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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

APPLE INC., a California corporation,

Plaintiff,

vs.

SAMSUNG ELECTRONICS CO., LTD., a Korean business entity; SAMSUNG ELECTRONICS AMERICA, INC., a New York corporation; SAMSUNG TELECOMMUNICATIONS AMERICA, LLC, a Delaware limited liability company,

Defendants.

CASE NO. 11-cv-01846-LHK

SAMSUNG'S OPPOSITION TO APPLE'S MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT OF U.S. PATENT NO. 7,362,867 AND INVALIDITY OF U.S. PATENT NOS. 7,456,893 AND 7,577,460

Date: June 21, 2012
Time: 1:30 p.m.
Place: Courtroom 4, 5th Floor
Judge: Hon. Lucy H. Koh

PUBLIC REDACTED VERSION

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I. INTRODUCTION

Apple's motion for summary judgment of non-infringement and invalidity ("Motion") rests on extreme interpretations of three Samsung patents, interpretations that find no support in the patents themselves or the law. Apple's Motion should be denied in its entirety.

First, Apple's request for summary judgment of non-infringement of the '867 patent should be denied. It is based entirely on an erroneous construction for the term "scrambling code" that is contradicted by the plain claim language as well as the other intrinsic evidence. Apple's construction is also contradicted by the extrinsic evidence it relies on as well as testimony from Samsung's technical expert. Under a proper construction of "scrambling code," there can be no dispute that Apple infringes the '867 patent.

Next, Apple's request for summary judgment of invalidity of the '893 patent should be denied. Contrary to Apple's assertions, the asserted claims of the '893 patent are not mixed method-apparatus claims. Rather, the claims simply describe how the apparatus functions "upon" an action by the user. Courts addressing the same functional language used in the '893 patent have consistently found that such claims are not indefinite.

Finally, Apple's motion for summary judgment of invalidity of the '460 patent should also be denied. The claim at issue includes five steps that correspond to three functions performed on a camera phone. Two of these steps relate to a first function, another two relate to a second function, and the last step relates to a third function. These functions and the corresponding steps are clearly described and supported in the specification and the prosecution history. There is nothing unclear – let alone "insolubly ambiguous" about this claim.

II. APPLE'S MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT OF THE '867 PATENT SHOULD BE DENIED

1. The '867 Patent

The '867 patent relates to an apparatus for generating scrambling codes in mobile communications systems. Mobile communications systems include base stations that communicate with mobile devices, such as cellular telephones. Scrambling codes are unique

sequences associated with each base station that allow the mobile devices to differentiate between each base station in the system. ('867 patent, Selwyn Decl. Ex. 1, D.N. 925-6, col. 1:48-50.)

Samsung asserts independent claim 25.[1] This claim describes an apparatus for generating scrambling codes. Claim 25 states:

> An apparatus for generating scrambling codes in mobile communication system having a scrambling code generator, comprising:
>
> a first m-sequence generator to generate a first m-sequence;
>
> a second m-sequence generator to generate a second m-sequence; and
>
> at least one adder for generating a ((K-1)*M+K)th Gold code as a Kth primary scrambling code by adding a (((K-1)*M+K)-1)-times shifted first m-sequence and the second m-sequence,
>
> wherein K is a natural number and M is a total number of secondary scrambling codes per one primary scrambling code.

According to the plain claim language, the "primary scrambling code" is simply a Gold code generated by adding a first m-sequence and a second m-sequence.

2. Apple's Non-Infringement Argument Is Based On An Improper And Unsupported Construction For "Scrambling Code"

[redacted] Apple's non-infringement argument is based on a construction of the term "scrambling code" that finds no support in the intrinsic or extrinsic evidence. Under a proper construction of "scrambling code," there is no dispute that Apple's products infringe.

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[1] Samsung also asserts dependent claim 26. Apple argues that it does not infringe this claim for the same reasons it does not infringe claim 25.

Although Apple does not expressly state its construction for "scrambling code" in its Motion, Apple's construction requires that: (1) a "scrambling code" cannot be a sum of two m-sequences, and (2) a "scrambling code" must be a complex code sequence like the "complex scrambling code sequence $S_{dl,n}$" described in the 3GPP Standard.[2] (Mot. at 5-6.)

No support exists in the intrinsic evidence, however, for Apple's proposed construction. Indeed, Apple ignores the plain claim language and the definitions in the specification that contradict its proposed interpretation. The only evidence Apple offers in support of its construction comes from a portion of the 3GPP standard.[3] But rather than supporting Apple, this extrinsic evidence is consistent with Samsung's construction and confirms that a "scrambling code" is a Gold code generated by adding two m-sequences. Such conclusion is also supported by the intrinsic evidence, as well as the testimony of Samsung's expert, Dr. Wesel, and the Intel source code itself.

3. Samsung's Construction For "Scrambling Code" Is Supported By Intrinsic And Extrinsic Evidence

One of ordinary skill in the art would understand that a "scrambling code" in the context of the '867 patent is a code generated by adding a first m-sequence and a second m-sequence. (Declaration of Richard D. Wesel, Ph.D. ("Wesel Decl.") at ¶ 38.) As explained below, this construction is supported by the plain claim language, the specification, and extrinsic evidence.

(a) Intrinsic Evidence

Samsung's construction tracks the plain claim language. Claim 25 requires "at least one adder for generating a $((K-1)*M+K)^{th}$ Gold code as a K^{th} primary scrambling code by adding a $(((K-1)*M+K)-1)$-times shifted first m-sequence and the second m-sequence." This language

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[2] A "complex scrambling sequence" is represented as "$Z_n(i)+jZ_n((i+131072) \text{ modulo}(2^{18}-1)$" in the standard where "$Z_n(i)$" is a real component (also called the "I-channel" component) and "$jZ_n((i+131072) \text{ modulo}(2^{18}-1)$" is an imaginary component (also called the "Q-channel" component). A binary scrambling code is comprised of 1s and 0s. (*See* Wesel Decl. at ¶¶ 42, 59).

[3] Apple's definition is also inconsistent with the construction it provided in its October 31, 2011 Local Rule 4-2 disclosures ("primary scrambling code" means "a scrambling code that is used for channel separation"). (Wesel Decl. Ex. H at 14.)

explicitly states that a "scrambling code" is a Gold code generated by adding a first m-sequence and a second m-sequence.[4]

The specification repeatedly refers to scrambling codes as codes resulting from adding a first m-sequence and a second m-sequence. (*See* '867 patent, D.N. 925-6, col. 4:2-3 ("a gold sequence is normally generated through binary adding to two distinct m-sequences,"); col. 4:62-64 ("adding the output of the first m-sequence generator and the output of the second m-sequence generator to generate first primary scrambling code for generating primary scrambling code"); col. 5:13-14 ("a first summer for adding the first and second m-sequences to generate the primary scrambling code"); col. 5:29-31("a first summer for adding the first and second m-sequences to generate the primary scrambling code"); col. 8:17-20 ("The adder 740 adds the 0-th register values (i.e., the last bits) of the first and second shift register memories 700 and 705 to generate a scrambling code, which becomes the primary scrambling code."); col. 9:57-58 ("The output of the adder 810 is a primary scrambling code."); col. 10:2-5 ("Then, the adder 810 adds the output bits from the 0-th registers of the first and second shift register memories 800 and 805 to generate I-channel primary scrambling code signals."); col. 11:43-46 ("The adder 1030 adds the 0-th register values of the first and second shift register memories 1040 and 1045 to generate a scrambling code, which becomes a primary scrambling code."); col. 11:49-52 ("Here, the output from the adder 1030 is used as the primary scrambling code . . . .").)[5]

(b) Extrinsic Evidence

Apple relies entirely on extrinsic evidence – a portion of the 3GPP standard – to support its contention that "scrambling code(s)" must be complex sequences. The relevant portion of the standard is reproduced below:

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[4] The specification states that the terms "scrambling code" and "gold code" are interchangeable. ('867 patent, D.N. 925-6, col. 2:13-16 ("It should be noted that for the purpose of illustration, the term 'scrambling code' is interchangeable with the term 'gold code' or 'gold sequence' indicating the same code as the scrambling code."; col. 6:23-24 ("A gold code used herein as a scrambling code is generated through binary adding of two distinct m-sequences.").)

[5] *See also* col. 5:2-3; col. 6:64-7:8; col. 7:13-17; col. 7:24-28 col. 9:62-65; col. 10:34-39; col. 10:40-43; col. 10:44-48; col. 11:5-7; and col. 11:17-19.

> The n:th Gold code sequence z_n, $n=0,1,2,\ldots,2^{18}-2$, is then defined as:
>
> - $z_n(i) = x((i+n) \text{ modulo } (2^{18} - 1)) + y(i) \text{ modulo } 2$, $i=0,\ldots, 2^{18}-2$.
>
> These binary sequences are converted to real valued sequences Z_n by the following transformation:
>
> $$Z_n(i) = \begin{cases} +1 & \text{if } z_n(i) = 0 \\ -1 & \text{if } z_n(i) = 1 \end{cases} \quad \text{for} \quad i = 0,1,\ldots,2^{18} - 2.$$
>
> Finally, the n:th complex scrambling code sequence $S_{dl,n}$ is defined as:
>
> - $S_{dl,n}(i) = Z_n(i) + j\, Z_n((i+131072) \text{ modulo } (2^{18}-1))$, $i=0,1,\ldots,38399$.
>
> Note that the pattern from phase 0 up to the phase of 38399 is repeated.

(Mot. at 5.)

This section of the 3GPP standard describes the generation of scrambling codes. (Wesel Decl. at ¶ 59.) In the first equation, two m-sequences are added together to generate a binary Gold code sequence, z_n. (*Id.*) This Gold code sequence is a scrambling code in binary form. (*Id.*) This binary scrambling code is then converted into a real scrambling code sequence in the second equation. (*Id.*) Finally, in the third equation, the real scrambling code sequence is converted into a complex scrambling code sequence, $S_{dl,n}$. (*Id.*)

Apple claims that the Gold code sequence generated by the first equation (z_n) is not a scrambling code simply because it is referred to as a "Gold code sequence" whereas the sequence generated by the third equation, $S_{dl,n}$, is referred to as a "complex scrambling code sequence." However, Gold codes ***are*** scrambling codes as confirmed by the '867 patent and Dr. Wesel. (Wesel Decl. at ¶ 38; '867 patent, D.N. 925-6, col. 2:13-16.) Furthermore, the reference to a "complex" scrambling code in the third equation indicates that the prior sequences are also scrambling codes (in "binary" and "real" form). Thus, the 3GPP standard supports Samsung's construction, not Apple's.

[redacted]

Apple selectively cites testimony from Dr. Wesel to suggest that scrambling codes must be complex because they are used for spreading and only complex scrambling codes can be used for spreading. (Mot. at 6 (quoting Deposition of Dr. Wesel, Selwyn Decl. Ex. 5 at 164:15-17) (Q. So the scrambling codes you say infringe the '867 patent, what are they used for? A: Spreading.")). Apple argues that this response demonstrates the scrambling codes in claims 25 and 26 cannot be binary sequences. (Mot. at 6). However, when asked whether he thought that a binary scrambling code is used for spreading, Dr. Wesel testified "Sure it is. It's used for spreading because it's used to make the ultimate spreading code." (Selwyn Decl. Ex. 5 (Wesel Dep.) at 165:22-23). The '867 patent also states that "each unique scrambling code used for spreading (scrambling) downlink channel signals of each base stations is referred to as 'primary scrambling code.'" ('867 patent, D.N. 925-6, col. 1:52-54). Thus, Dr. Wesel and the patent both recognize that a scrambling code that is generated by adding two m-sequences may ultimately be used for spreading downlink channel signals. This does not mean, however, that the two m-sequences when added are not a scrambling code as Apple contends. To the contrary, the overwhelming intrinsic evidence and the extrinsic evidence show that a scrambling code is a code generated by adding two m-sequences.

4. Under A Proper Construction Of "Scrambling Code," There Is No Dispute That Apple's Products Infringe

Apple's iPhones and iPads infringe claims 25 and 26.[6] [redacted]

[redacted]

[6] The accused products include: the iPhone 3G, iPhone 3GS, iPhone 4, iPad 3G (At&T) and iPad 2 3G (AT&T).

[7] Apple's Motion overlooks the Intel source code entirely, choosing instead to focus on the standard itself, which provides no insight on how the generation of scrambling codes is ***implemented*** within the accused devices. Wesel Decl. at ¶¶ 66, 78.) For this reason alone, Apple's Motion must fail.

[redacted] Thus, under a proper construction for "scrambling code," there is no dispute that Apple's products infringe.

That Apple infringes should come as no surprise. The inventors of the '867 patent developed a novel scrambling code generator technology in 1999 that was incorporated into and declared essential to the 3GPP standard. (Declaration of Sam Stake ("Stake Decl."), Ex. 1 (Samsung IPR Declaration), at APLNDC-WH-A000009391.) In 2007, long after Samsung's inventors developed this technology, Apple first entered the smartphone market and incorporated the 3GPP standard into its iPhone and iPad. In doing so, Apple integrated Samsung's patented scrambling code technology into its products.

[redacted] As a result, Apple should not now be heard to assert that it does not infringe the '867 patent after it has (1) admitted that this patent is essential to the 3GPP standards and (2) that its products comply with that standard.

III. APPLE'S MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF THE '893 PATENT SHOULD BE DENIED

1. The '893 Patent

The '893 patent is directed to a technique for "bookmarking" an image in a digital photo album. (Declaration of Woodward Yang, Ph.D. ("Yang Decl.") at ¶ 14.) The claimed invention accomplishes this goal by returning a user to the same bookmarked image in a digital image photo album even after capturing new images. (*Id.*) The invention of the '893 patent marks a departure from the default mode on digital cameras practiced in the art, which always returned a user to the last image captured upon returning to a digital photo album. (*Id.*) This default mode resulted in users losing their place in a digital image photo album, forcing the user to tediously flip back to their place in a digital image photo album. (*Id.*)

Claim 10 of the '893 patent is an independent claim directed to a "digital image processing apparatus." ('893 patent, Selwyn Decl. Ex. 2, D.N. 925-7, col. 10:20.) The claim language relevant to Apple's Motion is reproduced below:

> wherein **upon a user performing a mode-switching operation** defined by switching from the stored-image display mode to the photographing mode and back to the stored-image display mode the controller causes the display screen to first display a single image file that was most recently displayed before the mode-switching operation, the single image file being different from a most-recently stored image file, and the single image file being first displayed irrespective of a duration that the camera was used in the photographing mode during the mode-switching operation.

(*Id.* at col. 10:37-47) (emphasis added.)

Claim 12 of the '893 patent is a dependent claim that includes all of the limitations of claim 10 and, in addition, requires the apparatus to set the "index value" of the last image displayed in memory. (*Id.* at col. 10:52-56)

2. Claims 10 And 12 Of The '893 Patent Are Not Indefinite

Apple argues that claims 10 and 12 are indefinite because both claim an apparatus and a method for using the apparatus. (Mot. at 13-16.) In support of its argument, Apple relies heavily on the Federal Circuit's decision in *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). In *IPXL*, the Federal Circuit held a claim invalid for claiming both a system and a method for using that system. *Id.* at 1384. The claim language at issue in *IPXL* stated:

> The *system of claim 2* [including an input means] wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and ***the user uses the input means*** to either change the predicted transaction information or accept the displayed transaction type and transaction parameters.

Id. (emphasis added). The Federal Circuit found that this claim recited a system and a method for using the system because it required that "the user uses the input means." *See id.*

Apple's reliance here on *IPXL* is entirely misplaced. In *IPXL*, the claim language required user action (*i.e.*, "the user uses the input means"). Here, the claim language simply describes ***how the apparatus*** may respond to user action (*i.e.*, "upon a user performing a mode-switching operation"). It does not require user action.[8] "It is well-established that for a limitation to

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[8] Computer systems and applications are typically interactive systems that perform functions in response to user action. The invention of the '893 Patent is no different. There is nothing improper with drafting an apparatus claim in functional terms, *i.e.*, describing how the apparatus is to function in response to user action. *See Microprocessor Enhancement Corp. v. Tex.*
(footnote continued)

introduce a method step, the limitation must require action, or 'actual use' of something instead of merely requiring or setting forth a particular capability." *Eolas Techs., Inc. v. Adobe Sys., Inc.*, 810 F. Supp. 2d 795, 812 (E.D. Tex. 2011) (citing *Microprocessor Enhancement*, 520 F.3d at 1374-75). Because the language in claim 10 of the '893 patent does not require user action, it is not indefinite.[9]

Further, courts have repeatedly found the *IPXL* holding to be "very limited" and inapplicable where, as here, the claim language at issue does not require user action. *See SynQor, Inc. v. Artesyn Techs., Inc.*, No. 2:07-CV-497-TJW-CE, 2010 U.S. Dist. LEXIS 74808, at *96 (E.D. Tex. July 26, 2010) ("The Court agrees with numerous other courts in that the holding in the *IPXL* case is very limited."). As a result, in the vast majority of cases, district courts have refused to find claims indefinite under *IPXL*. *See, e.g., CBS-Sys. Int'l Inc. v. SAP Am., Inc.*, No. 10-2156, 2012 U.S. Dist. LEXIS 45847, at *40 (E.D. Pa. Mar. 30, 2012) ("[T]he claims ... clearly recite only apparatus elements modified by functional terms describing their capabilities"); *WAGO Verwaltungsgesellschaft GmbH v. Rockwell Automation*, No. 1:11-CV-00756, 2012 U.S. Dist. LEXIS 30703, at *19 (*N.D. Ohio Mar. 7, 2012) ("[T]he '241 Patent's use of 'configuring the device' reflects functional language ... not a method of using the device"); *Leader Techs., Inc. v. Facebook, Inc.*, 770 F. Supp. 2d 686, 710 (D. Del. 2011) ("[T]he Court concludes that *IPXL* does not apply to invalidate the claims as indefinite"); *Freedom Wireless, Inc. v. Alltel Corp.*, No. 2:06cv504 (TJW-CE), 2008 U.S. Dist. LEXIS 82785, at *40-41 (E.D. Tex. Oct. 17, 2008) ("The undersigned construes this claim to be an apparatus claim that describes the apparatus by reference

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Instruments Inc., 520 F.3d 1367, 1375 (Fed. Cir. 2008). As a consequence, simply because an apparatus claim refers to user action does not make it indefinite *ipso facto*, as Apple seems to imply.

[9] Apple also relies on *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303 (Fed. Cir. 2011). *Katz* is distinguishable for the same reasons *IPXL* does not apply. In *Katz*, the Federal Circuit upheld a district court's finding that a system with an "interface means for providing automated voice messages ... to certain of said individual callers, wherein said certain of said individual callers digitally enter data" was indefinite. *Id.* at 1318. The Court drew a parallel between the claim language in *IPXL* ("wherein ... the user uses") and the claim language in *Katz* ("wherein ... callers digitally enter data") and found both were "directed to user actions, not system capabilities." *Id.*

to its functional capabilities … [a]s such, it does not run afoul of *IPXL Holdings* and is not indefinite"); *Ricoh Co. v. Katun Corp.*, 486 F. Supp. 2d 395, 403 (D.N.J. 2007) ("Unlike the claim in *IPXL*, this language does not describe active use … it describes the claimed apparatus in functional terms"); *Sienna, LLC v. CVS Corp.*, No. 06 Civ. 3364 (DLC), 2007 U.S. Dist. LEXIS 2, at *22 (S.D.N.Y. Jan. 3, 2007) ("The clause at issue is not a separate method step, but rather is descriptive of the apparatus itself").

Specific to the claim language at issue here, "[c]ourts consistently find that claims containing both a physical description of an apparatus and a description of the apparatus' function, *e.g.*, 'communicates,' 'populates,' 'configured to,' 'and ***upon activation***' are not impermissible apparatus-method claims." *See Vistan Corp. v. Fadei USA, Inc.*, No. C 10-4862 JCS, 2012 U.S. Dist. LEXIS 59348, at *25 (N.D. Cal. Apr. 27, 2012) (internal citations omitted) (emphasis added); *see, e.g., Yodlee, Inc. v. Cashedge, Inc.*, No. C 05-01550 SI, 2006 U.S. Dist. LEXIS 86699, at *6-19 (N.D. Cal. Nov. 29, 2006) ("upon activation"); *Collaboration Props. v. Tandberg ASA*, No. C 05-01940 MHP, 2006 U.S. Dist. LEXIS 42465, at *19-20 (N.D. Cal. June 22, 2006) ("configured to"); *Collegenet, Inc. v. XAP Corp.*, 442 F. Supp. 2d 1036, 1062-63 (D. Or. 2006) ("populating"); *Toshiba Corp. v. Juniper Networks, Inc.*, No. 03-1035-SLR, 2006 U.S. Dist. LEXIS 44348, at *13-14 (D. Del. June 28, 2006) ("communicates"). This is because "these claims simply use active language to describe the capability of the apparatuses; they do not claim the activity itself." *Vistan*, 2012 U.S. Dist. LEXIS 59348, at *25 (internal citations omitted). The reasoning employed by these courts is equally applicable here.

In *Yodlee,* for example, Judge Illston denied summary judgment, finding that the claims at issue used active language to describe the capability of an apparatus but did not claim the activity itself. *Yodlee,* 2006 U.S. Dist. LEXIS 86699, at *6-19. As here, the claim language at issue in *Yodlee* involved the word "upon":

> A computer-readable storage device storing instructions that upon execution cause a processor to automatically access personal information associated with an end user, wherein the personal information is stored on a personal information provider by performing the steps comprising of: . . .

> (b) ***upon activation*** of the presented link, downloading an application to the client computer, wherein the downloaded application upon execution on the client computer performs the steps of . . .

Id. at *11-13 (emphasis added). The defendant argued that the claim language "upon activation of the presented link" did not make clear whether infringement "occurs when the computer-readable storage device is manufactured or sold, *or* whether infringement occurs when a user activates such a system's presented link, *or both*." *Id.* at *13 (emphasis in original). Judge Illston rejected that argument, finding that infringement occurs if a device presents such a link, and activating such link would initiate the process described under paragraph (b). *Id.* ("[W]hether a user actually activates the link presented by the infringing device is of absolutely no import.").

Apple advances the same flawed argument here. Apple alleges that it is unclear whether claims 10 and 12 are infringed "when one creates an apparatus that allows the user to switch from the stored-image display mode to the photographing mode and back to the stored-image display mode, or whether infringement occurs when the user actually switches from the stored-image display mode to the photographing mode and back to the stored-image display mode." (Mot. at 15.) But Apple's argument fails for precisely the same reason the defendant's argument failed in *Yodlee*. In both cases, infringement occurs if an apparatus is built that is ***capable*** of performing the recited functions "upon activation of the presented link" or "upon performing a mode switching operation." Whether the functions are ***actually*** executed upon action by a user is of absolutely no import. *Yodlee,* 2006 U.S. Dist. LEXIS 86699, at *13.[10]

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[10] Relying on *IPXL* and *Katz*, Apple misleadingly suggests that the use of "wherein" signifies a method step. (Mot. at 14.) Apple's argument is devoid of support for that proposition. The portion of *Katz* that Apple relies on reflects the Federal Circuit's rejection of plaintiff's argument that the term "wherein," *ipso facto*, indicates functional capability. *See Katz*, 639 F.3d at 1318. That finding does not, as Apple appears to argue, make the converse true (*i.e.*, "wherein," *ipso facto*, indicates a method step). Samsung is aware of no authority holding that the term "wherein" always signifies either functional language or a method step. Instead, the critical inquiry under *IPXL* is whether the claim "recites both a system and a method for using that system." *IPXL*, 430 F.3d at 1384. Indeed, many courts have found apparatus claims that included the term "wherein" to be definite. *See, e.g., Yodlee*, 2006 U.S. Dist. LEXIS 86699, at *18-19; *Freedom Wireless,* 2008 U.S. Dist. LEXIS 82785, at *40-41; *Toshiba,* 2006 U.S. Dist. LEXIS 44348, at *12-14.

Judge Illston provided a simple but useful analogy to determine if a claim is a mixed-method claim:

> [A] claim which physically describes a pair of scissors designed to cut paper, then states, '***upon opening and closing the sharp edges of the scissors on a piece of paper***, the paper is cut.' The language describes the capability of the scissors; it is functional language. Infringement occurs upon the manufacturing and sale of scissors that are capable of cutting paper. The *IPXL* rule would apply only if the patent claimed the physical description of the scissors, then stated within the same claim: "and the method of using said scissors to cut a piece of paper."

Id. at *14 (emphasis added).

This example is particularly relevant because "upon" is used as a precursor to the claimed action, just as it is in claim 10 of the '893 patent. Thus, just like *Yodlee*, the claims of the '893 patent simply describe "the capability of the [controller]" when a user performs a mode-switching operation. The claims do not require "the method of using said [controller]." In other words, claims 10 and 12 do not require a mode-switching operation (*i.e.*, flipping a switch); they require only a device that performs certain functions if and when a switch is flipped. As a result, claims 10 and 12 are not indefinite, and Apple's Motion fails as a matter of law.[11]

IV. APPLE'S MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF THE '460 PATENT SHOULD BE DENIED

1. The '460 Patent

Claim 1 of the '460 patent claims three core functions on a camera phone. (Yang Decl. at ¶ 25.) For ease of reference, the five steps of claim 1 are marked [a] through [e] below:

> 1. A data transmitting method for a portable composite communication terminal which functions as both a portable phone and a camera, comprising the steps of:

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[11] Apple's Motion also fails because it fails to cite sufficient intrinsic or extrinsic evidence to meet the clear and convincing evidentiary standard. Apple "bases its indefiniteness challenge entirely on attorney argument" and "d[oes] not adduce any evidence to substantiate its claim of indefiniteness." *See Mallinckrodt, Inc. v. Masimo Corp.*, 147 Fed. Appx. 158, 179 (Fed. Cir. 2005) (claims found to be definite because defendants failed to show that a person of skill in the art would not understand the scope of the claims). Moreover, Apple fails to "qualify or distinguish in any way" the actions of the USPTO and the experts in this case who have not "encounter[ed] difficulty in ascertaining" the scope of the claims at issue. *See id.* at 179-80; *see also* Yang Decl. at ¶ 23. Because claims 10 and 12 of the '893 patent are readily understood by those skilled in the art, they are not indefinite.

> [a] entering a ***first E-mail transmission sub-mode*** upon user request for E-mail transmission while operating in a portable phone mode, the first e-mail transmission sub-mode performing a portable phone function;
>
> [b] entering a ***second E-mail transmission sub-mode*** upon user request for E-mail transmission while operating in a display sub-mode, the second e-mail transmission sub-mode displaying an image most recently captured in a camera mode;
>
> [c] ***sequentially displaying other images*** stored in a memory through the use of scroll keys;
>
> [d] transmitting the address of the other party and a message received through ***a user interface*** in the ***first E-mail transmission sub-mode***;
>
> [e] and transmitting the address of the other party and the message received through ***the user interface*** and the image displayed on the display as an E-mail in the ***second E-mail transmission sub-mode***.

('460 patent, Selwyn Decl. Ex. 3, D.N. 925-8 (emphasis added).)

The first function is set forth in steps [a] and [d]. These steps claim sending text-only emails:

> [a] entering a ***first E-mail transmission sub-mode*** upon user request for E-mail transmission while operating in a portable phone mode, the first e-mail transmission sub-mode performing a portable phone function;
>
> [d] transmitting the address of the other party and a message received through ***a user interface*** in the ***first E-mail transmission sub-mode***;

The second function is set forth in steps [b] and [e]. These steps claim sending emails displaying both an image and a message:

> [b] entering a ***second E-mail transmission sub-mode*** upon user request for E-mail transmission while operating in a display sub-mode, the second e-mail transmission sub-mode displaying an image most recently captured in a camera mode;
>
> [e] and transmitting the address of the other party and the message received through ***the user interface*** and the image displayed on the display as an E-mail in the ***second E-mail transmission sub-mode***.

The third function is set for the in step [c]. This step claims sequentially displaying stored images on the device.

> [c] ***sequentially displaying other images*** stored in a memory through the use of scroll keys;

An intuitive "user interface," referenced in steps [d] and [e], ties together these three functions. (Yang Decl. at ¶ 26.) This user interface offers two distinct "E-mail transmission sub-modes." (*Id.*) The "first E-mail transmission sub-mode" allows a user to send text-only emails. (*Id.*) In contrast, the "second E-mail transmission sub-mode" allows a user to send e-mails displaying an image. (*Id.*)

2. Claim 1 Of The '460 Patent Is Not Indefinite

In its Motion, Apple claims three alternate interpretations of claim 1, and argues that the "plain language" of claim 1 provides insufficient guidance on which interpretation is correct. (Mot. at 16.) Apple's various and strained interpretations of claim 1 in the abstract, without any reference to the specification or prosecution history are improper. *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1369 (Fed. Cir. 2001) ("A claim is not 'indefinite' simply because it is hard to understand when viewed without benefit of the specification.") In point of fact, only Apple's first interpretation, "sending two separate email messages from two separate email transmission sub-modes," is consistent with the specification and prosecution history of the '460 patent. (Yang Decl. at ¶ 34.) Although the steps are not necessarily performed in sequential order, it is black letter law that a method claim may be infringed through non-sequential performance of steps. *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1345 (Fed. Cir. 2008); *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001) ("Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one."); *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369-71 (Fed. Cir. 2003) (reversing district court's finding that steps of method claim must be performed in a certain order). Apple's second and third interpretations are concocted and, unlike its first interpretation, find no support whatsoever in the specification or prosecution history.

(a) The Specification Describes The Three Functions Of Claim 1

Apple contends that the specification does not describe two distinct e-mail transmission sub-modes. (Mot. at 16-17.) This is not correct. The specification describes in detail the three functions claimed in claim 1. The specification discloses that two distinct e-mail functionalities are available when a user requests e-mail transmission in "portable phone mode" or in "play sub-

mode." ('460 patent, D.N. 925-8, col. 11:65-67; col. 12:38-41; figs. 6, 8; Yang Decl. at ¶27.) In particular, the specification discloses that the user can send a text-only email when she requests e-mail transmission while in the "portable phone mode." ('460 patent, col. 12:38-41 ("However, if only the E-mail transmission sub-mode is selected in the portable phone mode, this implies that no image data enclosed in the E-mail exists."); Yang Decl. at ¶ 27.) In contrast, while reviewing images (in "play sub-mode"), the user can send an e-mail enclosing an image. ('460 patent, col. 11:9-11 ("By selecting the E-mail transmission sub-mode in the play sub-mode, the user can transmit an E-mail with a still image enclosed therein."); Yang Decl. at ¶ 27.) The user's request for e-mail transmission in the play sub-mode "implies that image data to be enclosed in the E-mail exists." ('460 patent, col. 12:33-35; Yang Decl. at ¶ 27.) Figure 9 of the patent, understood in light of the specification, illustrates that image enclosure results from requesting e-mail transmission in play sub-mode. ('460 patent, fig. 9 at labels 914-918; col. 12:30-51; Yang Decl. at ¶ 27.)

The specification further discloses the third claimed function of claim 1: sequentially displaying photos stored on the device. The specification states: "Upon user pressing the volume up/down key 312 in a play sub-mode of the camera mode, an image previous or next to a current image is displayed.") ('460 patent, col. 5:9-12; Yang Decl. at ¶ 27.)

Moreover, Apple's expert on the '460 patent, Dr. Srivastava, testified that he understood claim 1 to be directed to the performance of three core functions:

> Q: Can we agree that at the very least this claim requires the three core functions that Dr. Yang opined on? . . .
>
> A: I do find the claim overall confusing as to what method it is citing. Whether there are two E-mail sub-modes or not, the claim language does use the first E-mail and the second E-mail sub-mode. As I alluded to in my report, the specification is at variance with that. **But in terms of does [claim 1] talk about sending an E-mail text alone, an E-mail with text and image and sequentially scrolling through the images, yes, the claim does talk about these three things.**

(Stake Decl. Ex. 2 (Srivastava Dep.) at 76:4-24) (emphasis added).

Similarly, in his invalidity report, Dr. Srivastava characterized claim 1 as being directed to a "method for transmitting E-mails from a portable device combining both phone and camera

functions, where an E-mail may include a user entered message and optionally an image selected by the user." (Stake Decl. Ex. 3 (Srivastava Rpt.) at ¶ 47.) Dr. Srivastava's contentions that two prior art references anticipate claim 1 by practicing the three core functions described above further confirm that the claim is not "insolubly ambiguous." (*See, e.g., id.* at ¶ 66 (opining that one alleged anticipatory reference "allowed the user to make voice phone calls; capture, store and transmit images to another device; and select one of the various previously filmed and stored images by sequentially scrolling through them via cursor keys.").)

These distinct functionalities also comport with the understanding of parties' experts concerning the term "sub-mode." (*Compare* Stake Decl. Ex. 3 (Srivastava Rpt.) at ¶ 63 (opining that "sub-mode" is a "mode that is subordinate to a higher level mode, and has a restricted or ***specialized set of functionality***.") (emphasis added) *with* Yang Decl. at ¶ 28 (opining that "sub-mode" is "***another set of functions*** which might be available upon subsequent selection to enter a 'sub-mode' from the current 'mode.'") (emphasis added.)

Thus, contrary to Apple's assertions, the '460 patent expressly discloses two different e-mail functionalities.

(b) The Prosecution History Describes The Three Functions Of Claim 1

During prosecution of the '460 patent, Samsung distinguished claim 1 from prior art by contending that no previous camera phone offered the claim's three core functions. (Yang Decl. at ¶¶ 29-33.) The '460 patent claims priority to U.S. Application No. 09/540,830 (the "'830 application"). As originally drafted, claim 20 of the '830 application was nearly identical to claim 1 but omitted step [c] ("sequentially displaying other stored images"). (Stake Decl. Ex. 4 at APLNDC-WH-A0000014309-10.)

In the first Office Action, the Examiner rejected claim 20 as obvious in view of the combination of three United States patents: "Wagner," "Suso," and "Dawson." (Stake Decl. Ex. 5 at APLNDC-WH-A0000014263.) According to the Examiner, the Wagner patent disclosed a portable phone that:

> [F]unctions as a portable phone comprising the steps of **entering a first E-mail transmission sub-mode** upon user request for E-mail transmission while operating in a portable phone mode, the first E-mail transmission sub-mode performing a

> portable phone function, **and transmitting** the address of the other party and a message received through a user interface **in the first E-mail transmission sub-mode**.

(*Id.* at APLNDC-WH-A0000014263-64.) (emphasis added.) Furthermore, according to the Examiner, the Dawson patent disclosed an "e-mail system" having two e-mail transmission sub-modes, one for sending text-only e-mails and one for sending e-mails enclosing images:

> Dawson teaches an audio-visual e-mail system having a **first E-mail transmission mode for transmitting a text-only email message** and a second E-mail transmission sub-mode upon user request for E-mail transmission, wherein the **second E-mail sub-mode displays an image captured by a digital camera and transmits the address of the other party and the message received through the user interface and the image display on the display**

(*Id.* at APLNDC-WH-A0000014264.) Thus, the Examiner readily recognized from the early stages of prosecution that claim 20 was directed to sending separate e-mails through two distinct sub-modes.

Samsung responded to the first Office Action by amending claim 20 to include the third claimed function of the '460 patent: "sequentially displaying other images stored in a memory through the use of scroll keys." (Stake Decl. Ex. 6 at APLNDC-WH-A0000014254.) Samsung further clarified that the second e-mail sub-mode would display a "most recently" captured image. Samsung contended that these amendments distinguished the pending claim from the asserted prior art. (*Id.* at APLNDC-WH-A0000014251.)

In subsequent Office Actions, the Examiner again rejected claim 20 over three U.S. patents: "Harris," "Hull," and "Sugiyama." (Stake Decl. Ex. 7 at APLNDC-WH-A0000014238-39; Stake Decl. Ex. 8 at APLNDC-WH-A0000014156-58.) The Examiner contended that these references rendered claim 20 obvious by disclosing, in combination, the three claimed functions of the '460 patent. In particular, the Examiner contended that Harris disclosed a "portable phone and camera" that sent text-only email, Hull disclosed sending e-mail enclosing an image and a message, and Sugiyama disclosed the use of scroll keys. (*Id.*)

Ultimately, the Examiner allowed claim 1 of the '460 patent to issue after Samsung demonstrated that the asserted prior art failed to disclose a device "capable of operating in a first and a second E-mail transmission sub-mode." (Stake Decl. Ex. 9 at APLNDC-WH-

A0000014122.) In particular, Samsung contended that "[e]ach of the [asserted] references can only operate in one of the two modes, not both." (*Id.*) The Examiner issued no further anticipation or obviousness rejections. On August 18, 2009, the '460 patent issued. ('460 patent, D.N. 925-8.)

(c) The Inventor Testimony Is Consistent With The Three Functions Of Claim 1

In 1998 and early 1999, three Samsung engineers—Jae-Min Kim, Jeong-Seok Oh, and Sang-Ryul Park—developed the novel camera phone technology claimed by the '460 patent. (Stake Decl. Ex. 10 (Oh Dep.) at 22:1-23:5; Stake Decl. Ex. 11 (Park Dep.), at 31-32.) In this litigation, Mr. Oh and Mr. Park (the two inventors deposed by Apple) provided testimony about their invention that is consistent with the three claimed functions of claim 1. Mr. Oh testified that he invented a portable phone that "incorporate[d] a camera via which you would snap photos and store same and manipulate it over a number of processes and ultimately to be able to transmit the same." (Stake Decl. Ex. 10 (Oh Dep.), at 21:17-25.) He further testified that he invented "the transmission of e-mail from and by use of a portable phone." (*Id.* at 47:4-6.) Finally, he testified that a "scroll key. . . might be in reference to something that hardware oriented, maybe software oriented, maybe something in reference to the flipping of pages." (*Id.* at 36:3-8.) Likewise, Mr. Park testified that he invented "send[ing] e-mails" and "attaching a photo to an e-mail" from "portable phones." (Stake Decl. Ex. 11 (Park Dep.) at 21-22.)[12]

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[12] The inventor testimony relied on by Apple does not support its argument. For example, Apple's counsel asked Mr. Oh, "Could you ***practice*** your invention ***by reading*** the language in Claim 1 of the U.S. patent 460?" (Mot. at 18) (emphasis added.) First, this question is unintelligible insofar as a claim cannot be practiced by simply reading it. Furthermore, inventor testimony regarding indefiniteness is entitled to virtually no weight. *Solomon v. Kimberly-Clark Corp.*, 216 F.3d 1372, 1379 (Fed. Cir. 2000); *Oakley, Inc. v. Sunglass Hut Int'l,* 316 F.3d 1331, 1342 n.2 (Fed. Cir. 2003) ("We consider that testimony to be of little value in the definiteness analysis or claim construction."). Apple's reliance on *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200 (Fed. Cir. 1991) is inapposite. In *Amgen*, the court looked to inventor testimony only ***after*** concluding that the specification and prosecution history shed no light on the allegedly indefinite claim language. *Id.* at 1218. Here, the specification and prosecution history of the '460 patent unquestionably describe the three functions in claim 1.

(d) The Opinions of Samsung's Experts Are Consistent with the Clear Meaning of Claim 1

Apple incorrectly argues that Samsung has advanced interpretations of claim 1 in the expert reports of Dr. Yang and Dr. Sukumar that are inconsistent with its infringement contentions. (Mot. at 19.)

First, Apple mischaracterizes Samsung's infringement contentions as "requir[ing] a user to perform the claimed steps in order." (Mot. at 20 (emphasis omitted).) To do so, however, Apple is forced to ignore that Samsung's infringement contentions provided, by way of example only ("See, *e.g.*,"), that a user ***could*** perform these claim steps in sequence. (*See, e.g.*, Selwyn Decl. Ex. 15 at 3.) Nothing in the contentions ***requires*** sequential performance. The intrinsic record of the '460 patent is also consistent with the performance of the three claimed functions in any sequence. Thus, Samsung's infringement contentions are fully consistent with the expert testimony of Dr. Woodward Yang, who opined:

> Although ***performance of these steps in the recited sequence would certainly infringe the patent***, I do not understand claim 1 to ***require*** that these five claimed steps be performed in sequence. Rather, I understand the patent to permit the performance of the three claimed, core functions in any sequence.

(Stake Decl. Ex. 12 (Yang Rpt.) at ¶ 43.)

Second, Apple characterizes Dr. Yang's interpretation of claim 1 as "nonsensical" for suggesting that performance of the three claimed functions over the span of a year would infringe. (Mot. at 20-21.) Infringement of a method claim, however, generally requires only performance of all claimed steps during the term of the patent. 35 U.S.C. § 271(a) ("[whoever without authority uses] any patented invention within the United States . . . during the term of the patent therefor, infringes the patent."); *Monsanto Co. v. Syngenta Seeds, Inc.*, 503 F.3d 1352, 1359 (Fed. Cir. 2007) ("[I]nfringement under § 271(a) requires use "without authority ... during the patent term.") Furthermore, it is improper to impose a time limitation on the performance of a method claim absent support for such a limitation in the intrinsic record, which Apple fails to identify. *Network Commerce, Inc. v. Microsoft Corp.*, No. 01-1991-P, 2002 WL 32954821, at *3-4 (W.D. Wash. Oct. 29, 2002) (finding no support in specification or prosecution history to support time limitation for the term "in response to.")

Finally, Apple contends that opinions expressed by Dr. Sukumar, Samsung's survey expert, have "no apparent relationship" to the expert opinions of Dr. Yang. (Mot. at 21.) Apple is mistaken. In his report, Dr. Sukumar—who was attempting to understand the value users placed on the inventive aspects of the '460 patent—correctly recognized that displaying an image in the body of an e-mail, rather than as an attachment, is one advantage of the claimed invention over the prior art. ('460 patent, D.N. 925-8, claim 1 ("and transmitting the address of the other party and the message received through the user interface and the ***image displayed on the display as an E-mail*** in the second E-mail transmission sub-mode").) Dr. Yang also recognized that claim 1 of the '460 patent requires image display in the body of an e-mail. (Stake Decl. Ex. 12 (Yang Rpt.) at ¶ 41 ("the patent is directed to the performance of three core functions on the device. . . (ii) transmitting an email displaying an image and a message. . . ."); Stake Decl. Ex. 13 (Yang Dep.) at 236:9-238:14.) Thus, Apple's suggestion that Dr. Sukumar's report is somehow inconsistent with the opinions of Dr. Yang is simply wrong.

In summary, Apple's contention that claim 1 is "insolubly ambiguous" ignores the claim language, specification, and prosecution history of the '460 patent. *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1366 (Fed. Cir. 2011) ("[A]n accused infringer must … demonstrate by clear and convincing evidence that one of ordinary skill in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecution history, and the knowledge in the relevant art.") (internal citations omitted); *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010) ("[P]roof of indefiniteness must meet an exacting standard. Only claims not amenable to construction or insolubly ambiguous are indefinite. A claim is not indefinite merely because parties disagree concerning its construction.") (internal citations omitted); *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1380 (Fed. Cir. 2001) ("[C]lose questions of indefiniteness in litigation involving issued patents are properly resolved in favor of the patentee."). In light of this intrinsic record, claim 1 is clear and unambiguous.

V. CONCLUSION

For the foregoing reasons, Apple's motion for summary judgment on the '867, '893, and '460 patents should be denied.

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Respectfully submitted,

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