help shape the smartphone market. *Id.* ¶ 51 & Exs. 68, 69. Furthermore, Samsung’s own documents recognize the competitive importance of network effects. *See, e.g.,* Velturo Reply Decl. Ex. 56 at S-ITC-500056410 (“[REDACTED].”).

Although Samsung’s expert opines that Apple’s expert overstates the potential harm derived from network effects, *see* Wagner Decl. ¶¶ 75-82, Samsung’s evidence does not fully undermine Apple’s evidence that network effects are playing some role in the consumer dynamics of the smartphone market. Thus, the Court finds plausible Apple’s theory that network effects will further exacerbate the magnitude of Apple’s harm.

Based on the record before it, the Court finds that Apple has provided sufficient evidence of the downstream effects of lost smartphone sales, which would be both long-term and difficult to calculate. This showing further supports a finding of irreparable harm.

**c. Loss of Goodwill**

Finally, Apple argues that it will also suffer irreparable harm in the form of loss of goodwill. Mot. at 24. Loss of goodwill, as well as damage to reputation, can support a finding of irreparable harm. *See Celsis In Vitro*, 664 F.3d at 930 (citing *Sandoz*, 544 F.3d at 1362; *Sanofi-*

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1 *Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1382-83 (Fed. Cir. 2006)); *AstraZeneca*, 633 F.3d at  
 2 1062-63. For example, in *AstraZeneca*, the Federal Circuit affirmed the district court's finding that  
 3 *AstraZeneca*, the patentee of a pediatric asthma drug, would suffer a loss of unquantifiable public  
 4 goodwill if the accused infringer began distributing its generic drug and was subsequently forced to  
 5 remove the drug from the market, which would result in confusion among physicians and patients  
 6 alike. *AstraZeneca*, 633 F.3d at 1062-63. Similarly, in *Celsis In Vitro*, the Federal Circuit found  
 7 no error in the district court's finding that the patentee would suffer loss of customer goodwill if  
 8 the patentee later, upon obtaining a permanent injunction, attempted to restore the original price.  
 9 664 F.3d at 930.

10 In contrast to the claimed loss of goodwill at issue in these biotechnology and  
 11 pharmaceutical cases, Apple here claims that it will suffer a loss of goodwill because it has built a  
 12 reputation for innovativeness, and Samsung's introduction of infringing products like the Galaxy  
 13 Nexus into the smartphone market will dilute the distinctiveness of Apple's products and the  
 14 goodwill associated with those products. Mot. at 24. Apple fails, however, to cite any Federal  
 15 Circuit case law recognizing loss of brand distinctiveness as a form of loss of goodwill. Even  
 16 assuming that Apple has articulated a legally cognizable theory of irreparable harm based on  
 17 erosion of its reputation for innovativeness, Apple has failed to support this theory with evidence.

18 Admittedly, Apple has presented evidence that a [REDACTED]  
 19 [REDACTED]  
 20 [REDACTED] Rangel Decl. Ex. 3 at 25; *see also* Velturo Decl. ¶¶ 97-98. [REDACTED]  
 21 [REDACTED]. Rangel Decl. Ex. 3 at 25. Nonetheless, although Apple  
 22 has submitted evidence that it has invested in cultivating strong customer goodwill and that some  
 23 consumers purchase Apple products because of Apple's good reputation, Apple has presented no  
 24 evidence explaining how the presence in the market of an infringing product such as the Galaxy  
 25 Nexus erodes that goodwill. Samsung points this out in its opposition brief, *see* Opp'n at 25, and  
 26 indeed, Apple offers no rebuttal in its reply. Accordingly, on this record, the Court cannot find that  
 27 Apple will likely suffer loss of goodwill in the absence of preliminary relief. *See Tech-Wear, Inc.*  
 28 *v. Acme Laundry Prods., Inc.*, 38 F. Supp. 2d 1147, 1152 (C.D. Cal. 1998) (declining to find loss of

1 goodwill where plaintiffs provided “no evidentiary facts” to support that conclusion); *Quad/Tech,*  
 2 *Inc. v. Q.I. Press Controls B.V.*, 701 F. Supp. 2d 644, 656-57 (E.D. Pa. 2010) (speculative harm  
 3 insufficient).

#### 4 **d. Summary**

5 For the reasons discussed, the Court finds that, although Apple has not proven a likelihood  
 6 that it will suffer loss of goodwill in the absence of immediate injunctive relief, Apple has made a  
 7 clear showing that, in the absence of a preliminary injunction, it is likely to lose substantial market  
 8 share in the smartphone market and to lose substantial downstream sales of future smartphone  
 9 purchases and tag-along products. The Court finds that the full extent of these losses would likely  
 10 be unascertainable, difficult to calculate, and irreparable.<sup>9</sup> Having adequately shown this risk of  
 11 irreparable harm, however, Apple must further show that this theoretical harm is attributable in  
 12 some way to Samsung’s alleged infringement of the ’604, ’647, ’721, and ’172 Patents. The Court  
 13 therefore turns next to determining whether Apple has adequately established some “causal nexus”  
 14 between Samsung’s purported infringement of each asserted patent and the theoretical irreparable  
 15 harm described above.

#### 16 **2. Causal Nexus**

17 Subsequent to Apple’s filing of its opening brief, the Federal Circuit issued an opinion  
 18 clarifying that a party seeking a preliminary injunction must show “some causal nexus” between  
 19 the accused infringer’s alleged infringement and the patentee’s alleged irreparable harm. *Apple,*  
 20 678 F.3d at 1324. As the Federal Circuit explained:

21 To show irreparable harm, it is necessary to show that the infringement caused harm  
 22 in the first place. Sales lost to an infringing product cannot irreparably harm a  
 23 patentee if consumers buy that product for reasons other than the patented feature.  
 24 If the patented feature does not drive the demand for the product, sales would be lost  
 even if the offending feature were absent from the accused product. Thus, a

25 <sup>9</sup> The parties highlight a tension inherent in the irreparable harm standard. On the one hand, a  
 26 plaintiff cannot establish irreparable harm based on a purely speculative allegation of lost market  
 27 share. *See Ill. Tool Works*, 906 F.2d at 683. On the other hand, the incalculability of future lost  
 28 market share supports a finding that monetary damages are an inadequate remedy. *See Robert*  
*Bosch*, 659 F.3d at 1154. The Court finds that here, Apple’s claim that it will suffer incalculable  
 future lost market share is not merely speculative, but rather is amply supported by industry data  
 and Samsung’s own internal documents.

1 likelihood of irreparable harm cannot be shown if sales would be lost regardless of  
2 the infringing conduct. . . . A mere showing that [the patentee] might lose some  
insubstantial market share as a result of [the accused's] infringement is not enough.

3 *Id.* at 1324-25 (citing *Voda v. Cordis Corp.*, 536 F.3d 1311, 1329 (Fed. Cir. 2008)).

4 Apple has established that the Galaxy Nexus likely infringes four of Apple's likely valid  
5 patents, but it is undisputed that smartphones today are comprised of a multitude of different  
6 features. In this context, the Federal Circuit's guidance is clear: Apple cannot enjoin the Galaxy  
7 Nexus unless it is able to show that the features claimed by the '604, '647, '721, or '172 Patents  
8 "drive the demand for the [Galaxy Nexus]." *Id.* Of course, not all consumers' purchasing  
9 decisions are driven by the same preferences. Therefore the Court does not take the Federal  
10 Circuit's ruling to mean that Apple must show that its patented features are the sole or even the  
11 primary driver of consumer demand. Nonetheless, the party seeking an injunction must show that  
12 the accused's infringement is responsible for more than an insubstantial loss of market share, for  
13 "[a] mere showing that [the patentee] might lose some insubstantial market share as a result of [the  
14 accused's] infringement is not enough" to make the requisite "'clear showing' that the patentee is  
15 at risk of irreparable harm." *Id.* at 1324-25 (quoting *Winter*, 555 U.S. at 22).

16 While the Federal Circuit has made clear that the patented features must "drive the  
17 demand" for the accused product, the Federal Circuit has not provided more detailed guidance on  
18 what standard of proof would satisfy the movant's burden. Samsung argues that Apple has  
19 produced no evidence that any of the four accused features drives consumer demand for the Galaxy  
20 Nexus. Samsung argues it is "common sense" that "consumers do not buy advanced smartphones  
21 based on non-core attributes like the unlock feature, any more than consumers buy cars because  
22 they like the cup holder." *Opp'n* at 27. At the hearing on this motion, Samsung argued that the  
23 relevant nexus inquiry was, "Does [the patented feature] drive . . . sufficient sales that would affect  
24 substantially the market share?" *Tr.* at 106:6-8. Apple agrees that "a feature can satisfy the nexus  
25 requirement if it affirmatively drives demand," but insists that proof of such affirmative demand  
26 cannot reasonably be required in the context of a complex device with a multiplicity of features.  
27 *Tr.* at 79:23-80:5. Apple therefore suggests that "[a] feature can also satisfy the nexus requirement  
28 if its removal would suppress demand, [i.e.,] if its removal would render the product less valuable."

1 Tr. at 80:6-9; *see also id.* at 106:24-107:12. According to Apple, an equally appropriate inquiry is,  
2 “If you were to remove the feature, [would there] be an impact on the functionality of the device in  
3 some manner that would have some causal link to demand[?]” Tr. at 107:2-5. Applying that nexus  
4 standard, Apple contends that “[i]f [Samsung] were to remove the features that are covered by our  
5 patents, each one, from the Galaxy Nexus, it would have a substantial impact on the functionality  
6 of the device and, as a consequence, a substantial impact on the demand for the device.” Tr. at  
7 80:13-18.

8 In the absence of more specific guidance from the Federal Circuit, this Court concludes that  
9 the requisite causal nexus between the alleged infringement and irreparable harm can be  
10 established by showing either that the patented feature is an affirmative driver of consumer  
11 demand, or that the patented feature’s absence would suppress consumer demand. In other words,  
12 a patentee seeking to establish irreparable harm by virtue of lost sales must show that the infringing  
13 feature is a “drive[r] [of] demand for the product,” such that its presence or absence from the  
14 product is responsible for the substantial gain or loss, respectively, of market share. That a  
15 patented feature drives consumer demand may be proven by direct evidence, such as consumer  
16 surveys, or by circumstantial evidence, such as evidence that the patented feature is a “core”  
17 feature of the product at issue. *Cf. Apple I*, 2011 WL 7036077, at \*39; *Commonwealth Sci. &*  
18 *Indus. Research Org. v. Buffalo Tech. Inc.*, 492 F. Supp. 2d 600, 606 (E.D. Tex. 2007) (concluding  
19 that the patent at issue is a “core technology” of the infringing products and thus monetary  
20 damages are less likely to compensate for the infringement of the patent-in-suit); *z4 Techs., Inc. v.*  
21 *Microsoft Corp.*, 434 F. Supp. 2d 437, 440-41 (E.D. Tex. 2006) (finding no irreparable harm  
22 because “Microsoft only uses the infringing technology as a small component of its own software,  
23 and it is not likely that any consumer of Microsoft’s Windows or Office software purchases these  
24 products for their product activation functionality”).

25 Apple asserts that “[t]he patents at issue in this motion relate to core functionalities of the  
26 Galaxy Nexus and are very likely to drive consumer purchasing decisions,” because the patents at  
27 issue all “cover important features that enable the ‘smart’ behavior of cutting-edge smartphones  
28

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1 that have helped make Apple’s products successful.” Mot. at 26. The Court considers each  
2 asserted patent individually to determine whether it satisfies the nexus requirement.

3 **a. ’604 Patent (Unified Search)**

4 Apple asserts that Samsung has incorporated the unified search feature of the ’604 Patent  
5 into the Galaxy Nexus in the form of the Google Quick Search Box because this search feature is  
6 highly valued by customers, as evidenced by the fact that the implementation of this feature on the  
7 iPhone 4S in the form of “Siri,” “a computerized personal assistant,” has driven consumer demand  
8 for the iPhone 4S. See Polish Decl. ¶¶ 77-78 & Ex. 8. Apple accuses Samsung of infringing the  
9 ’604 Patent by using the patented unified search feature to allow users to search across sources,  
10 including contacts and the web, using a single interface, thus depriving Apple of its exclusive right  
11 to reap the benefit of this invention through Siri.

12 In support of its claim that the feature claimed by the ’604 Patent drives consumer demand,  
13 Apple submits customer surveys showing that [REDACTED]  
14 [REDACTED]. According to one recent survey, [REDACTED]  
15 [REDACTED]  
16 [REDACTED] Rangel Decl. Ex. 3 at  
17 26; see also Vellturo Decl. ¶ 44. [REDACTED]  
18 [REDACTED]  
19 [REDACTED] Rangel Decl. Ex. 3 at 27. [REDACTED]  
20 [REDACTED]  
21 [REDACTED] Rangel Decl. Ex. 3 at 31. Indeed, [REDACTED]  
22 [REDACTED]. Vellturo Decl. ¶ 44 & Ex. 14. This consumer survey data is  
23 strengthened by even more recent consumer survey data from the first quarter of 2012, which  
24 reveals that [REDACTED]  
25 [REDACTED]. Vellturo Reply Decl. Ex. 31 at APLNDCA630-00001494990. [REDACTED]  
26 [REDACTED]  
27 [REDACTED]  
28 [REDACTED] *Id.* at APLNDCA630-0000149481, \*483, \*484. In addition to customer surveys, Apple

1 points to industry praise for the Siri feature as evidence that it is a driver of consumer demand. For  
 2 example, one review of the iPhone 4S calls Siri “the standout feature” of the iPhone 4S that has to  
 3 “be tried to be believed.” Velturo Decl. Ex. 51 [Walt Mossberg, *The iPhone Finds Its Voice*,  
 4 allthingsd.com, Oct. 11, 2011] at 1, 3. Another review says “Siri is the reason people should buy  
 5 this phone.” Velturo Decl. Ex. 50 [Brian X. Chen, *Review: With Siri, the iPhone Finds Its Voice*,  
 6 wired.com, Oct. 11, 2011] at 1.

7 Samsung insists that “the Galaxy Nexus doesn’t compete on Siri.” Tr. at 111:4. Samsung  
 8 responds that the Siri feature on the iPhone 4S and the Quick Search Box on the Galaxy Nexus are  
 9 not comparable features in the eyes of consumers, and that Apple has failed to adduce specific  
 10 evidence that the unified search functionality claimed by the ’604 Patent, as opposed to the  
 11 intelligent voice-response feature of Siri, is the real driver of consumer demand. Samsung’s expert  
 12 Mr. Wagner points to a few reviews of Siri that focus on its voice-recognition improvements as  
 13 evidence that consumers value Siri not for its search functionality across multiple databases, but  
 14 rather for the ability to interface with the phone verbally in a natural, conversational manner.  
 15 Wagner Decl. ¶ 60; *id.* Exs. W, X. Mr. Wagner asserts that industry praise for Siri as a “virtual  
 16 personal assistant” – a feature of Siri that Apple itself advertises – suggests that “[b]uyers value the  
 17 idea of Siri because it is a step towards artificial intelligence.” Wagner Decl. ¶ 60; *see also* Decl.  
 18 of Steven Sinclair (“Sinclair Decl.”) ¶ 9 (iPhone 4S commercials advertise Siri as “The Assistant”).  
 19 Samsung further argues that even if Siri is a driving force behind consumer demand for the iPhone  
 20 4S, the Quick Search Box, which allegedly practices the asserted claims of the ’604 Patent, is  
 21 decidedly not driving consumer demand for the Galaxy Nexus. Samsung presents evidence,  
 22 comprised primarily of its own marketing messages and industry analyst commentary, that  
 23 consumers are drawn to the Galaxy Nexus for features other than the Quick Search Box, such as  
 24 the phone’s AMOLED display, its 1.2 GHz dual-core processor, Android 4.0 (“Ice Cream  
 25 Sandwich”), the Android Beam, face unlock,<sup>10</sup> and its camera. Wagner Decl. ¶¶ 64-67.

26  
 27 <sup>10</sup> Although Samsung emphasizes that it advertises the “face unlock” feature, even Samsung’s own  
 28 internal documents note that [REDACTED] Velturo  
 Reply Decl. Ex. 49 at SAMNDCA630-00055973.

1 Samsung's criticism of the probative weight of Apple's consumer survey evidence on Siri  
 2 is well taken, but the Court nonetheless finds the evidence to be persuasive circumstantial  
 3 evidence. While direct evidence of Galaxy Nexus customers' feature preferences would certainly  
 4 be even more compelling, Apple's survey evidence of its own customers is still relevant to the  
 5 Court's determination of what features drive consumer demand for either the iPhone or the Galaxy  
 6 Nexus. This is particularly true in light of Samsung's own documents confirming that Samsung  
 7 and Apple compete directly with one another for the same customers. *See, e.g.*, Velturo Decl. ¶  
 8 67; *id.* Exs. 23, 40 (commentators noting that Samsung's marketing campaign for the S II (a  
 9 predecessor to the Galaxy Nexus) "is [g]oing [r]ight for Apple [f]anboys' [j]ugular"). In any event,  
 10 the Federal Circuit has not held that customer survey evidence or other direct proof of "consumer  
 11 motivation" is "a prerequisite to a finding of irreparable harm" in every patent case. *Apple*, 678  
 12 F.3d at 1324 n.3; *see also i4i Ltd. P'ship*, 598 F.3d at 862 (holding that "i4i was not required to  
 13 prove that its specific customers stopped using i4i's products because they switched to the  
 14 infringing Word products").

15 Furthermore, notwithstanding Samsung's argument that Siri's voice recognition capability  
 16 drives demand, Apple introduces evidence in support of its competing argument that "Siri is core to  
 17 the functioning and sales of the iPhone not just because it hears requests, but because it *delivers*  
 18 *search results.*" Reply at 13 (emphasis in original); *see Velturo Reply Decl.* ¶¶ 96, 102. As  
 19 Apple's expert stated during his deposition, "[A] lot of Siri's value comes from its  
 20 comprehensiveness and . . . the claimed features of the '604 are important to achieving that  
 21 comprehensiveness. So there may well be other aspects of Siri such as its ability to do speaker  
 22 independent speech recognition that's very important or handle noisy microphones, but . . . I think  
 23 comprehensiveness is very . . . important to the . . . success of it as an interface and the '604  
 24 patented features are very important to that comprehensiveness." Posner Decl. Ex. E at 158:10-21.  
 25 Indeed, the importance of Siri's underlying search functionality is corroborated by consumer  
 26 studies, which show that [REDACTED]

27 [REDACTED]. Velturo Reply Decl. ¶ 101; *id.* Ex. 30 at APLNDC630-  
 28

1 0000149092, \*094. Samsung does not contest that the Siri feature uses the claimed unified search  
2 features of the '604 Patent. *See* Polish Decl. ¶¶ 77-78; *see generally* Opp'n.

3 Third-party reviewers similarly recognize the importance of Siri's search capabilities. For  
4 example, a *Forbes* article notes that "its potential really lies in its ability to revolutionize the way  
5 we search," and further predicts that "in the future it may even be a 'Google killer.'" Velturo  
6 Reply Decl. Ex. 15 at APLNDCA630-0000149197. The article goes on to say, "Siri is the latest . .  
7 . game changer in Internet search, and it has certainly begun to change people's expectations about  
8 both the process and the results of search. . . . Siri has become a near-indispensible [sic] entry  
9 point." *Id.* Ex. 15 at APLNDCA630-0000149197. Indeed, even one of the third-party articles on  
10 which Samsung relies highlights Siri's search functionality, remarking, "Behold, the awesome  
11 power of curated search," and "Siri is a great tool even when you're using it for basic search."  
12 Wagner Decl. Ex. W at 4.

13 Moreover, Samsung's effort to downplay the importance of the Quick Search Box's search  
14 functionality to Galaxy Nexus is undermined by Android and Google documents. The Android  
15 developer's guide stresses that "[s]earch is a core user feature on Android." Velturo Reply Decl. ¶  
16 104; *id.* Ex. 6 at 1. The Android developer's guide specifically emphasizes the importance of a  
17 search feature that lets users "search any data that is available to them, whether the content is  
18 located *on the device or the Internet.*" *Id.* Ex. 6 at 1 (emphasis added). This is unified search. The  
19 Google Mobile Blog also featured the Quick Search Box for Android, highlighting precisely the  
20 functionality claimed by the '604 Patent:

21 Rather than giving you one search box for the web and another for your phone, QSB  
22 provides one single search box to let you search content on your phone, including  
23 apps, contacts, and browser history, as well as content from the web, like  
24 personalized search suggestions, local business listings, stock quotes, weather, and  
25 flight status, all without opening the browser. QSB even learns from your habits  
26 and provides faster access to the items you search for and use most often (by, for  
27 example, moving them higher on the suggestions list).

28 Polish Reply Decl. Ex. 1 at 1. Third parties agree that the Quick Search Box "adds a whole new  
layer of functionality" that helps Android phones "win new customers, even ones with iPhones."  
Velturo Reply Decl. ¶ 104; *id.* Ex. 10 at 2. Finally, to the extent Samsung's evidence suggests that

1 consumers are drawn to the voice-recognition functionality of Siri, the Quick Search Box also  
2 features voice search capability. *See* Polish Reply Decl. Ex. 1 at 1-2 (“The next time you want to  
3 search the web or call a friend, try speaking your query, like ‘pictures of the Golden Gate Bridge at  
4 sunset,’ or the name of a contact, like ‘Call Dave Burke.’”); Velturo Reply Decl. Ex. 10 at 1.

5 The Court is persuaded by the evidence in the record that the ’604 unified search  
6 functionality drives consumer demand in a way that affects substantial market share. Even  
7 accepting Samsung’s argument that the intelligent voice-recognition aspect of Siri, as advertised,  
8 also contributes to consumer interest in the iPhone 4S, Apple has shown that the ’604 Patented  
9 feature is core to Siri’s functionality and is thus a but-for driver of demand for Siri. Accordingly,  
10 the Court finds that Apple has adequately established the requisite causal nexus between  
11 Samsung’s alleged infringement of the ’604 Patent and Apple’s risk of suffering irreparable harm.

12 **b. ’647 Patent (Links for Structures)**

13 Apple asserts that “[p]roviding links for structures is an important aspect of the user  
14 experience, and is core to both the iPhone and the Galaxy Nexus.” Reply at 15; *see also* Tr. at  
15 94:8-9; 95:18-20 (arguing that “links for structures” is now fundamental to “the way people  
16 interact with their phones”). Apple has submitted evidence that Apple itself practices at least claim  
17 1 of the ’647 Patent. Mowry Decl. ¶¶ 84-87 & Exs. 13 [Mowry Expert Rep. in 710 Investigation],  
18 15 [ITC Initial Determination in 710 Investigation], 16 [ITC Commission Opinion in 710  
19 Investigation]. The ITC also recently found that HTC phones practiced the same patented feature,  
20 and granted an injunction on that basis. *See* Mowry Decl. Ex. 16. Furthermore, as discussed  
21 above, Apple has shown a likelihood of proving at trial that the Galaxy Nexus infringes this feature  
22 as well.

23 Apple asserts that “[a] phone without this feature would be far more cumbersome, and less  
24 appealing to consumers,” and thus “[t]he absence of this feature would fundamentally change the  
25 easy and intuitive way users interact with their devices, and diminish sales.” Reply at 15 (citing  
26 Velturo Reply Decl. ¶¶ 90-95). In support of this argument, Apple relies principally on the views  
27 of its own expert, Dr. Mowry, who opines that links for structures “is particularly useful in today’s  
28 mobile devices, which often prevent multiple applications from being shown simultaneously.

1 Users no longer ha[ve] to flip back and forth between screens or applications to copy a phone  
 2 number from a web page to the phone dialer or to carefully highlight a number[,] copy it into a  
 3 device’s memory and then paste it into a dialer application.” Mowry Decl. ¶ 24. Apple also points  
 4 to Apple’s June 2007 iPhone Reviewer’s Guide 2007, which advertises that “[m]aking a call is as  
 5 simple as tapping a name,” and that “any phone number that appears in an email, SMS text  
 6 message, or web page can be called instantly by tapping on it.” Vellturo Reply Decl. ¶ 91; *id.* Ex.  
 7 28 [iPhone Reviewers Guide: June 2007] at APLNDCA630-0000128233, \*240. Though not  
 8 overwhelming, there is also some evidence that Samsung recognizes the importance of the “links  
 9 for structures” feature as well. In particular, Apple points to a Samsung document [REDACTED]  
 10 [REDACTED]  
 11 [REDACTED]  
 12 [REDACTED] Vellturo Reply  
 13 Decl. ¶ 94; *id.* Ex. 32 at SAMNDCA00203915.

14 While probative of the fact that both Apple and Samsung value the functionality claimed by  
 15 the ’647 Patent, Apple’s evidence does not demonstrate that the links for structures feature actually  
 16 drives consumer demand in a way that affects substantial market share. Dr. Mowry’s testimony  
 17 explaining the value of the patented invention is uncorroborated and does not adequately support  
 18 an inference that removal of the feature would substantially affect consumer demand for either the  
 19 iPhone or the Galaxy Nexus. The 2007 iPhone Reviewer’s Guide does not describe the full  
 20 invention of the ’647 Patent, which is linking multiple structures to multiple actions, but instead  
 21 describes only the ability to call a phone number by tapping on it. As discussed above in the  
 22 Court’s merits analysis, this limited functionality of being able to perform a single action,  
 23 “dialing,” on a single type of structure, “phone number,” was disclosed in the prior art, such as the  
 24 Sidekick. Thus, it is not clear even from Apple’s own evidence whether the claimed invention of  
 25 the ’647 Patent is critical functionality, or whether only the more limited functionality disclosed by  
 26 the prior art is the relevant driver of consumer demand. [REDACTED]  
 27 [REDACTED]  
 28 [REDACTED]

United States District Court  
For the Northern District of California

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[REDACTED]

Again, while the evidence shows that there is some connection between the links for structures feature and consumer interest, the evidence falls short of establishing that this particular feature is a substantial driver of consumer demand.

In an effort to establish the requisite causal nexus between Samsung’s alleged infringement of the ’647 Patent and Apple’s claimed irreparable harm, Apple also leans heavily on customer surveys [REDACTED] and then argues that the links for structures feature [REDACTED] “helps put the ‘smart’ in smartphone.” Mot. at 28. [REDACTED] as a driver of consumer demand is well supported. For example, one customer survey of iPhone 4S customers shows that [REDACTED].” Rangel Decl. Ex. 3 at 27. Another Apple survey of iPhone buyers shows that [REDACTED] Rangel Decl. Ex. 1 at 60. A third Apple study comparing both iPhone and Android consumers’ preferences shows [REDACTED]. Wagner Decl. Ex. T at APLNDCA630-0000149121.

Notwithstanding this data [REDACTED], however, Apple has failed to adduce consumer survey evidence establishing demand specifically for the ’647 Patented feature. Unlike [REDACTED], which appears to practice the invention of the ’604 Patent, [REDACTED] Apple’s 30(b)(6) witness [REDACTED] Posner Decl. Ex. G [Joswiak Dep.] at 18:24-19:18. He further admitted that [REDACTED] See Wagner Decl. ¶ 56; Posner Decl. Ex. G [Joswiak Dep.] at 20:15-38:11. Indeed, [REDACTED] Posner Decl. Ex. G [Joswiak Dep.] at 23:2-4. Instead, [REDACTED]

United States District Court  
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[Redacted]

[Redacted]

[Redacted] Posner Decl. Ex. G

at 20:18-24. [Redacted]

[Redacted] Posner Decl. Ex. G

at 23:5-9. Apple has not presented any more granular data specifically demonstrating how the “links for structures” feature drives consumer demand.

The sole connection between the links for structures feature and [Redacted]

[Redacted]

[Redacted] See Posner Decl. Ex. K at 34:22-25; Velturo Reply Decl. ¶ 93 & Ex. 24.

According to a memo summarizing key findings from the study, [Redacted]

[Redacted] Velturo Reply Decl. Ex.

24 at APLNDC0002420480. [Redacted]

[Redacted]

[Redacted]

[Redacted] *Id.* [Redacted]

[Redacted]

the Court finds this evidence to be of only limited probative value. The memo provides no

information about the number of participants, the questions they were asked, or any other

parameters that would generally be important in assessing the reliability of a study. Moreover, the

memo states that [Redacted]

[Redacted]

[Redacted]

[Redacted] *Id.* Ex. 24 at

APLNDC0002420480. Even the results of [Redacted]

[Redacted] Apple has presented no

evidence of its attempt to do so. Thus, although Apple has demonstrated some causal link between

the “links for structures” feature and consumer purchasing decisions, the evidence adduced falls

1 short of making the requisite clear showing that the “links for structures” feature drives consumer  
2 demand in a way that affects substantial market share.

3 Of course, customer survey evidence, while probative of nexus, is not required. *Apple*, 678  
4 F.3d at 1324 n.3. Nonetheless, Apple bears the burden of providing some evidence that Samsung’s  
5 alleged infringement of the ’647 Patent will cause it to lose more than “some insubstantial market  
6 share.” *Id.* at 1324-25. As both the Supreme Court and the Federal Circuit have made clear, a  
7 preliminary injunction “is a drastic and extraordinary remedy.” *Munaf*, 553 U.S. at 689-90; *Intel*  
8 *Corp.*, 995 F.2d at 1568. A party seeking preliminary injunctive relief must therefore “make ‘a  
9 clear showing’ that it is at risk of irreparable harm.” *Apple*, 678 F.3d at 1325 (quoting *Winter*, 555  
10 U.S. at 22). On this record, viewing the evidence in its totality, the Court finds that Apple has not  
11 made a clear showing that the functionality described in the ’647 Patent drives consumer demand  
12 such that Samsung’s alleged infringement is likely to cause Apple a substantial loss of market  
13 share.

14 **c. ’721 Patent (Slide to Unlock)**

15 Apple argues that “[s]lide-to-unlock is an iconic feature of the iPhone . . . and also is a core  
16 feature of the Galaxy Nexus.” Reply at 14. As evidence that the slide-to-unlock feature is part of  
17 what drives consumer demand for the iPhone, Apple points to the fact that iPhone commercials  
18 have for a long time featured a finger demonstrating the slide-to-unlock feature. *See* Velluro  
19 Reply Decl. ¶¶ 74-75. As further support, Apple again points to the [REDACTED]  
20 [REDACTED]  
21 [REDACTED] *See* Rangel Decl. Ex. 3 at 27; *id.* Ex. 1 at 60. Although  
22 Apple’s evidence clearly demonstrates [REDACTED], the  
23 Court finds the record devoid of any evidence that specifically links the “slide to unlock” feature to  
24 [REDACTED]. As previously noted, [REDACTED]  
25 [REDACTED] When asked whether Apple has ever  
26 asked consumers whether the “slide to unlock” feature was important or contributed to their buying  
27 decision, [REDACTED]  
28

1 [REDACTED] Posner Decl. Ex. G at 25:14-24. Thus, Apple's [REDACTED] is of only  
2 extremely limited relevance to the present inquiry.

3 Apple's second argument emphasizes the superiority of the slide to unlock feature  
4 compared to other methods of unlocking a smartphone. Apple points to Samsung's internal  
5 research and development documents, which [REDACTED]

6 [REDACTED].  
7 *See* Velturo Reply Decl. ¶¶ 77-81. For example, a Samsung document noted that [REDACTED]

8 [REDACTED] Velturo Reply Decl. Ex. 49 at SAMNDCA630-00055973.

9 Another Samsung document noted that [REDACTED]. Velturo  
10 Reply Decl. ¶ 79 & Ex. 33 at SAMNDCA00231472.

11 Samsung contends that the proper inquiry is not whether the general functionality to which  
12 Apple's patent is directed is a driver of consumer demand, but rather whether "Apple's way of  
13 doing that feature" is a driver of sales. Tr. at 105:9-10. The Court is not convinced that the mere  
14 availability of other implementations is dispositive. For example, though there may be other  
15 possible ways to unlock a device, the fact that Samsung has chosen to copy Apple's particular,  
16 patented method may be indicia that Apple's method is not only a superior one, but a driver of  
17 demand. Nonetheless, the Court agrees that when examining the causal nexus between  
18 infringement of the patented feature and the claimed irreparable harm, the Court necessarily must  
19 take into account the scope of the claimed invention. Here, it is apparent that the scope of the '721  
20 Patent covers only one method of unlocking a device. Samsung has identified examples of other  
21 methods for unlocking a device, such as "face unlock," which uses facial recognition to unlock the  
22 device, and is an alternative setting available on the Galaxy Nexus. *See* Velturo Reply Decl. ¶ 80  
23 Ex. 21. Again, the Court is not particularly persuaded that "face unlock" is a comparable  
24 alternative to the slide to unlock feature, given that [REDACTED]  
25 [REDACTED] Velturo Reply Decl. Ex. 49 at SAMNDCA630-  
26 00055973. Nonetheless, on the record as a whole, Apple has not met its burden of showing that  
27 removal of the slide to unlock feature would suppress consumer demand to a degree that would  
28 substantially affect market share.

1 Although there is some evidence in the record that the slide to unlock feature is an  
 2 improvement over the prior art and thus a valued one, the Court cannot say that Apple has  
 3 established that this one feature is a substantial driver of consumer demand. Apple’s reliance on its  
 4 own advertising highlighting the slide-to-unlock feature and its unsupported assertion that slide-to-  
 5 unlock contributes to a smartphone’s “ease of use” is simply insufficient to establish the requisite  
 6 causal nexus between Samsung’s infringement of this particular feature, on its own, and the alleged  
 7 irreparable harm.

8 **d. ’172 Patent (Word Recommendations)**

9 Apple asserts that the word recommendation feature claimed in the ’172 Patent “helps make  
 10 the iPhone’s touchscreen user interface remarkably easy to use, as it allows users to type on the  
 11 touchscreen quickly (by automatically completing words) and accurately (by correcting  
 12 misspellings).” Mot. at 29. Apple asserts that this user-interface invention is “very important to  
 13 the success of Apple’s devices” and that Samsung has copied the feature because Samsung “knows  
 14 that consumers who are choosing a new phone want a fun, easy-to-use touchscreen interface like  
 15 the one Apple provides.” Mot. at 29.

16 Apple has no direct evidence linking consumer demand for iPhones or other smartphones to  
 17 the claimed word recommendation feature, specifically. Once again, Apple points to the [REDACTED]

18 [REDACTED]  
 19 [REDACTED] See Rangel Decl. Ex. 3 at 27;  
 20 *id.* Ex. 1 at 60. However, as with the slide to unlock feature, [REDACTED]

21 [REDACTED]  
 22 [REDACTED]  
 23 [REDACTED]  
 24 [REDACTED] Posner Decl.  
 25 Ex. G at 32:24-33:1. Apple’s reliance on its [REDACTED] is again  
 26 undermined by its failure to establish a link between [REDACTED] and the patented  
 27 “word recommendations” feature.  
 28

1 Perhaps recognizing the limited probative value of its [REDACTED],  
2 Apple takes a different tack in its reply, repackaging the '172 Patent in its reply brief as directed  
3 towards an "auto-correct feature," which Apple asserts is essential to the viability of glass  
4 keyboards that are now a fundamental component of smartphones. See Reply at 14; see also Tr. at  
5 81:2-82:2, 89:9-90:8. Apple's expert asserts that without an auto-correct feature, touchscreen  
6 keyboards, which are more prone to error than are tactile keyboards, would be difficult and  
7 intimidating, particularly to the critical customer base of first-time smartphone users. Velturo  
8 Reply Decl. ¶¶ 83-87. In support of this theory, Apple submits two newspaper articles, one by the  
9 *Wall Street Journal* and another by the *New York Times*, praising the success of the auto-correction  
10 feature on the iPhone touchscreen. *Id.* ¶ 86 & Exs. 8, 9. Apple also points [REDACTED]  
11 [REDACTED]  
12 [REDACTED]. Velturo Reply Decl. ¶ 87; *id.* Ex. 3 [Joswiak Dep.] at 30:2-22.  
13 Finally, Samsung's witness agreed during his deposition that typing is a "necessity" for messaging  
14 and web browsing capabilities on the Galaxy Nexus. Velturo Reply Decl. ¶ 88; *id.* Ex. 5  
15 [Geklinsky Dep.] at 113:4-8. Based on this evidence, Apple argues that if the feature covered by  
16 the '172 Patent were removed from the Galaxy Nexus, demand for the phone would plummet.

17 The Court finds that Apple's evidence regarding the importance of auto-correct  
18 functionality to the viability of touchscreen keyboards is not adequately tailored to capture  
19 consumer demand for Apple's specific patented invention. As noted above, the Court deems it  
20 appropriate to take into account the scope of the claimed invention when considering whether the  
21 patentee has established the requisite causal nexus between infringement of the patented feature  
22 and the claimed irreparable harm. Apple equates the '172 Patent with "auto-correct" functionality  
23 as a blanket category. However, as addressed in the Court's discussion of the merits above,  
24 Apple's '172 Patent is narrow in scope. Contrary to Apple's characterizations, the '172 Patent  
25 does not broadly claim "auto-correction" functionality in all its forms. If it did, Samsung has  
26 shown that it would likely be invalidated by numerous prior art references that similarly were  
27 directed to methods of providing auto-correct functionality.  
28

1 The Court finds that Apple has failed to adduce evidence demonstrating that the particular  
2 auto-correct implementation claimed by the '172 Patent drives consumer demand, or that  
3 Samsung's alleged infringement of this feature is likely to cause a *substantial* loss of market share.  
4 In short, as with the slide to unlock feature, Apple has failed to show that the user interface feature  
5 covered by the '172 Patent is a substantial driver of consumer demand.

### 6 **3. Inadequacy of Legal Remedies**

7 The Court next considers Samsung's contention that Apple's delay in prosecuting its patent  
8 claims and Apple's past willingness to license at least some of the asserted patents belie the  
9 inadequacy of monetary damages in remedying any injuries that may ultimately be proven at trial.

#### 10 **a. Delay**

11 Samsung argues that Apple's delay in seeking to enjoin Samsung from selling products  
12 with the allegedly patented features undercuts its claimed irreparable harm. Opp'n at 30. Indeed, a  
13 prolonged or undue delay in bringing suit or seeking a preliminary injunction "is an important  
14 factor bearing on the need for a preliminary injunction." *High Tech Med. Instrumentation, Inc. v.*  
15 *New Image Indus., Inc.*, 49 F.3d 1551, 1557 (Fed. Cir. 1995) (finding that an unjustified 17-month  
16 delay in bringing suit, combined with other factors, "militate[d] against" issuance of an injunction  
17 because it suggested there was "no apparent urgency to the request for injunctive relief"); *see*  
18 *Nutrition 21*, 930 F.2d at 872 (finding that a seven-month delay in bringing suit "at least suggests  
19 that the *status quo*" does not cause irreparable harm).

20 Here, Samsung argues that Apple delayed seeking to enjoin Samsung's infringement of the  
21 '604 and '721 Patents. Although the '604 Patent did not issue until December 27, 2011 – just a  
22 few months before Apple brought this infringement action – the '604 Patent is a continuation of  
23 U.S. Patent No. 6,847,959 ("the '959 Patent"), which issued in January 2005, and the Quick Search  
24 Box has been included in Samsung's other Android products since at least July 2010. *See* Decl. of  
25 Youngsoon Lee ("Youngsoon Lee Decl.") Ex. A. Similarly, although the '721 Patent did not issue  
26 until October 25, 2011, the '721 Patent is a continuation of a prior patent, U.S. Patent No.  
27 7,657,849 ("the '849 Patent"), which issued in February 2010. Samsung asserts that earlier  
28 generations of its Android-based products, since at least July 2010, used features similar to those in

1 the Galaxy Nexus accused of infringing the '604 and '721 Patents, yet Apple waited until 2012 to  
2 assert these patents against Samsung. *See* Youngsoon Lee Decl. Exs. A & B.

3 The Court is not persuaded. The Court finds that Apple did not unreasonably delay in  
4 seeking to enforce the '604 or '721, which did not even issue until just a few months before Apple  
5 filed for preliminary injunctive relief. Nor did Apple unreasonably delay in bringing this  
6 infringement suit or moving for preliminary relief with respect to the Galaxy Nexus, which was not  
7 released until December 2011, just three months before Apple filed this suit and the instant motion.

8 Samsung also argues that Apple unreasonably delayed in seeking an injunction based on the  
9 '647 Patent, which issued in 1999. Samsung argues that the accused Browser application was part  
10 of earlier versions of Android that have been included in other Samsung products since at least July  
11 2010. *See* Youngsoon Lee Decl. Ex. A. Apple's delay in seeking to enjoin previous generations of  
12 Samsung products that may also have infringed the '647 Patent is a factor that undercuts Apple's  
13 claim of urgency and irreparable harm with respect to the '647 Patent. *See Pfizer*, 429 F.3d at  
14 1381. Nonetheless, this Court previously rejected Samsung's argument that a patentee's initial  
15 failure to timely enjoin a first generation of products forever forecloses a patentee's ability to  
16 preliminarily enjoin subsequent generations of infringing products. *See Apple I*, 2011 WL  
17 7036077, at \*22. To the extent Apple did delay in enforcing its patent rights, delay in seeking a  
18 preliminary injunction "is but one factor to be considered" by the court "in the context of the  
19 totality of the circumstances." *Hybritech*, 849 F.2d at 1457; *see also High Tech Med.*  
20 *Instrumentation*, 49 F.3d at 1557 (noting that the 17-month delay "may not have been enough,  
21 standing alone, to demonstrate the absence of irreparable harm"). While a significant delay may  
22 support a district court's finding of no irreparable harm as a matter of discretion, a showing of  
23 delay does not preclude a finding of irreparable harm as a matter of law. *Hybritech*, 849 F.2d at  
24 1457. Furthermore, "[t]he fact that other infringers may be in the marketplace does not negate  
25 irreparable harm. A patentee does not have to sue all infringers at once. Picking off one infringer  
26 at a time is not inconsistent with being irreparably harmed." *Polymer Techs.*, 103 F.3d at 975.  
27 Thus, the Court does not find that Apple's failure to enforce the '647 Patent against earlier  
28 generations of Samsung products weighs heavily against a finding of irreparable harm.

1 **b. Licensing Practices**

2 Samsung also argues that “Apple’s licensing practices show that Apple could be  
3 compensated with money damages for any alleged infringement.” Opp’n at 31. Samsung’s only  
4 evidence with regard to [REDACTED]  
5 [REDACTED]  
6 [REDACTED]. See Posner Decl. Ex. S; see  
7 also Mot. at 5-6, nn.9-10. Thus, the Court finds this license inapposite to the question of  
8 irreparable harm.

9 [REDACTED], however, tells a different story. [REDACTED]  
10 [REDACTED] Opp’n at 31. More importantly, it appears that  
11 [REDACTED]  
12 [REDACTED]. Posner Decl. Ex. P [Lutton  
13 Dep.] at 47:21-55:4; *id.* Ex. DD at 15, 23. While not dispositive, a patentee’s willingness to license  
14 its patents can weigh against a finding of irreparable harm, when viewed in the context of the  
15 totality of circumstances. See *Acumed*, 551 F.3d at 1328 (“While the fact that a patentee has  
16 previously chosen to license the patent may indicate that a reasonable royalty does compensate for  
17 an infringement, that is but one factor for the district court to consider.”); *cf. eBay*, 547 U.S. at 393  
18 (rejecting district court’s conclusion that “a plaintiff’s willingness to license its patents . . . would  
19 be sufficient to establish that the patent holder would not suffer irreparable harm if an injunction  
20 did not issue”). “The fact of the grant of previous licenses, the identity of the past licensees, the  
21 experience in the market since the licenses were granted, and the identity of the new infringer all  
22 may affect the district court’s discretionary decision concerning whether a reasonable royalty from  
23 an infringer constitutes damages adequate to compensate for the infringement.” *Acumed*, 551 F.3d  
24 at 1328.

25 Though not dispositive, Apple’s [REDACTED]  
26 [REDACTED]  
27 [REDACTED], is relevant to the Court’s factual determination of whether Samsung’s alleged  
28

1 infringement of the [REDACTED] is compensable by money damages. The Court finds that this  
2 factor therefore weighs against a finding of irreparable harm as to the [REDACTED].

3 **4. Summary of Irreparable Harm**

4 The Court finds that Apple and Samsung are direct competitors in the smartphone market,  
5 and that Apple practices its own claimed inventions in the iPhone. Both factors weigh in favor of  
6 finding irreparable harm. *See Robert Bosch*, 659 F.3d at 1150 (in fashioning equitable relief, the  
7 “wisdom” of history “is particularly apt in traditional cases . . . where the patentee and adjudged  
8 infringer both practice the patented technology”). The Court further finds that Apple has  
9 articulated a plausible theory of irreparable harm that would flow from long-term loss of market  
10 share and unascertainable losses of downstream sales. *See id.* at 1153-54 (loss of market share  
11 supports finding of irreparable harm). Furthermore, although the Court finds that Apple has not  
12 clearly shown that the features claimed by the ’647, ’721, and ’172 Patents are substantial drivers  
13 of consumer demand, Apple has made such a showing with respect to the unified search  
14 functionality claimed by the ’604 Patent. Thus, the Court finds that Apple has established the  
15 requisite causal nexus between Samsung’s alleged infringement of the likely valid ’604 Patent and  
16 Apple’s alleged irreparable harm. In addition, the Court finds that Apple did not unreasonably  
17 delay in bringing this suit against Samsung and in seeking preliminary injunctive relief. Finally,  
18 although [REDACTED]  
19 [REDACTED] is a factor that weighs against a finding of irreparable harm with  
20 respect to the [REDACTED], Samsung has introduced no relevant evidence of Apple’s willingness to  
21 license the ’604 Patent. Thus, after weighing all the evidence presented by both parties, the Court  
22 finds that Apple has clearly shown that it is likely to suffer irreparable harm in the absence of  
23 preliminary injunctive relief. *Cf. Robert Bosch*, 659 F.3d at 1151 (finding irreparable harm where  
24 the parties were in direct competition, plaintiff established a likely loss in market share and access  
25 to potential customers, and defendant lacked financial wherewithal to satisfy a judgment).

26 **C. Balance of Hardships**

27 Under the third prong of the *Winter* test, “[t]he magnitude of the threatened injury to the  
28 patent owner is weighed, in the light of the strength of the showing of likelihood of success on the

1 merits, against the injury to the accused infringer if the preliminary decision is in error.” *H.H.*  
2 *Robertson, Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 390 (Fed. Cir. 1987), *abrogated on other*  
3 *grounds by Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995). “Because the  
4 court must balance the hardships, at least in part in light of its estimate of what is likely to happen  
5 at trial, it must consider the movant’s showing of likelihood of success. Yet, a court must remain  
6 free to deny a preliminary injunction, whatever be the showing of likelihood of success, when  
7 equity in the light of all the factors so requires.” *Ill. Tool Works*, 906 F.2d at 683 (citing *Roper*  
8 *Corp. v. Litton Sys., Inc.*, 757 F.2d 1266, 1272-73 (Fed. Cir. 1985)). As the Federal Circuit has  
9 recognized, “[t]he hardship on a preliminarily enjoined manufacturer who must withdraw its  
10 product from the market before trial can be devastating.” *Id.* On the other hand, “the hardship on a  
11 patentee denied an injunction after showing a strong likelihood of success on validity and  
12 infringement consists in a frequently and equally serious delay in the exercise of his limited-in-time  
13 property right to exclude.” *Id.* “Neither hardship can be controlling in all cases.” *Id.*

14 On this record, the Court finds that the balance of hardships tips in Apple’s favor.  
15 Although Samsung will necessarily be harmed by being forced to withdraw its product from the  
16 market before the merits can be determined after a full trial, the harm faced by Apple absent an  
17 injunction is greater. Apple’s interest in enforcing its patent rights is particularly strong because it  
18 has presented a strong case on the merits. As discussed above, Apple has shown a likelihood of  
19 prevailing on the merits of all four of its asserted patents. Apple has further shown a likelihood of  
20 irreparable harm attributable to Samsung’s infringement of the ’604 Patent if the injunction does  
21 not issue. Samsung, by contrast, does not present any evidence of what hardship it will suffer if the  
22 injunction issues. *See* Opp’n at 31-32. Samsung’s only balance of hardships arguments simply  
23 duplicate its irreparable harm arguments, which the Court finds unpersuasive. First, Samsung  
24 asserts, without explanation, that “evidence of Apple’s growing sales and market share . . . tips the  
25 balance of the hardships in Samsung’s favor.” Opp’n at 32. As discussed previously, however,  
26 Apple has presented evidence that Samsung’s market share has also been growing. Thus, this  
27 factor does not weigh in Samsung’s favor. Second, Samsung argues that an injunction on the  
28 Galaxy Nexus is overbroad, because the “four allegedly infringing features . . . are ‘but a small

1 part’ of the overall product.” Opp’n at 32. The Court takes to heart Justice Kennedy’s admonition  
2 that “[w]hen the patented invention is but a small component of the product the companies seek to  
3 produce . . . legal damages may well be sufficient to compensate for the infringement.” *eBay*, 547  
4 U.S. at 396. Nonetheless, whether a patented invention is “but a small component” of the accused  
5 product turns not on some quantitative tally of total features, but rather on the power of the  
6 patented invention to drive consumer demand. Here, the Court has already found that the unified  
7 search feature claimed by the ’604 Patent is not merely “a small component” of the product but  
8 rather a substantial driver of consumer demand.

9 While Apple’s showing of a likelihood of success and a likelihood of irreparable harm with  
10 respect to the ’604 Patent may have supported issuance of an injunction on its own, the Court finds  
11 that Apple’s showing of likely validity and infringement of the ’647, ’721, and ’172 Patents further  
12 tips the scales in Apple’s favor. *See Celsis In Vitro*, 664 F.3d at 931 (a strong showing of likely  
13 success on the merits and likely irreparable harm support a finding that the balance of hardships  
14 favors the patentee). “One who elects to build a business on a product found to infringe cannot be  
15 heard to complain if an injunction against continuing infringement destroys the business so  
16 elected.” *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986). While  
17 Samsung will certainly suffer lost sales from the issuance of an injunction, the hardship to Apple of  
18 having to directly compete with Samsung’s infringing products outweighs Samsung’s harm in light  
19 of the Court’s findings. Viewing the totality of the evidence and weighing the equities based on  
20 the record before it, the Court finds that the balance of hardships tips in Apple’s favor.

#### 21 **D. Public Interest**

22 “[T]he touchstone of the public interest factor is whether an injunction, both in scope and  
23 effect, strikes a workable balance between protecting the patentee’s rights and protecting the public  
24 from the injunction’s adverse effects.” *i4i Ltd. P’ship*, 598 F.3d at 863 (citing *Broadcom Corp. v.*  
25 *Qualcomm Inc.*, 543 F.3d 683, 704 (Fed. Cir. 2008)). Apple argues that issuance of a preliminary  
26 injunction would serve the public interest in this case because Apple has established a likelihood of  
27 success on the merits, and the Federal Circuit has “long acknowledged the importance of the patent  
28 system in encouraging innovation.” *Sanofi-Synthelabo*, 470 F.3d at 1383; *accord Celsis In Vitro*,

1 664 F.3d at 931. Apple further argues that Samsung is a “serial infringe[r],” as Samsung launched  
2 its Galaxy Nexus just two weeks after this Court determined that its prior devices likely infringed  
3 several other Apple patents. Mot. at 31. Samsung, in turn, argues that the “public also has an  
4 interest in promoting competition,” and that “[r]emoving from the market the product described as  
5 ‘the most credible competitor of the iPhone so far’ based on alleged infringement by four of its  
6 non-core features would fail to serve the public’s interest in enjoying the benefits of competition . .  
7 . .” Opp’n at 32-33.

8 Both parties have identified valid public interests. Nonetheless, in light of Apple’s showing  
9 of likely success on the merits and likely irreparable harm, the Court finds that the public interest  
10 favors enforcement of Apple’s patent rights. *See Celsis In Vitro*, 664 F.3d at 931; *Sanofi-*  
11 *Synthelabo*, 470 F.3d at 1383 (“We have long acknowledged the importance of the patent system in  
12 encouraging innovation.”). Although Samsung has a right to compete, it does not have a right to  
13 compete with infringing products. As explained by the Federal Circuit, “[a]lthough the public  
14 interest inquiry is not necessarily or always bound to the likelihood of success o[n] the merits, . . .  
15 absent any other relevant concerns . . . the public is best served by enforcing patents that are likely  
16 valid and infringed.” *Abbott Labs.*, 452 F.3d at 1348. As a patent holder, Apple has a valid right to  
17 exclude others from practicing Apple’s invention. In order to protect that right, and to promote the  
18 “encouragement of investment-based risk,” the public interest weighs in favor of Apple in this  
19 case. *See Sanofi-Synthelabo*, 470 F.3d at 1383 (citing *Patlex Corp. v. Mossinghoff*, 758 F.2d 594,  
20 599 (Fed. Cir. 1985)).

### 21 **E. Weighing the Factors**

22 As previously noted, in determining whether a party is entitled to preliminary injunctive  
23 relief under *Winter*, “the district court must weigh and measure each factor against the other factors  
24 and against the form and magnitude of the relief requested.” *Hybritech*, 849 F.2d at 1451 n.12.  
25 “[N]o one factor, taken individually, is necessarily dispositive.” *Chrysler Motors Corp. v. Auto*  
26 *Body Panels of Ohio, Inc.*, 908 F.2d 951, 953 (Fed. Cir. 1990). The Court therefore considers and  
27 weighs all four factors, in light of the totality of the evidence in the record.  
28

1 Apple has shown that it is likely to prove at trial that the Galaxy Nexus phones infringe  
 2 claims 6 and 19 of the '604 Patent; claims 1 and 8 of the '647 Patent; claims 7, 8, 12 and 15 of the  
 3 '721 Patent; and claims 18, 19, and 27 of the '172 Patent, and that these patent claims are valid.  
 4 Apple has further shown that it is likely to suffer irreparable harm in the absence of immediate  
 5 relief, and that this irreparable harm will be attributable to Samsung's infringement of the '604  
 6 Patent, though Apple has not made the same showing with respect to Samsung's infringement of  
 7 the '647, '721, or '172 Patents. As explained above, the remaining two *Winter* factors also weigh  
 8 in favor of an injunction. In light of the fact that all four *Winter* factors weigh in Apple's favor, the  
 9 Court finds that the issuance of a preliminary injunction enjoining Samsung from practicing the  
 10 claimed features of the '604 Patent is proper and justified.

#### 11 V. BOND

12 Federal Rule of Civil Procedure 65(c) requires that the Court order Apple to provide  
 13 security "in an amount that the court considers proper to pay the costs and damages sustained by  
 14 any party found to have been wrongfully enjoined or restrained." The amount of bond is within  
 15 the court's discretion. *See Save Our Sonoran, Inc. v. Flowers*, 408 F.3d 1113, 1126 (9th Cir.  
 16 2005). The bond requirement is "designed to protect the enjoined party's interests in the event that  
 17 future proceedings show the injunction issued wrongfully." *Apple*, 678 F.3d at 1339 (O'Malley, J.  
 18 concurring) (citing *Edgar v. MITE Corp.*, 457 U.S. 624, 649 (1982) (Stevens, J., concurring)).

19 Samsung argues that Apple should be required to post a bond of no less than  
 20 \$95,637,141.60. This figure is based on Samsung's projected losses resulting from lost sales of the  
 21 Galaxy Nexus through trial in this matter, currently scheduled for March 31, 2014. Samsung Bond  
 22 Br. at 1-2. Samsung estimates that between July 2012 and June 2013, it will sell approximately  
 23 [REDACTED] units of the Galaxy Nexus in the United States, at an average profit rate of [REDACTED].  
 24 *Id.*; see Decl. of Corey Kerstetter ("Kerstetter Decl.") ¶¶ 2-3. Because the amount of the bond is an  
 25 upper limit on an injured party's redress for a wrongful injunction, courts have held that "district  
 26 courts should err on the high side." *Mead Johnson & Co. v. Abbott Labs.*, 201 F.3d 883, 888 (7th  
 27 Cir. 2000). Apple offers no alternative bond amount. Accordingly, the Court sets the bond in the  
 28 amount of \$95,637,141.60.

1           **VI. CONCLUSION**

2           For the foregoing reasons, Apple’s motion for a preliminary injunction is GRANTED.  
3 Accordingly, Samsung Electronics Co., Ltd.; Samsung Electronics America, Inc.; and Samsung  
4 Telecommunications America, LLC; its officers, directors, partners, agents, servants, employees,  
5 attorneys, subsidiaries, and those acting in concert with any of them, are enjoined from making,  
6 using, offering to sell, or selling within the United States, or importing into the United States  
7 Samsung’s Galaxy Nexus and any product that is no more than colorably different from the  
8 specified product and infringes U.S. Patent No. 8,086,604. As a condition of the preliminary  
9 injunction, Apple is ordered to post a bond in the amount of \$95,637,141.60 to secure payment of  
10 any damages sustained by defendant if it is later found to have been wrongfully enjoined. This  
11 Order shall become effective upon posting of the bond.

12 **IT IS SO ORDERED.**

13  
14 Dated: June 29, 2012

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16 LUCY H. KOH  
17 United States District Judge  
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United States District Court  
For the Northern District of California