that, in Samsung's own words, is "fatal to the goals of the 644 patent...." (*Id.* (citing RX-26C, App. L at 9).)

Apple says the Accused Products have substantial non-infringing uses and says that Samsung's allegations are based on TS 25.212, Section 4.10's transmitter definition. (*Id.* at 103.) Apple argues that the ability to receive a Section 4.10 transmission is itself a non-infringing use. (*Id.*) Apple says its products also have many substantial uses unrelated to Section 4.10. (*Id.*) According to Apple, Samsung does not accuse any TS 25.212 version before Version 6.5.0 and the functionality of these prior versions, including HSDPA, is distinct from Section 4.10. (*Id.*) Apple argues that the HSDPA capabilities of the Accused Products, such as downloading streaming video, are substantial non-infringing uses. (*Id.* (citing Tr. at 1268 (Min)).) Apple says the Accused Products also have substantial uses wholly unrelated to UMTS, including 802.11 (WiFi) capability and robust feature sets. (*Id.*) Apple says Samsung's testing allegations are based on nothing more than HSUPA compatibility and Samsung had not identified any test that requires decoding of an E-AGCH message in accordance with TS 25.212, Section 4.10. (*Id.*)

Staff says that to prove indirect infringement direct infringement must first be shown. (SBr. at 80.) Staff says that because the evidence does not demonstrate direct infringement of the asserted claims, indirect infringement has not been proven. (*Id.* at 80-81.)

The Administrative Law Judge concludes that the evidence is does not demonstrate to a preponderate degree that any of the asserted claims of the '644 patent has been directly infringed by Apple, for the reasons previously discussed, and therefore, the evidence fails to demonstrate that a violation of Section 337 has occurred by reason of indirect infringement, as alleged by Samsung.

For the foregoing reasons, the Administrative Law Judge concludes that the evidence does not demonstrate, to a preponderate degree, that there is any violation of Section 337, as alleged by Samsung, by reason of infringement of the '644 patent by Apple.

D. Analysis of the Accused Products with Respect to the '980 Patent

Samsung accuses the "iPhone 3GS (all carriers), the iPhone 4 (all carriers and models), and the iPhone 4S (all carriers)" (collectively, the "Accused '980 Products") of infringing the asserted claims 5, 9-10, and 13 of the '980 patent. (CBr. at 145, n.36.) According to Samsung, all of the Accused '980 Products "run iOS 4 or later and currently run a version of iOS 5[.]" (*Id.*) Samsung says that whether an iPhone has iOS 4 or iOS 5 does not affect the infringement analysis here. (*Id.*) Samsung has designated the iPhone 4S with iOS 5 as representative of all the Accused '980 Products. (*Id.* at 145-46.)

1. Claims 5 and 10.

Claims 5 and 10 of the '980 patent, as numbered by Samsung, read as follows:

> **5[A].** A method for dialing a phone number in a smart phone having random access memory (RAM) and both personal digital assistant (PDA) and mobile phone functions during operation of a PDA function, comprising the steps of:
>
> [5B] loading an operating system (OS) program for said PDA function;
>
> [5C] loading a phone program for editing and dialing a phone number along with displaying a phone editor and dialing icon if said PDA function is requested by a user;
>
> [5D] executing said phone program if said user selects a phone number during operation of said PDA function;
>
> [5E] storing an identifying name designated for the selected phone number into a phone book; and
>
> [5F] dialing the selected phone number.

> **10[A].** A method for dialing a phone number in a smart phone having both personal digital assistant (PDA) and mobile phone functions, comprising the steps of:
>
> [10B] executing a dialing program for editing and dialing a phone number and displaying a phone editor and a dialing icon when a PDA function is utilized in said smart phone;
>
> [10C] switching a display screen into a dialing state for selecting a phone number when said dialing icon is selected during the performance of said PDA function;
>
> [10D] storing an identifying name designated for the selected phone number into a phone book; and
>
> [10E] dialing the selected phone number.

(JXM-5 at 4:36-49, 5:1-13; CBr. at 146.)

a) Claim 5

According to Samsung, only limitations 5C and 5D of claim 5 of the '980 patent are in dispute. The undisputed limitations of claim 5 will be discussed first.

> (1) *5A, "A method for dialing a phone number in a smart phone having random access memory (RAM) and both personal digital assistant (PDA) and mobile phone functions during operation of a PDA function"*

With respect to the preamble, Samsung argues that "[t]he iPhone 4S is a smart phone, dials phone numbers, and has RAM." (CBr. at 146; Tr. at 2372:5-2374:23 (Cole); CX-1103; CX-1568; CX-0576; CX-0585; CX-0877.0124C; CX-1106.0126C; CX-1105.037C; CPX-15.) Samsung explains that

> The iPhone 4S comprises the following PDA functions covered by claim 5: Mail, Safari Browser, Calendar, and Notes. (Cole Tr. 2360:8-2368:21; CX-0588.3; CDX-03.22-33.) The iPhone 4S allows a user to dial a phone number during operation of those PDA functions. (*Id*; CX-0283.1; CX-1046.1; CX-1045.1; CX-0160.3C; CX-0585.3.) For example, an iPhone 4S user may encounter a telephone number displayed in any of those PDA functions and dial that number by selecting it with their finger. (*Id.*; CX-583.1 (printout from www.apple.com explaining: "To make a call on iPhone, tap a name or number. That's it. You can tap to call from just about anywhere: . . . a number on a website"); CX-0283.1 (iPhone Fi[n]gerTips QuickStart Guide).)

(CBr. at 147.) Staff also argues that it is undisputed that the Accused '980 Products are "each smartphones that contain random access memory and perform both PDA and mobile phone functions. . . ." (SBr. at 94; Tr. at 2376:3-11 (Cole)[19]; CPX-15.) Apple does not appear to directly dispute these assertions. (Ground Rule 10.1; RBr. at 147-172; RRBr. at 93-106.) Indeed, Apple's expert admitted that the accused iPhones are smartphones that have RAM, mobile phone functions, and PDA functions, and that there is no dispute that the preamble of claim 5 has been met. (Tr. at 2904:5-23 (Ingers).) The Administrative Law Judge concludes that Samsung has demonstrated by a preponderance of the evidence that the Accused '980 Products are smart phones that are able to dial a phone number, have RAM, and have both PDA and mobile phone functions during operation of a PDA function, such that the preamble of claim 5 is met. (CBr. at 146; Tr. at 2372:5-2374:23, 2376:3-11, 2377 (Cole); CX-1103; CX-1568; CX-0576; CX-0585; CX-0877.0124C; CX-1106.0126C; CX-1105.037C; CPX-15; SBr. at 94.)

(2) *5B, "loading an operating system (OS) program for said PDA function"*

With respect to element "5B" of claim 5, loading an operating system (OS) program for said PDA function, it is also undisputed that the Accused '980 Products are also able to perform this step of the claimed method. Dr. Ingers, Apple's expert, testified that he does not dispute that all of the accused products meet step 5B. (Tr. at 2905:5-2906:3 (Ingers). *See also* Tr. at 2378:9-2379:11 (Cole); CBr. at 147; SBr. at 95; RBr. at 153-155.) The Administrative Law Judge concludes that Samsung has shown by a preponderance of the evidence that the Accused '980 Products are capable of loading an OS program "for said PDA function" such that the limitations of "5B" are met.

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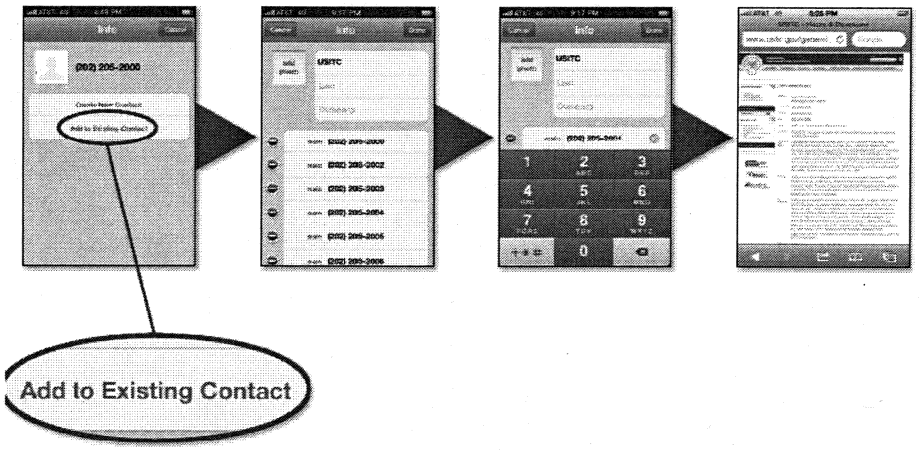
[19] Staff also relies on the hearing transcript at 2945 (SBr. at 94), but this portion of Dr. Ingers's testimony does not appear to support Staff's arguments regarding infringement. (Tr. at 2945.)

(3) *5E, "storing an identifying name designated for the selected phone number into a phone book"*

Samsung argues that the accused iPhone 4S meets element "5E" of claim 5 because it "can store an identifying name for the phone number selected from Mail, Safari, Calendar, or Notes into a phone book (i.e., the Contacts application)." (CBr. at 147; Tr. at 2398:8-2399:17 (Cole), 2920:7-14 (Ingers).) Staff also argues that the Accused '980 Products meet this limitation. (SBr. at 98; CX-285 at 78.) Dr. Ingers also testified that he does not dispute that the iPhones are able to store address book entries such that the limitation "5E" is met (when taken in isolation). (Tr. at 2920 (Ingers).) Apple explains how the user may store a selected phone number:

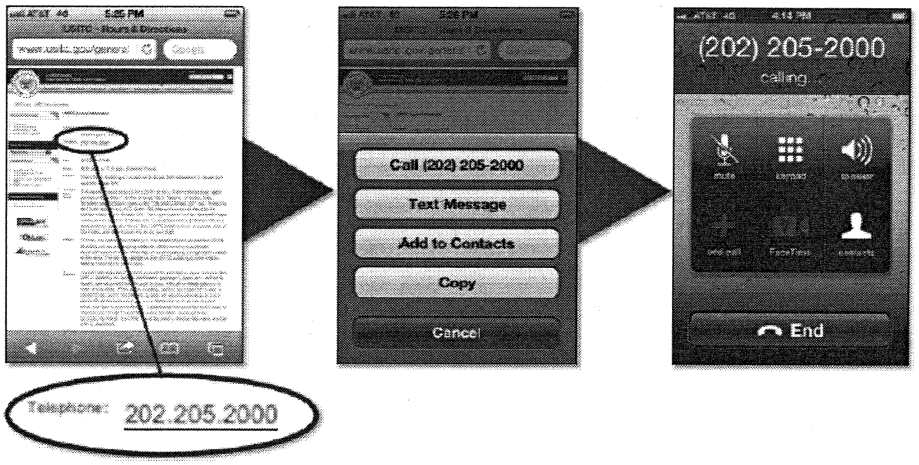
> Alternatively, if the user presses the "Add to Contacts" button on the action sheet, the PDA application (using the AddressBookUI framework) displays the screens shown below that allow the user to create or modify a contact entry for the selected phone number:



(RBr. at 157 (citing RDX 13-10; RDX 13-19; RDX 13-26; RDX 13-33).) The Administrative Law Judge concludes that the Accused '980 Products are able to store an identifying name designated for the selected phone number into a phone book such that element "5E" of claim 5 is met.

(4) *5F, "dialing the selected phone number"*

Samsung argues that the accused iPhone 4S meets element "5F" of claim 5 because it is able to perform the step of dialing the number selected by the user. (CBr. at 147; Tr. at 2399:18-2400:17 (Cole), 2920:15-21 (Ingers); CX-0283.1; CX-1046.1; CX-1045.1; CX-0160.3C; CX-0585.3.) Staff agrees. (SBr. at 98; CX-285 at 78.) It is noted that Dr. Ingers does not dispute this limitation (Tr. at 2920), and that Apple explains how the accused products perform the step of dialing a selected number:

> The accused iPhones allow users to select a phone number displayed in Safari, Calendar, Notes, and Mail. More specifically, as shown below (using Safari as an example), when a user performs a long-press (i.e., a press and hold) on a phone number displayed by the PDA function (image on left), the PDA function displays an "action sheet" that provides the user with several options (image in middle):
>
> 
>
>
> (RDX 13-9.) If the user presses the "Call [#]" button, Springboard will send the selected phone number to Core Telephony (which passes it to CommCenter), and will also transition the user interface of the

(RBr. at 156-158.) The Administrative Law Judge concludes that the Accused '980 Products are able to dial the selected phone number such that element "5F" of claim 5 of the '980 patent is met. (*See also* Tr. at 2558:19-23, 2577-79 (Santamaria); CPX-15.)

> (5) *5C, "loading a phone program for editing and dialing a phone number along with displaying a phone editor and dialing icon if said PDA function is requested by a user"*

Turning to the disputed elements, the parties extensively debate the meaning of element "5C" (CBr. at 143-45, 153-154; RBr. at 159-61, 168-69; SBr. at 95-96) and specifically the impact of the word "if"—even though they failed to raise this dispute during claim construction. (*See* Order Nos. 2, 3, 63.) The parties were informed at the outset of the Investigation that they were expected to solidify their positions with respect to claim construction early in the Investigation and that they would be bound by their proposed constructions for disputed claim terms on the date set for the joint submission of disputed claim terms. (Order No. 2 at 3-4.) The parties were reminded of this again when the Administrative Law Judge issued Markman procedures, again when the Administrative Law Judge struck Samsung's altered claim constructions in Order No. 41, and yet again when the Administrative Law Judge issued amended Ground Rules. (Order No. 5; Order No. 41 at 2-4; Order No. 43.) In the same vein, when the Markman Order issued, the parties were informed that "[a]ll other claim terms shall be deemed undisputed and shall be interpreted by the Administrative Law Judge in accordance with their ordinary meaning as viewed by a person of ordinary skill in the art." (Markman Order at 2.) Thus all of the parties' new arguments with respect to claim construction are untimely and waived. (*See* Order Nos. 2, 3, 5, 63. *See also* Ground Rule 1.15.1.)

Even if this were not the case, all of the parties ignore the fact that the Administrative Law Judge *already addressed this element* in passing while evaluating the parties' dispute regarding the meaning of "a phone program."[20] (Markman Order at 73.) Specifically, the

[20] Thus the new arguments raised by the parties are essentially unseasonable requests for reconsideration of the Markman Order. The parties do not meet the standard for reconsideration here. *See e.g. Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Order No. 13 at 2-3 (U.S.I.T.C., 2010). The Administrative Law Judge notes, however, that if reconsideration were appropriate,

Administrative Law Judge explained in the Markman Order that "[i]f the user makes a request for 'said PDA function' (for which the OS program has been loaded in element 'a'), the smart phone also loads a phone program for editing and dialing a phone number and displays a phone editor and dialing icon." (*Id.*) The Administrative Law Judge notes that this explanation of element "5C" necessarily gives meaning to the words "along with," which otherwise would be read out of the claim. *Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000). While the parties make much of the canons of statutory construction (CBr. at 143-45; RBr. at 159-61, 168-69; SBr. at 95-96), the application of the rule of the last antecedent (assuming solely for the sake of argument that it were applicable here in either of the ways argued by Samsung[21] and Staff) is certainly "overcome by other indicia of meaning,"[22] namely, by the words "along with." These words effectively mean that if a user requests said PDA function, then "displaying" along with "loading" occur.

The Administrative Law Judge found that one of ordinary skill in the art would have understood "loading" in claim 5 of the '980 patent to mean "copying or transferring into memory." (Markman Order at 81-82.) The Administrative Law Judge found that a person of ordinary skill in the art reviewing "phone editor" in view of the claims and specification of the

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Mr. Cole's inconsistent testimony leaves Samsung's position without any extrinsic support and seriously undermines the persuasive value of its arguments. (RBr. at 160-61 and the evidence cited therein; Tr. at 2475-89, 2524-26 (Cole).)

[21] Samsung relies on the Supreme Court opinion *Barnhart v. Thomas,* which applied

> the grammatical "rule of the last antecedent," according to which a limiting clause or phrase (here, the relative clause "which exists in the national economy") should ordinarily be read as modifying only the noun or phrase that it immediately follows (here, "any other kind of substantial gainful work"). See 2A N. Singer, Sutherland on Statutory Construction § 47.33, p. 369 (6th rev. ed. 2000) ("Referential and qualifying words and phrases, where no contrary intention appears, refer solely to the last antecedent"). While this rule is not an absolute and can assuredly be overcome by other indicia of meaning, we have said that construing a statute in accord with the rule is "quite sensible as a matter of grammar."

Barnhart v. Thomas, 540 U.S. 20, 26 (2003) (emphasis added).

[22] *Barnhart*, 540 U.S. at 26.

'980 patent would understand that this term means "a user interface that allows the user to edit a phone number prior to dialing." (*Id.* at 78.)

Turning to the operation of the Accused '980 Products, Apple's employee, senior manager and software engineer Justin Edward Santamaria,[23] testified that the iPhone's phone application allows the user to place a phone call and that {

[23] (Tr. at 2552.)

} (*Id.* at 2568-69; RDX-13-2C.[25])

---

[24] {

} (Tr. at 2570.)

[25] Apple's expert Dr. Ingers also testified that {

}. (*Id.* at 2822.)

The Administrative Law Judge concludes that {

} in the Accused '980 Products meet the "phone program" limitation in element "5C" of claim 5 because the above cited evidence shows that {

}. (Tr. at 2560-61, 2569 (Santamaria), 2821-22 (Ingers); RBr. at 159, 169 and the evidence cited therein.)

Samsung contends that the "phone program for editing and dialing a phone number" referred to in element "5C" is something other than the iPhone phone application. (CBr. at 149.) According to Samsung, the claimed "phone program" "is the software that allows the user to edit and dial the selected number." (*Id.*) Samsung alleges that the accused iPhone 4S allows a user "to dial a number displayed in a PDA function and edit that number before dialing." (*Id.* (citing JX-47C at 87:5-21[27], 89:24-91:5,[28] 91:23-92:19[29] (Novick Depo); Tr. at 2580:16-2581:7, 2581:19-2582:9 (Santamaria), 2919:10-13 (Ingers); CDX-03.71C).) Samsung further points to its expert's demonstration at the hearing "that the iPhone 4S can dial a number displayed in Mail and edit the selected number before dialing" and also to Mr. Santamaria's testimony. (*Id.* (citing Tr. at 2369:6-2371:23 (Cole), 2580:16-2581:7, 2581:19-2582:9 (Santamaria); CDX-03.22-03.33; CPX-15).)

Taking a closer look at these allegations, the Administrative Law Judge notes that Mr. Santamaria explained that {

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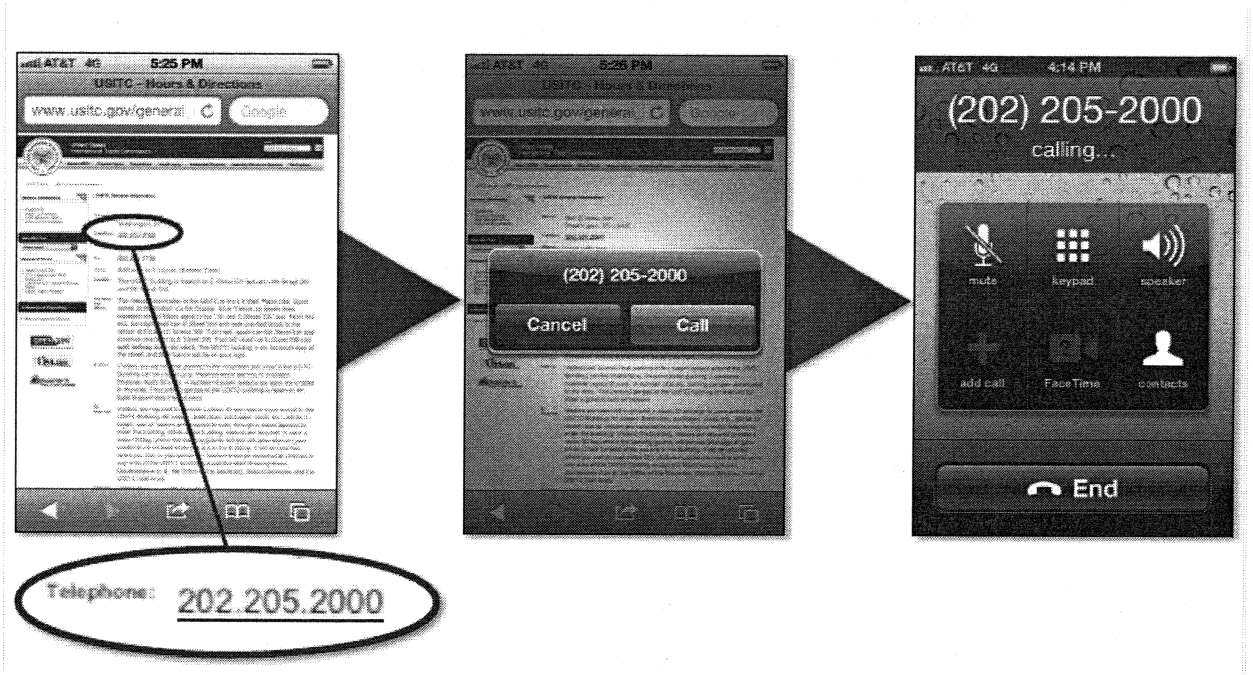
[26] According to Apple, this was Samsung's primary infringement theory until a belated shift in position. (RBr. at 158.) Said shift will be addressed in more detail below. It is noted that Samsung relies on the "Phone application" to explain infringement of element "5D." (CBr. at 155.)

[27] Referring to a "tap" on a phone number in the Notes application that allows a user to place a call.

[28] Further explaining the "tap" function with respect to a call.

[29] Same.

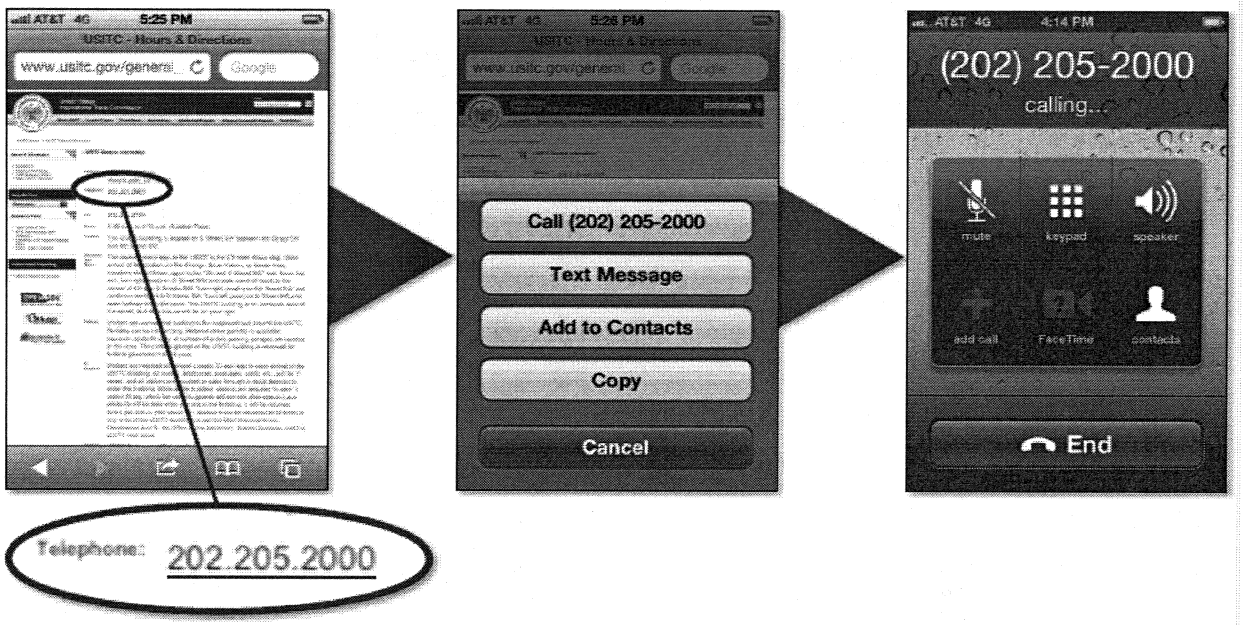
}[31]



(Tr. at 2577-2579; RDX-13-8. *See also* Tr. at 2585-86 { }.)

[30] (*See also* JX-47C at 28-29 (Novick Depo).)
[31] (*Accord* JX-47C at 87, 90-92 (Novick Depo); Tr. at 2911:1-4 (Ingers).)

If a user presses the phone number a little longer ("long press"), Safari[32] launches an "action sheet"[33] or "UIAction sheet." (Tr. at 2580, 2598, 2606.)



(RDX-13-9. *See also* CPX-15.) Mr. Santamaria explained that {

}." (Tr. at 2580-81, 2597, 2606.[34]) If a user chooses to tap the "Add to Contacts" button on the action sheet, another user interface "will slide up," giving the user the option to create or add to a contact. (*Id.* at 2581.[35]) Mr. Santamaria explained that during the long press and "add to existing contact" steps, "we're in the Safari application the entire time." (*Id.* at 2582.)

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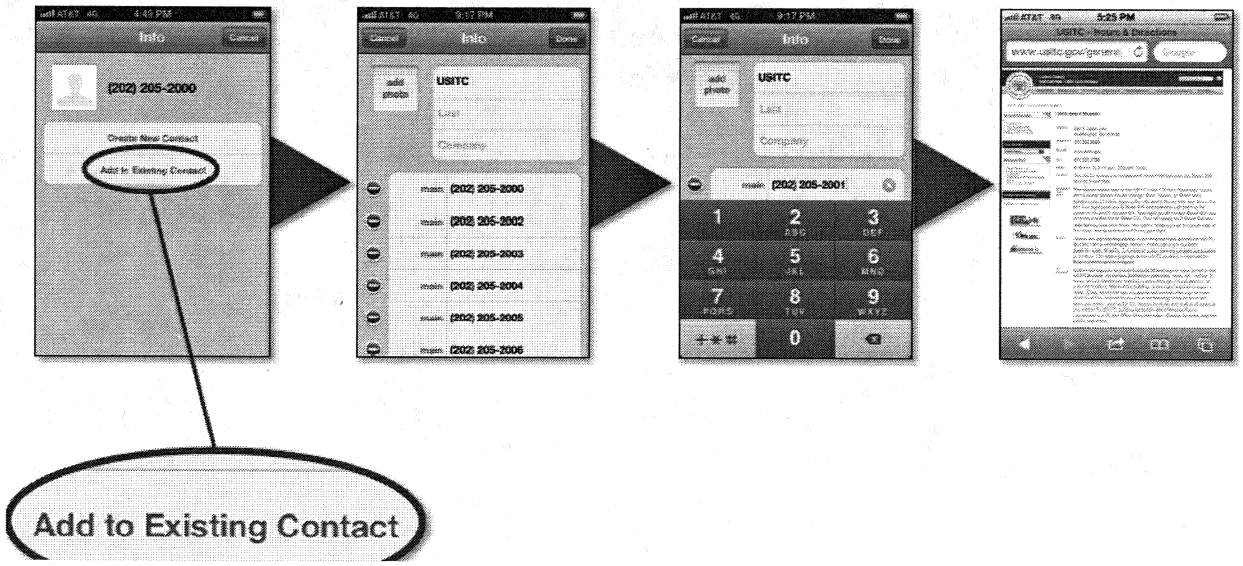
[32] (*Accord* Tr. at 2824 (Ingers) (describing similar situation with respect to the action sheet in the Mail application).)
[33] (*Accord* JX-47C at 97 (Novick Depo).)
[34] (*Accord* Tr. at 2369:12-19, 2391:4-12 (Cole) ({
}); CDX-03.22. *See also id.* at 2392:10-14.)
[35] (*Accord* Tr. at 2371:3-12, 2391:21-2392:3 (Cole) (describing similar situation with respect to the action sheet in the Mail application); CDX-03.24. *See also id.* at 2392:15-24.)



(RDX-13-10. *See also* CPX-15.) In this scenario, the user may edit the number while adding it, but cannot call the number from Safari. (Tr. at 2582-83.) Instead the user would have to switch from Safari to the separate contacts application, select the newly entered or edited contact, and then tap on that phone number to make a call. (*Id.* *See also* Tr. at 2586-87 (same result in Mail application).) Thus, contrary to Samsung's assertions (CBr. at 149-150), the evidence shows that a user may edit a phone number **or** dial a phone number by way of the action sheet in the event of a long press in the Safari application (or other PDA function,[36] such as the Mail application), but cannot edit **and** dial a phone number. The Administrative Law Judge therefore concludes that the long press action sheet (including any related interfaces when "Add to Contacts" is selected) does not meet the limitation of "a phone program for editing *and* dialing a phone number" in element "5C" of claim 5 and, in the same vein, is not able to perform both steps of storing and dialing the selected phone number (elements "5E" and "5F"[37]). (JXM-5 at 4:36-49

[36] (*See also* Tr. at 2585-92.) The iPhone web browser (Safari), mail program, calendar, and notepad (Notes) are the PDA functions at issue here and operate in the same manner for purposes of this analysis. (*Id.*; SRBr. at 25.)

[37] Although the Administrative Law Judge found above that the Accused '980 Products are able to meet elements "5E" and "5F" in isolation, Samsung has not set forth persuasive evidence that these two steps in the claimed method as a whole may be performed together during operation of a PDA function.

(emphasis added). *See also* SBr. at 97; SRBr. at 26-27; RBr. at 157-58; CPX-15.) Likewise, the evidence shows that the accused iPhones are not able to display a "phone editor" as claimed in element "5C" of claim 5 because the Administrative Law Judge found that a person of ordinary skill would understand that this term means "a user interface that allows the user to edit a phone number *prior to* dialing." (Markman Order at 78 (emphasis added).)

The Administrative Law Judge further finds that Samsung has not shown that the "loading" limitation of element "5C" of claim 5 has been met. Samsung argues that the {

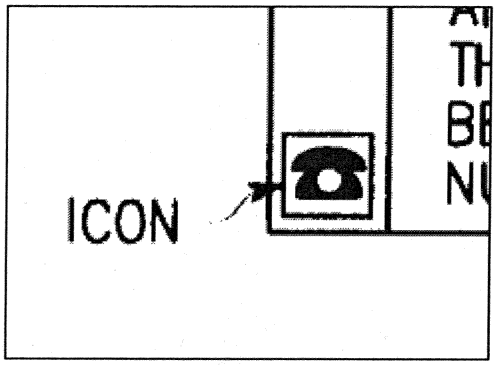
[38] Apple argues that these portions of Mr. Cole's testimony should be stricken pursuant to Ground Rules 5 and 9.5.6 because Mr. Cole failed to disclose this theory in any expert report. (RBr. at 167.) Because Mr. Cole's testimony has been unpersuasive, mutable, undeveloped, and poorly supported, as noted above, it is not necessary to reach the question of whether it should be stricken on procedural grounds.

} However, he testified that { } (*id.* at 2385, 2388; CDX-3.53), which as noted by Mr. Santamaria { }. (*Id.* at 2572 (Santamaria). *See also id.* at 2575-76 ({ }.) Thus the Administrative Law Judge finds Dr. Cole's descriptions of { } as part of the claimed "phone program" to be implausible because they do not load in the claimed manner. In the same vein, as noted above, { } and cannot be the claimed "phone program." Apple also persuasively makes the point that Samsung and Mr. Cole did not previously assert that specific PDA functions (CDX-3.53) are part of this claimed "phone program" in Samsung's pleadings, infringement contentions, Mr. Cole's expert reports, or Mr. Cole's deposition. (Tr. at 2491-99:19, 2501-02 (Cole); Complaint, Ex. 16.) This change in infringement theory is troublesome and lacks substance and credibility.[39] Indeed, Mr. Cole was unable to answer specific questions

[39] In so finding, the Administrative Law Judge does not take issue with Samsung's arguments that the PDA functions and mobile phone functions may have "overlapping characteristics." (CBr. at 148.) This is in fact what the Administrative Law Judge found in the Markman Order. (*See e.g.,* Markman Order at 68.) The problem here is

about what other portions of the iOS are part of the alleged "phone program." (Tr. at 2505:24-2506:3 (Cole).) The Administrative Law Judge concludes that Samsung has failed to adequately or persuasively explain its shift in position, let alone what this alleged phone program is or how it is loaded after the PDA function is requested by a user.

The Administrative Law Judge further finds that the Accused '980 Products do not meet the "dialing icon" limitation of element "5C' of claim 5. "Dialing icon" was not a disputed term and therefore was accorded its plain and ordinary meaning. Figure 3 of the '980 patent shows an example of a dialing icon (without limiting the meaning of the term in claim 5). (JXM-5 at Fig. 3; JXM-6 at Samsung-AppleITC003695.1 ('980 patent file history).)



(JXM-5 at Fig. 3 (detail).) With respect to the accused iPhones, Mr. Cole identifies the "dialing icon" as (i) the altered/hyperlinked text for web pages, emails, and text messages as identified by the data detectors and (ii) the call button on the action sheet. (Tr. at 2394-96 (Cole); CDX-3.65; CBr. at 150.)

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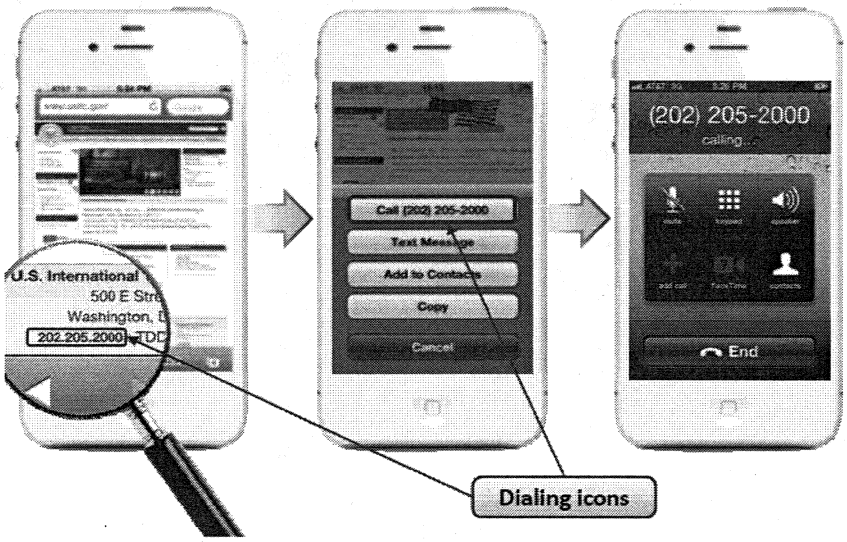
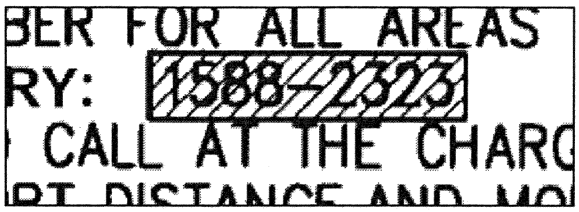
that Samsung appears to be grasping at a mutating concept of what might make up the claimed "phone program" and appears to be unable to pinpoint anything except PDA programs in the accused iPhones as possibly performing the "loading" step. The Administrative Law Judge simply cannot credit Mr. Cole's testimony here.



(CDX-3.65.) Dr. Ingers provided countervailing and credible testimony that a hyperlinked[40] phone number is not a dialing "icon." (Tr. at 2824-25 (Ingers); RBr. at 169.) According to Dr. Ingers, an icon needs a "pictorial element." (Tr. at 2824.) Furthermore, he testified that "hyperlinks were well-known at the time of . . . invention[,]" were not specifically claimed in claim 5, and were considered to be distinct from icons." (*Id.* at 2824-25.) This is consistent with Figure 3, which also appears to show a hyperlinked phone number, but the '980 patent does not identify it as an icon:



(JXM-5 at Fig. 3 (detail).) In addition, Dr. Ingers's testimony appears to be consistent with other extrinsic evidence relating to the plain and ordinary meaning of "icon" near to the time the '980 patent was filed. *See e.g.,* Modern Dictionary of Electronics, Rudolf F. Graf, p. 359 (1999) ("**icon**—A small picture displayed on a computer screen that represents a command or an object

[40] (Tr. at 2603-04 (Santamaria).)

that can be manipulated by the user. Usually, the picture shows what the icon does. For example, the PRINT icon generally looks like a printer."); Jargon: an informal dictionary of computer terms, Robin Williams and Steve Commings, p. 270 (1993) ("**Icons** are those little pictures on the screen. . ."); Folens Dictionary: Combined Dictionary and Thesaurus, Fred McDonald and Steve & Patricia Harrison, p. 183 (1999) ("**icon** *noun* **icons**. . . **2** An icon is a symbol on a computer screen that represents a certain feature of the program. [Icon comes from the Greek . . . 'image'.]"). The Administrative Law Judge notes that Mr. Cole did not suitably explain his reasoning for why a person of ordinary skill in the art would have understood a hyperlink or the call (### ###-####) button that he identified, both of which would differ every time a user identified a phone number, to be the same as an "icon." The Administrative Law Judge concludes that Samsung has not persuasively shown that the hyperlinked phone number and button with the selected phone number in the accused phones, both of which lack any pictorial[41] elements, meet the claimed "dialing icon" limitation of claim 5. (*See also* RBr. at 169 and the evidence cited therein.)

(6) *5D, "executing said phone program if said user selects a phone number during operation of said PDA function"*

Samsung argues that the accused phones are able to perform step "5D" of claim 5 "for the same reasons" explained with respect to "5C." (CBr. at 155.) According to Samsung:

> When Mr. Cole long-pressed on the linkable phone number, the Mail application brings up the Action Sheet that displays the dialing icon and phone editor. (*Id.*) When the user presses the "Call [#]" dialing icon, {

[41] Samsung's argument that the highlighting or blue text which "draw the phone number out from the surrounding text"(CBr. at 151) is equally unpersuasive for the reasons discussed above.

} (See, e.g., CX-592.35 (section titled "Resuming Foreground Execution".)

(CBr. at 155.) As explained above with respect to "5C" above, the {

}. (*See also* RBr. at 169 and the evidence cited therein.) The Administrative Law Judge concludes for the reasons discussed in this Section and with respect to step "5C" above, that Samsung has not shown that the Accused '980 Products are able to perform step "5D" of claim 5.

(7) *Doctrine of Equivalents*

Samsung argues that "[t]o the extent that there is no literal infringement because a "phone program" must be a single stand-alone program like the iPhone's Phone application, there is an insubstantial difference between the iPhone software identified above that allows the user to dial and edit a selected number and a single phone program like the Phone application." (CBr. at 152.) According to Samsung,

> The phone program described above in the iPhone 4S performs substantially the same function, in substantially the same way, to achieve substantially the same results as a single, stand-alone phone program. (*Id.*) It is an insubstantial difference to create a phone program from various different software modules that work together to provide dialing and editing features compared to using a single, stand-alone program to do the same thing. (*Id.*) The phone program described above performs substantially the same function of facilitating editing and dialing a phone number, in substantially the same way, by allowing the user to move from the PDA function to the phone program for dialing a phone number without the need to memorize the number, to achieve substantially the same result of dialing and editing a phone number displayed in a PDA application without the need to memorize it. (*Id.*)

(*Id.* at 153 (citing Tr. at 2402:23-2404:12 (Cole)) (emphasis added).) Apple argues that Samsung has waived this argument because it did not appear "anywhere in Samsung's contentions, expert reports or depositions, or even in its pre-hearing brief." (RRBr. at 99.) The Administrative Law Judge disagrees that this issue has been waived pursuant to Ground Rule 7.2. (Samsung Pre-Hearing Brief at 83.) However, the Administrative Law Judge finds, for the reasons discussed above with respect to step "5C" above, that the alleged "phone program" does not perform the function of "editing and dialing" a phone number on the accused iPhone and thus does not achieve the result of "dialing and editing a phone number." Thus Samsung's arguments with respect to the doctrine of equivalents here are rejected. It is also noted in passing that Mr. Cole's testimony on this specific subject was, in addition, implausible for the reasons discussed above with respect to literal infringement of element "5C."

> Samsung also argues that
>
> to the extent the "loading a phone program" limitation is not met literally because { } perform substantially the same function, e.g., { }, in substantially the same way, e.g., { }, in order to achieve substantially the same result, e.g., { } (*Id.*)

(CBr. at 154-55.) The Administrative Law Judge found with respect to step "5C" above that Mr. Cole's unsettled testimony with respect to this element lacked substance and credibility. Furthermore, the Administrative Law Judge notes that the section of testimony relied on by Samsung is little more than a recitation of the function/way/result test and lacks any analysis or

factual support. (Tr. at 2404-5. *See also* Tr. at 2411 (conclusory statement that a hyperlink is equivalent to an icon).) The Administrative Law Judge finds that Samsung has not persuasively shown that {

}is equivalent to "loading."

(8) *Conclusion*

The Administrative Law Judge concludes that the Accused '980 Products do not infringe claim 5 of the '980 patent either literally or under the doctrine of equivalents.

b) Claim 10

(1) *10A, "A method for dialing a phone number in a smart phone having both personal digital assistant (PDA) and mobile phone functions"*

The preamble of claim 10 overlaps in pertinent part with the preamble of claim 5. For the reasons discussed above with respect to claim 5, the Administrative Law Judge finds that the accused devices are smart phones that are able to dial a phone number and have both PDA and mobile phone functions such that the preamble of claim 10 is met. (*See* Section IV.D.1.a)(1).)

(2) *10B, "executing a dialing program for editing and dialing a phone number and displaying a phone editor and a dialing icon when a PDA function is utilized in said smart phone";*

and 10C, "switching a display screen into a dialing state for selecting a phone number when said dialing icon is selected during the performance of said PDA function"

Samsung argues that the iPhone 4S infringes claim 10 for the same reasons as claim 5. (CBr. at 156.) Samsung argues that "[t]he dialing program in the iPhone 4S is the same software that makes up the phone program of claim 5." (*Id.* at 157; Tr. at 2408 (Cole).) For the reasons discussed above with respect to steps "5C" and "5D" of claim 5 above, the Administrative Law Judge finds that Samsung has not persuasively or credibly demonstrated what the "program" is

or how it is executed when a PDA function is utilized.[42] (*See* Sections IV.D.1.a)(5) and (6).) The fact that the program in claim 10 is a "dialing program" and not the claimed "phone program" of claim 5 does not affect the analysis because Samsung relies on the same aspects of the accused devices (CBr. at 157) and because the difference between the two terms is not pertinent here. (Markman Order at 74-75 ("the two claim terms in issue are very similar to the extent that both programs are, under the plain language of the claims, 'for editing and dialing a phone number'").) The alleged "phone program" pointed to by Samsung on the accused iPhones is not able to edit and dial a phone number, thus the same software identified by Samsung and termed a "dialing program" is also not able to edit and dial a phone number. (*See* Sections IV.D.1.a)(5) and (6); CBr. at 157; Tr. at 2408 (Cole).)

The Administrative Law Judge further finds for the reasons discussed above respect to step "5C" that Samsung has failed to show that the accused phones display a "dialing icon" and thus these limitations of steps "10B" and "10C" are not met. (*See* Section IV.D.1.a)(5). *See also* RRBr. at 109-110 and the evidence cited therein.)

The Administrative Law Judge does find that the evidence shows that the accused phones are able to switch a display screen into a dialing state as claimed in step "10C" of claim 10. Mr. Santamaria testified that this can occur with either a user's tap on a phone number in a PDA function or a long press. (Tr. at 2577-2581, 2597, 2606; RDX-13-8, 13-9.)

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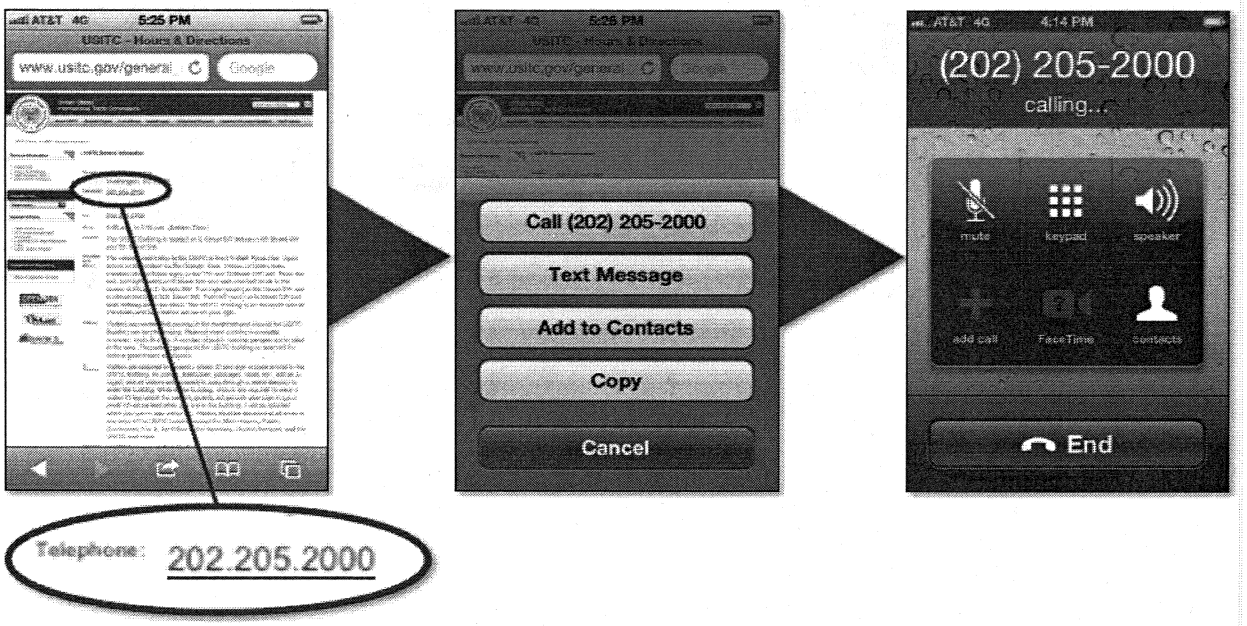
[42] In so finding, the Administrative Law Judge does not take any issue with Samsung's responses to Apple's arguments regarding whether the dialing program requires the support of an operating system. (*See e.g.* CBr. at 139-140, 157-58 (refuting the types of arguments found in RBr. at 170).) While the Administrative Law Judge noted in the Markman Order that the invention as claimed in claim 5 refers to a claimed operating system ("5B") and the invention as claimed in claim 10 does not, the method of claim 10 is open ended and may have other unrecited steps. (Markman Order at 75; JXM-5 at 5:3 ("comprising the steps of"); *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007) (the term "comprising" in a patent claim permits the inclusion of unrecited steps, elements, or materials in addition to those specified in the claim).) Thus a device that is capable of practicing the method claimed in claim 10 may, but does not have to, have an OS program for the claimed PDA function. Apple's arguments to the contrary (made with respect to infringement, technical domestic industry, and validity) are all rejected.



(RDX-13-9.) This state would permit a user to select a phone number. Thus the accused phones meet this portion of step "10C" when taken in isolation.

(3) *[10D] storing an identifying name designated for the selected phone number into a phone book*

This element is identical to "5E" in claim 5. For the reasons discussed Section IV.D.1.a)(3) with respect to "5E," the Administrative Law Judge finds that the accused devices are able to store an identifying name designated for the number a user selects into a phone book such that element "10D" of claim 10 is met. However, the Administrative Law Judge notes that for the same reasons discussed above with respect to element "5C" (*see* Section IV.D.1.a)(5)), the accused phones are not able to perform both steps of storing *and* dialing the selected phone number because the user cannot dial the selected phone number after storing the identifying name in a phone book. (Tr. at 2582-83, 2586-87 (Santamaria).) Thus, the Accused '980 Products cannot perform both steps "10D" and "10E" of the claimed method in claim 10.

(4) *[10E] dialing the selected phone number*

This element is identical to "5F" in claim 5. (*See* Section IV.D.1.a)(4).) For the reasons discussed in Section IV.D.1.a)(4) above with respect to that element, the Administrative Law Judge finds that the Accused '980 Products are able to perform step "10E" of claim 10 because they are able to dial the selected phone number. (*Id.*) However, as noted regarding "10D" above, the accused phones are not able to perform both steps of storing *and* dialing the selected phone number because the user cannot dial the selected phone number after storing the identifying name in a phone book. (Tr. at 2582-83, 2586-87 (Santamaria).) Thus, the accused iPhones cannot perform both steps "10D" and "10E" of the claimed method in claim 10.

(5) *Conclusion.*

The Administrative Law Judge concludes that the Accused '980 Products do not infringe claims 10 of the '980 patent.

2. Dependent claims 9 and 13.

Claim 9 depends from claim 5 of the '980 patent and adds the additional limitation "wherein said phone number is selected by one of pressing a touch screen and dragging a mouse." (JXM-5 at 4:65-67.) Claim 13 depends from claim 10 and adds the same limitation as claim 9. (*Id.* at 6:9-11.) Samsung does not appear to have discussed these two dependent claims in its Post-Hearing Brief. (CBr. at 145-159.) Samsung's sole discussion on this issue appears to be on p. 136 of its Post-Hearing Brief, and consists of little more than two conclusory portions of statements made with respect to claims 5 and 10 that claims 9 and 13 are literally infringed. (*Id.* at 136.) The issue of whether Samsung has withdrawn its infringement allegations as to these two dependent claims need not be reached as Staff has preserved the infringement arguments in Staff's briefing. (SBr. at 98-100.)

According to Staff, the accused iPhones do not infringe claims 9 and 13 because they do not infringe the underlying independent claims. (*Id.*) However, Staff finds that the accused products meet the additional limitations of these two dependent claims: "wherein said phone number is selected by one of pressing a touch screen and dragging a mouse." (*Id.* (citing Tr. at 2578-80 (Santamaria)).) For the reasons articulated by Staff, the Administrative Law Judge finds that for the Accused '980 Products, the user may select a phone number by pressing a touch screen such that the additional limitations of claims 9 and 13 are met. However, the Administrative Law Judge has already found above that the accused iPhones do not infringe the underlying independent claims 5 and 10 of the '980 patent.

The Administrative Law Judge concludes that the Accused '980 Products do not infringe claims 9 and 13 of the '980 patent.

3. Direct Infringement.

The Administrative Law Judge found above that Samsung has failed to demonstrate that the Accused '980 Products are able to infringe the asserted claims of the '980 patent. Thus Samsung has not shown that a user is able to directly infringe the asserted claims with the accused iPhones.

4. Indirect Infringement

As Samsung has failed to show by a preponderance of the evidence that the Accused '980 Products are able to directly infringe the asserted '980 patent claims, they cannot indirectly infringe.

E. Analysis of the Accused Products with Respect to the '114 Patent

Samsung accuses the following products running iOS version 5 of infringing the '114 patent: iPhone 4S, iPhone 4, iPhone 3GS, iPod Touch, iPad 2, and iPad. (CBr. at 192, n. 52.)[43] Samsung says the '114 patent discloses a more natural way of viewing web pages and other documents having data content and a page structure. (CBr. at 192 (citing JXM-9 at 14:10-12).) According to Samsung, a key feature of the '114 invention is the fact that a user can use a pointer, such as his finger, to drag or pan a document, such as a Web page. (*Id.*) Samsung points out that a Web page can have a page layout and data content that exceeds a display screen's dimensions. (*Id.* (citing Tr. (Abowd) at 1522).) As the user moves his finger, the hidden portions of the page move into the viewing space. (*Id.* (citing JXM-9 at 14:11-12, 16:24-26).)

Samsung contends that the '114 invention differs from the prior art because it determines a velocity vector by calculating both the speed and direction of the user's finger on a two-dimensional touch-screen that is used to pan the displayed document. (*Id.* (citing JXM-9 at 16:16, 14:16; Tr. (Abowd) at 1524-27.) If the user moves his finger in a diagonal direction, the page moves in the same diagonal direction. If the user moves his finger more quickly, the page moves more quickly. (*Id.* (citing Tr. (Abowd) at 1524-27).) Samsung says that by using both speed and direction in a two-dimensional space, the user can pan the document more naturally on the screen. (*Id.* (citing JXM-9 at 14:10).) According to Samsung, the iPhone 4S and the other Accused Products do exactly this.[44] (*Id.*)

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[43] These products are referred to herein as the "Accused Products" only with respect to the '114 patent only.

[44] Throughout the discussion of the '114 patent, Samsung says the iPhone 4S is representative of all of the Accused Products.

1. Samsung's Infringement Contentions

Samsung alleges that the Accused Products infringe claims 1-5 of the '114 patent. Those claims read as follows:

> **1[A].** A computer device having a system for simulating tactile control over a document, comprising
>
> **[1B]** a processor, memory, and a touch-sensitive display,
>
> **[1C]** system code stored within the memory and adapted to be executed by the processor to provide a digital representation of a document including data content and a page structure representative of a page layout of the document,
>
> **[1D]** an engine for rendering an image of at least a portion of the page layout of the digital representation of a page layout of the document,
>
> **[1E]** a display monitor in communication with the touch-sensitive display screen for detecting motion of a pointer across the touch-sensitive display,
>
> **[1F]** a velocity detector for determining a velocity vector based on a velocity of the detected motion,
>
> **[1G]** an interface process in communication with the display monitor for processing the motion detected by the display monitor to detect one of a plurality of commands, wherein the plurality of commands includes a pan command,
>
> **[1H]** wherein, in response to the command detected by the interface process being the pan command, the engine pans the displayed document on the display at a rate based on the determined velocity vector.
>
> **2.** The computing device of claim **1**, wherein panning the displayed document comprises rendering different views of the document on the touch-sensitive display at a rate based on the determined velocity vector.
>
> **3.** A computer device having a system for simulating tactile control over a document, comprising
>
> a processor, memory, and a touch-sensitive display,
>
> system code stored within the memory and adapted to be executed by the processor to provide a digital representation of a document including data content and a page structure representative of a page layout of the document,

an engine for rendering an image of at least a portion of the page layout of the digital representation on the touch-sensitive display,

a display monitor in communication with the touch-sensitive display screen for detecting motion of a pointer across the touch-sensitive display,

[3F] a velocity detector for determining a velocity vector associated with the detected motion,

an interface process in communication with the display monitor for processing the motion detected by the display monitor to detect one of a plurality of commands, wherein the plurality of commands includes a pan command,

[3G] wherein, in response to the command detected by the interface process being the pan command, the engine renders a series of pages of the document on the touch-sensitive display at a rate based on the determined velocity vector and a page inertia.

4. A computing device according to claim **3**, wherein the rate at which the engine renders the series of pages of the document decreases over time based on the page inertia.

5. A computing device according to claim **3**, wherein in response to the interface process detecting a subsequent pan command based on a subsequent motion of a pointer across the display, the engine alters the rate at which it renders the series of pages based on a velocity vector the velocity detector determines in relation to the subsequent motion.

(JXM-9 at 16:1-65.)

Samsung says that Apple either concedes or else does not dispute that the Accused Products practice the claim elements identified as **[1A]** – **[1E]** and **[1G]** of claim 1 and claim elements **[3A]** and **[3G]** of claim 3, or any of the additional limitations of dependent claims 2, 4, and 5. (CBr. at 197 (citing Tr. (Balakrishnan) at 2724-25, 2748-49, 2750-52).) According to Samsung, Apple concedes that the Accused Products are computer devices that have a system for simulating tactile control of a document, and have processors, memory, and touch-sensitive displays. (*Id.* at 198 (citing Tr. (Balakrishnan) at 2724).) According to Samsung, Apple also admits that the Accused Products contain "system code stored within the memory and adapted to

be executed by the processor to provide a digital representation of a document including data content and a page structure representative of a page layout of the document." (*Id.* (citing Tr. (Balakrishnan) at 2724).) Samsung says the iOS 5 implements a framework known as UIKit that renders content on the display and handles touch events. (*Id.* (citing Tr. (Abowd) at 1520, 1535, 1543).) This framework is used throughout all applications in the iOS 5, according to Samsung. (*Id.*) Moreover, says Samsung, Apple does not contest that UIKit contains an "engine for rendering an image of at least a portion of the page layout of the digital representation on the touch-sensitive display. (*Id.* (citing Tr. (Balakrishnan) at 2724).) {

}. (*Id.* (citing Tr. (Abowd) at 1522, 1543-49).)

Samsung says that Apple also concedes that the "display monitor" and "interface process" are present within the Accused Products. (*Id.* (citing Tr. (Balakrishnan) at 2724).) {

}. (*Id.* (citing CX-1019; CX-1702C; CX-1552; CX-16C; CX-1153).)

Samsung claims that Apple does not contest several additional limitations in claims 2-5. (*Id.*) For instance, Apple's expert Dr. Balakrishnan agreed that the Accused Products meet the "page inertia" limitation as specified in claims 2-4. (*Id.* (citing Tr. (Balakrishnan) at 2748-49, 2751).) {

}. (*Id.* (citing Tr. (Abowd) at 1528, 1596-1600).)

Samsung says that Apple does not contest the fact that the Accused Products pan a "series of pages." (*Id.* (citing Tr. (Balakrishnan) at 2750).) According to Samsung, the iOS 5 can display documents with multiple pages, such as a PDF or a Microsoft PowerPoint presentation, { }. (*Id.* (citing Tr. (Abowd) at 1528-31, 1605-06 and (Shaffer) at 1862-63).)

Finally, Samsung says that Apple does not dispute that the Accused Products are able to detect a subsequent pan command as specified in claim 5. (*Id.* (citing Tr. (Balakrishnan) at 2751-52).) {

}. (*Id.*)

Samsung argues that at the hearing Apple disputed claim elements that concerned the (1) "velocity detector" and (2) "rate based on the determined velocity vector" limitations. (*Id.* at 200 (citing Tr. (Balakrishnan) at 2724-25).) According to Samsung, Apple only presented three non-

infringement arguments as to why these limitations are not present in the Accused Products: (1) the velocity detector must take position readings from the touch-screen; (2) {

}; and (3) the Accused Products contain a multi-touch framework. (*Id.* (citing Tr. (Balakrishnan) at 2727-28, 2667-68 and (Shaffer) at 1826-28, 1834-35).) Samsung says that these contentions of Apple's lack merit. (*Id.*)

a) Literal Infringement of all claims

(1) *Velocity Detector Limitation—All Claims*

Samsung argues that Apple's velocity detector argument is premised on Dr. Balakrishnan's untimely and incorrect construction of the term "velocity detector," which ignores its plain meaning. (*Id.* (citing Tr. (Balakrishnan) at 2727-28).) Specifically, according to Samsung, Apple contends that the "velocity detector" must take position readings from the touch panel periodically and determine a velocity from those readings. (*Id.* (citing Tr. (Balakrishnan) at 2728).) Samsung contends that Apple failed to raise this construction in its *Markman* briefs and thus waived this argument. (*Id.* (citing Tr. (Balakrishnan) at 2727) and Order No. 63 at 2).) In addition, according to Samsung, Apple's construction has no intrinsic support, inasmuch as Apple relies entirely on the following sentence from the '114 patent specification: "In the depicted embodiment, during a document drag operation a velocity detector process takes position readings periodically, such as every centi-second. " (*Id.* (citing JXM-9 at 14:6-9; Tr. (Balakrishnan) at 2727).) Samsung argues that Apple's reliance on this passage is misplaced because the passage makes clear that "the velocity detector process"—as opposed to simply the "velocity detector"—takes position readings. (*Id.* at 200-201 (citing Tr. (Abowd) at 1499-1501, 1510-11).) According to Samsung, the "velocity detector process" comprises several limitations of claim 1, including the display monitor, which detects motion of a pointer across the screen;

(*id.* at 201 (citing JXM-9 at 16:13-15)), an interface process in communication with the display monitor for processing the motion detected (*id.* (citing JXM-9 at 16:18-22)), and the velocity detector which determines a velocity vector based on that detected motion. (*Id.* (citing Tr. (Abowd) at 1499-1501, 1510-11).)

Moreover, according to Samsung, even if Apple were correct in its analysis, the passage that Apple refers to only describes one embodiment of the invention, while the claim makes clear that the display monitor, not the velocity detector, takes position readings on the screen as it "detect[s] motion of a pointer across the touch-sensitive display." (*Id.* (citing JXM-9 at 16:14-15).) The velocity detector, says Samsung, merely "determine[s] a velocity vector based on a velocity of the detected motion." (*Id.* (citing JXM-9 at 16:16-17).) Thus, argues Samsung, a person of ordinary skill in the art would understand velocity detector to mean something that determines a velocity vector, not something that "takes position readings." (*Id.* (citing Tr. (Abowd) at 1499-1501, 1510-11).)

Samsung says that {

}. (*Id.* (citing Tr. (Balakrishnan) at 2646-48, 2734, 2740, (Shaffer) at 1846).)

Samsung argues that Apple, relying on its erroneous construction, contends that the "velocity detector" has to be firmware, not UIPanGestureRecognizer. (*Id.* (citing Tr. (Balakrishnan) at 2667-68).) Samsung says that Apple then argues that

{

}.

(*Id.*) These arguments, according to Samsung, ignore the plain language of claim 1, which states: "a velocity detector for determining a velocity based on a velocity of the detected motion." (*Id.* (citing JXM-9 at 16:16-17).) Samsung argues that the velocity vector need not represent the exact velocity of the detected motion, but, rather, must merely be based on it, a fact which is highlighted by several facts. (*Id.*)

First, says Samsung, {

}. (*Id.* at 202-203 (citing Tr. (Abowd) at 1508, (Balakrishnan) at 2742-45).)

Second, according to Samsung, as {

}. (*Id.* at 203 (citing Tr. (Balakrishnan) at 2740).) Dr. Balakrishnan demonstrated that there is {

}. (*Id.*) This can be seen by merely operating the iPhone 4S, argues Samsung. (*Id.*) Samsung says Dr. Abowd demonstrated that if the finger moves fast, the Web page is panned faster in the direction of the user's finger. (*Id.* (citing Tr. (Abowd) at 1500, 1524, 1526-27, 1581-82).) If the finger moves slowly, the Web page is panned slower in the direction of the user's finger. (*Id.*)

(2) *Rate Based on the Determined Velocity Vector Limitation—All Claims*

Samsung argues that Apple said at the hearing that {

}. (*Id.* (citing Tr. (Shaffer) at 1834-35).)

Samsung says Apple attempts to argue around basic principles of geometry because in a two-

dimensional Cartesian coordinate system, a velocity in a direction D, representing a change in both horizontal and vertical directions, can be represented in a vector with both X and Y components. (*Id.* at 203-204.) {

}.

(*Id.* at 204 (citing Tr. (Abowd) at 1558-60, 1566, (Shaffer) at 1849).) Therefore, argues Samsung, this argument of Apple lacks merit. (*Id.*)

Samsung notes that Apple contends that the multi-touch capabilities of the Accused Products are different than the invention of the '114 patent. (*Id.* (citing Tr. (Shaffer) at 1826-27).) According to Samsung, Apple fails to explain how the multi-touch capability renders the Accused Products non-infringing. (*Id.*) Even if Apple's attempt to distinguish multi-touch capability were accepted, argues Samsung, it is of no moment, because in order to prove direct infringement, a patent owner "must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit." (*Id.* (citing *ACCO,* 501 F.3d at 1313).) Samsung contends the Accused Products necessarily infringe the patent because the multi-touch framework is capable of detecting movement of a single finger to determine if the user has performed a pan command or gesture, even while detecting multiple fingers on the display. (*Id.* (citing Tr. (Shaffer) at 1826, 1828, 1843).) Moreover, according to Samsung, Dr. Abowd and Mr. Johnson demonstrated specific instances of direct infringement during the hearing by panning a Web page with a single finger on the iPhone 4S. (*Id.* (citing Tr. (Abowd) at 1517-32, (Balakrishnan) at 2744-45).) Samsung says that Apple's own demonstratives used in connection with Mr. Shaffer's testimony demonstrate that the Accused Products are capable of panning based on movement of a single finger. (*Id.* at 204-205 (citing *Hilgraeve Corp. v. Symantec Corp.*, 265 F.3 1336, 1343 (Fed. Cir. 2001) ("[A]n accused device may be found to

infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of non-infringing modes of operation.").)

***b)* Infringement under the doctrine of equivalents**

Samsung argues that the Accused Products infringe under the doctrine of equivalents. (*Id.* at 205.) Samsung says that Dr. Balakrishnan testified at the hearing that the function of the velocity detector is to determine a velocity vector based on the velocity of a detected motion. (*Id.* (citing Tr. (Balakrishnan) at 2745).) The way this is done, says Samsung, is not substantially different under Apple's construction because Dr. Balakrishnan said the way to do this is to "determine a velocity based on position readings of the user's pointer taken directly from the touch-sensitive display at regular intervals." (*Id.* (citing Tr. (Balakrishnan) at 2759).) In the Accused Products, according to Samsung, {

}. (*Id.* (citing Tr. (Balakrishnan) at 2646-48, 2734, (Shaffer) at 1846).) According to Samsung, Dr. Abowd explained the way the function is performed by the Accused Products is insubstantially different under the construction Dr. Balakrishnan proposed. (*Id.* at 205-206 (citing Tr. (Abowd) at 1600-03).) Furthermore, according to Samsung, the Accused

Products achieve substantially the same result of using position information taken from position readings sampled from the touch screen and calculating a velocity vector. (*Id.* at 206.)

Samsung maintains that the prosecution history of the '114 patent does not preclude Samsung from asserting infringement under the doctrine of equivalents for the "velocity detector," limitation in claims 1 and 3, as Apple contends. (*Id.*) According to Samsung, Apple erroneously contends that prosecution history estoppel applies to each of the limitations added to claim 50, which eventually issued as claim 3, during the prosecution of the '114 patent. (*Id.* (citing Apple's pre-hearing brief at 131).) Samsung says these added limitations include (1) "a velocity detector for determining a velocity vector based on a velocity of detected motion," (2) "a velocity detector for determining a velocity detector associated with the detected motion," (3) "rate based on the determined velocity vector," (4) "rate based on the determined velocity vector and a page inertia," and (5) "wherein, in response to the command detected by the interface process being the pan command, the engine renders a series of pages of the document on the touch sensitive display at a rate based on the determined velocity vector and a page inertia." (*Id.*) Samsung maintains that Apple's assertion of prosecution history estoppel is overly broad and does not comport with Federal Circuit case law. (*Id.*) Samsung argues that under *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.,* 344 F.3d 1359, 1369 (Fed. Cir. 2003), a patentee may rebut a presumption of prosecution estoppel by showing that the "rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent in question." (*Id.*) In this instance, argues Samsung, the applicant added new claim 50 to overcome two prior art references, Ho and Moran. (*Id.* at 206-207 (citing RX-1658 at Samsung-AppleITC003276).) According to Samsung, the applicant argued that Ho and Moran fail to describe a computing device that causes the engine to render a series of pages at a rate that is

determined based on a detected velocity associated with a motion that triggered the command and based on a page inertia and the examiner allowed claim 50 to issue on that basis. (*Id.* at 207.)

Samsung says the underlying rationale for this amendment has no more than a tangential relationship, if any, to the equivalent in question, the velocity detector in the Accused Products. (*Id.*) Samsung argues that the applicant's explanation, distinguishing Ho and Moran, does not even mention a "velocity detector." (*Id.*) Therefore, according to Samsung, it has rebutted any presumption that prosecution history estoppel should apply. (*Id.* (citing *Insituform Tech., Inc. v. CAT Contracting, Inc.*, 385 F. 3d 1360, 1368-71 (Fed. Cir. 2004)).)

2. Apple's Non-infringement Contentions

a) Literal Infringement

Apple says that the asserted claims of the '114 patent are directed to a computer device with a touch-sensitive display that allows "panning" of a displayed document based on a "velocity detector" of a user's pointer across the touch-sensitive display. (RBr. at 203 (citing JXM-9 at 16:1-65; Tr. (Balakrishnan) at 2632-33).) Apple notes that the asserted claims were added after 69 months of prosecution and after the PTO had rejected the original claims in seven office actions. (*Id.* (citing Tr. (Abowd) at 1657).) Apple says that both side's experts agree that only one paragraph in the patent specification describes panning, JXM-9 at 14:3-32. (*Id.* (citing Tr. (Balakrishnan) at 2632-33, (Abowd) at 1685-86).) That paragraph, according to Apple, describes old technology in which the "velocity detector process takes position readings periodically, such as every centi-second[,]" and "[f]rom these position readings a page velocity determination may be made." (*Id.* at 204 (citing JXM-9 at 14:6-9).) Additionally, argues Apple, the '114 patent notes that "the velocity [of panning] may decrease by a constant page inertia until

it reaches zero velocity and page scrolling ceases." (*Id.* (citing JXM-9 at 14:26-28).) The only disclosed embodiment in the '114 patent that is related to panning, according to Apple, is that shown in Figures 13A and 13B, depicting panning a document horizontally, based on a velocity vector determined by a velocity detector. (*Id.* (citing Tr. (Balakrishnan) at 2632-4, (Abowd) at 3135-37; JXM-9 at Figs. 13A, 13B and at 14:3-9).)

Apple posits that in an effort to read the '114 patent sufficiently broadly to ensnare the Accused Products, while preserving the patent's validity, Samsung and its expert have radically changed their positions on every dispute related to the '114 patent. (*Id.*) Apple says that Dr. Abowd in his expert report accused iTunes and the App Store of infringing all the asserted claims of the '114 patent although iTunes and the App Store on the iPhone pan only in single direction, vertically. (*Id.* (citing Tr. (Abowd) at 1719-20).) Apple says that Dr. Abowd also asserted in his expert report that the Email applications on Samsung's domestic industry devices practice claim 1 by panning only in a single direction, vertically using only the velocity in the Y direction. (*Id.* (citing Tr. (Abowd) at 1723-26, 3141).)

Apple says that, after he received Dr. Balakrishnan's report on invalidity on March 21, 2012, Dr. Abowd did an about face and changed his opinion so as to assert that the claims of the '114 patent require two-dimensional panning and a two-dimensional vector, thereby excluding panning in a single dimension, either horizontally or vertically, and in so doing contradicted his own infringement and domestic industry contentions in which he specifically accused applications that pan in one direction of practicing the asserted claims. (*Id.* at 204-205 (citing Tr. (Abowd) at 1719-20, 1725).) Apple says at the hearing, Dr. Abowd announced, for the first time, that his accusation of infringement by iTunes and the App Store was a "mistake," and that

the '114 claims should be read differently from the way he read them prior to the hearing. (*Id.* (citing Tr. (Abowd) at 1727).)

Apple argues that during most of this Investigation, Dr. Abowd, Dr. Balakrishnan, and Dr. Cole, Samsung's expert on claim construction for the '114 patent, all agreed on the interpretation of the term "velocity detector" as it is recited in the claims, which is that it must take position readings periodically and determine a velocity vector from those readings. (*Id.* (citing Tr. (Abowd) at 1669, 1675, (Balakrishnan) at 2661-62).) Apple notes that in his expert report Dr. Abowd indicated eight times that the "velocity detector must take and use position readings of the user's input periodically." (*Id.* (citing Tr. (Abowd) at 1671, 1675-76).) However, says Apple, at the hearing Dr. Abowd claimed for the first time that his construction of "velocity detector" in his expert report, which he used to distinguish each of Apple's prior art references, was a "cut and paste error," a "mistake." (*Id.* (citing Tr. (Abowd) at 1510-11, 1665-66, 1744).) According to Apple, Dr. Abowd's newest theory, first announced at the hearing, was that the "velocity detector" should be construed as any "process that detects velocity," a construction Samsung had not advanced at the *Markman* hearing and which Dr. Abowd had not included in his expert reports. (*Id.*)

Apple notes that Dr. Abowd admitted at the hearing that if a "velocity detector" is interpreted using the same construction he used in his expert report for validity, Apple does not infringe:

> Q. If we take your sentence, and I am going to put it on the record again, we're in this velocity detector limitation, as the '114 patent explains, the velocity detector must take and use position readings of the user's input periodically, that's the sentence correct?
> A. That's correct.
> Q. If that is what is required of a velocity detector, there is no literal infringement by the Apple products, correct?
> A. That's correct.

> ....
> Q. I am asking you to focus on the version that was your version, Dr. Cole's version, Dr. Balakrishnan's version before 9:00 o'clock this morning. If we accept that definition of velocity detector, no literal infringement, correct?
> A. That's correct.

(*Id.* at 205-206 (citing Tr. (Abowd) at 1677-79).)

Apple argues that even though "the determined velocity vector" is a key limitation in the asserted claims, neither Samsung's infringement contentions nor Dr. Abowd's expert report identified what in the Accused Products allegedly meets this limitation. (*Id.* at 206 (citing Tr. (Balakrishnan) at 2671-72).) Apple notes that at his deposition, Dr. Abowd testified that "the

{

}

(*Id.* (citing Ex. 3 (Abowd Dep.) at 475).) Apple says that on May 30, 2012, five days before the hearing, Samsung served an "errata" in which Dr. Abowd attempted to change this deposition testimony as follows:

(*Id.* at Ex. 4 (Abowd Dep. Tr. Errata) at 1; Tr. at 1734).) Apple argues that this "errata" sought to make a wholesale change to Samsung's infringement theory by changing what "the

determined velocity vector" is in the Accused Products to an entirely different calculation in an entirely different software module. (*Id.*)

Apple notes that at the hearing Dr. Abowd admitted that if, as he had testified at his deposition, "{

}:

> Q. Now, sir, my question, I am going to repeat my question, if we take you at your word in the deposition and the velocity vector is Vx_scroll and Vy_scroll, there is no infringement, is there?
> A. Well, if you take me at my word there, then I am contradicting myself in other places in that same deposition.
> Q. Dr. Abowd, if we accept what you said there as true, there is no infringement, correct?
> A. That's correct.

(*Id.* at 207 (citing Tr. at 1737-38 (Abowd)).)

Apple argues that despite Samsung's shifting sands approach Samsung failed to prove any violation of Section 337 with respect to the '114 patent, under any of its theories. (*Id.*) Apple contends that Samsung, at the hearing, failed to show that the Accused Products meet the "velocity detector" and "rate based on the determined velocity vector" limitations of claim 1. (*Id.*)

Apple points out that Samsung accuses the iPhone 3GS, iPhone 4, iPhone 4S, iPad 2, and iPod Touch products that run on iOS 5.0 of infringing claims 1-5. (*Id.* (citing Samsung's pre-hearing statement, Ex. L).) {

}

(*Id.* at 207-208 (citing Tr. (Parivar) at 1904-05).) According to Apple, the Accused Products include touch hardware that has a capacitive touch panel with sensors that can detect a user's touch by sensing the change in capacitance at different locations. (*Id.* at 208 (citing Tr. (Parivar) at 1875, (Balakrishnan) at 2636).) {

}. (*Id.* (citing Tr. (Parivar) at 1888, (Balakrishnan) at 2637-38).) According to Apple, both opposing parties' experts agree that {

}. (*Id.* (citing Tr. (Parivar) at 1889-90, (Balakrishnan) at 2637-40, and (Abowd) at 1702).) Therefore, argues Apple, {

}. (*Id.* (citing Tr. (Parivar) at 1891, (Shaffer) at 1836, 1841, (Balakrishnan) at 2637, and (Abowd) at 1702-03).)

Apple says {

}. (*Id.* (citing Tr. at 1830 (Shaffer), 2640-42 (Balakrishnan)).) Apple says its tests show that the {

}. (*Id.* (citing Tr. at 2656-58 (Balakrishnan); RX-0365C at 4066, 4072-73, 4097).)

According to Apple, the {

} (*Id.* (citing Tr. at 1837 (Shaffer)).) Next, according to Apple, {

}. (*Id.* (citing Tr. at 1839-40 (Shaffer)).)

Apple says that the Accused Products {

}. (*Id.*) Detecting gestures, such as scrolling, is significantly more complex in a multi-touch system, like those of the Accused Products, than in a single-touch system, according to Apple. (*Id.* (citing Tr. at 1831-33 (Shaffer), 1882-83 (Parivar)).) In a single-touch system, the device only has to track the position of a single pointer and detect a single command at a time; however, in a multi-touch system, the software must be able to track several different fingers on the touch screen at the same time, and make decisions about which fingers are involved in which gestures, because a multi-touch system can recognize multiple gestures at the same time. (*Id.* at 211-212 (citing Tr. at 1831-32 (Shaffer), 1882-83 (Parivar)).) Apple argues that it had to design new software architecture to implement multi-touch functionality. (*Id.* (citing Tr. at 1882-83 (Parivar)).)

(1) *Velocity Detector Limitation—All Claims*

Apple maintains that the Accused Products do not have a "velocity detector" as required by the '114 patent's claims. (*Id.* at 212.) Apple says that, in his expert report and testimony at the hearing, Dr. Abowd adopted all of the opinions of Dr. Cole including his understanding of "velocity detector." (*Id.* at 212-213 (citing Tr. at 1652-53, 1668, 1670 (Abowd)).) Apple notes that Dr. Cole, in his expert report, said this:

> The specification further states that the velocity detector "takes position readings periodically, such as every centi-second. From these position readings a page velocity determination may be made.

(*Id.* at 212 (citing JXM-18 at ¶ 50; Tr. at 1668-69 (Abowd)).) Apple says that Dr. Abowd, applying a similar understanding as Dr. Cole, stated eight times in his rebuttal report the following understanding of "velocity detector," which he used to distinguish each prior art reference:

> As the '114 patent explains, the velocity detector must take and use position readings of the user's input periodically. (*See, e.g.,* '114 patent at 14:3-9.) The [prior art reference] does not disclose any means or apparatus that periodically captures and calculates the user's detected motion to determine a velocity vector.

(*Id.* at 213 (citing Tr. at 1675-76 (Abowd); Abowd '114 Rebut. Rep. at ¶¶ 69, 107, 146, 180, 189, 215, 251, 283).) Apple says that Order No. 63 similarly found Samsung's position to be that "the velocity detector" takes position readings periodically, such as every centisecond. (*Id.* (citing Order No. 63 at 122).)

Apple says its expert Dr. Balakrishnan agreed with Dr. Cole's and Dr. Abowd's understanding of "velocity detector," and Dr. Balakrishnan testified that "one of skill in the art would understand is that the claimed velocity detector must, A, take position readings periodically—in other words, it detects—and B, determine velocity vectors based on the velocity of that detected motion." (*Id.* (citing Tr. at 2662 (Balakrishnan)).) Apple says that until the hearing, there was a consensus among the experts as to the meaning of "velocity detector" in the asserted claims. (*Id.* (citing JXM-18 at ¶ 50; Tr. at 1591-92, 1668-69, 1675-76 (Abowd), 2662 (Balakrishnan)).) However, argues Apple, at the hearing on June 11, 2012, Dr. Abowd asserted for the first time that the understanding of "velocity detector" used in his and Dr. Cole's expert reports was a "mistake":

> Q. The very first time you told us that these statements were a mistake was today, June 11th, 2012, correct?
>
> A. That is correct.
>
> Q. And up until today, what we had was Dr. Cole's report, your eight statements, your testimony under oath that it was not a mistake, an errata sheet with no corrections, that's all we had before today, correct?
>
> A. That's correct.

(*Id.* (citing Tr. at 1677 (Abowd)).) Apple says that Dr. Abowd did not correct this alleged "mistake" in the errata to his expert report that was served on April 24. (*Id.* (citing Tr. at 1672 (Abowd)).) Instead, he conceded at the hearing that in the eight sentences he now labels a "mistake" he had specifically affirmed in his deposition were not a mistake.

> Q. Your articulation was as follows: "As the '114 patent explains, the velocity detector must take and use position reading of the user's input periodically." That's the statement you made, correct?
>
> A. That's right. That's the one that has a mistake in it, that's correct.
>
> Q. And you made it eight times, correct?
>
> A. That's correct.
>
> Q. In your deposition at page 504 at line 2, you were asked this question: "Question: The two sentences that I read to you that begin with 'as the '114 patent explains,' which is repeated seven or eight time in your rebuttal report? Answer: Yes." Have I read that question and answer correctly?
>
> A. You have read that correctly, yes.
>
> Q. Let's go to the next question and answer. "Question: Were those sentences a mistake? Answer: The sentences were not a mistake. What I'm saying is those sentences are not germane to the actual argumentation. They're not needed for the arguments that are being put forth. That's what I was trying to explain." Were you asked that question and did you give that answer?
>
> A. That's correct.

(*Id.* 213-214 (citing Tr. at 1675-76 (Abowd)).)

Apple argues that the reason Dr. Abowd tried to change his opinion regarding "velocity detector" at the hearing is clear because under the meaning of "velocity detector" that Dr. Cole, Dr. Balakrishnan, and Dr. Abowd applied in their reports the Accused Products do not literally infringe the asserted claims, a fact which Dr. Abowd admits:

> Q. Now, there is a reason that you have said it is a mistake and that you adopt a different view, isn't there?
>
> A. Yes, there is.
>
> Q. If we take your sentence, and I am going to put in on the record again, we're in this velocity detector limitation, as the '114 patent explains, the velocity detector must take and use position reading of the user's input periodically, that's the sentence, correct?
>
> A. That's correct.
>
> Q. If that is what is required of a velocity detector, there is no literal infringement by the Apple products, correct?
>
> A. That's correct.
>
> ....
>
> Q. I am asking you to focus on the version that was your version, Dr. Cole's version, Dr. Balakrishnan's version before 9:00 o'clock the morning. If we accept the definition of velocity detector, no literal infringement, correct?
>
> A. That's correct.

(*Id.* at 214-215 (citing Tr. at 1677-79 (Abowd)).) Therefore, argues Apple, if the "velocity detector" must take and use position reading periodically, as asserted by Drs. Cole, Abowd, and Balakrishnan in their reports, it is undisputed that the Accused Products do not literally infringe any asserted claim. (*Id.* at 215 (citing Tr. at 1677-78 (Abowd), 2667-68 (Balakrishnan)).)

Apple says that Dr. Abowd has alleged that UIPanGestureRecognizer in iOS 5is the "velocity detector" in the Accused Products.[45] (*Id.* (citing Tr. at 1734-35 (Abowd)).) However,

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[45] Apple says this firmware is not a "velocity detector" because {

}. (*Id.* at n. 70 (citing Tr. at 1877-78 (Parivar), 2637, 2640, 2644-2646

argues Apple, the UIPanGestureRecognizer cannot be the "velocity detector" for several reasons. {

}.

(*Id.* (citing Tr. at 2644-46 (Balakrishnan), 1836 (Shaffer), 1696-97, 1875-78, 1894-95 (Parivar)).) Apple says testing data proves that {

}. (*Id.* (citing Tr. at 1894-95 (Shaffer)).)

Third, the UIPanGestureRecognizer does not determine a velocity vector" based on a velocity of the detected motion" (claim 1) or "associated with the detected motion" (claim 3). Apple says that velocity and motion are characterized by position and time. (*Id.*) To calculate a velocity "based on a velocity of the detected motion" or "associated with the detected motion," one would have to know the position of the pointer at particular points in time. (*Id.*) {

}. (Id. (citing Tr. at 1877-78 (Parivar), 2636-37,

(Balakrishnan)).)

2643, 2648 (Balakrishnan)).) {

}, UIPGestureRecognizer never calculates a velocity that is "based on a velocity of the detected motion" or "associated with the detected motion." (*Id.*)

b) Infringement under the doctrine of equivalents

Apple also denies that there is any infringement of the '114 patent by the Accused Products under the doctrine of equivalents, as alleged by Samsung, for three reasons. (*Id.*) First, Samsung is estopped from asserting the doctrine of equivalents for the "velocity detector" limitation by reason of prosecution estoppel. (*Id.*) Second, pursuant to Ground Rule 9.5.6, Dr. Abowd's testimony regarding whether the Accused Products satisfy the "velocity detector" limitation under the doctrine of equivalents should be stricken because he offered new opinions at the hearing that were not in his expert reports or deposition. (*Id.*) And third, the Accused Products do not perform substantially the same function in substantially the same way to achieve substantially the same result. (*Id.*)

With respect to prosecution history estoppel, Apple says this arises when an amendment is made to secure the patent and the amendment narrows the patent's scope. (*Id.* at 217-218 (citing *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 736 (2002)).) Apple argues that where, as here, a rejected claim is cancelled and a new claim is added that narrows the patent's scope, prosecution history estoppel applies to the limitations in the newly added claim that were not present in the originally cancelled claim. (*Id.* at 218 (citing *Mycogen Plant Science, Inc., v. Monsanto Co.*, 261 F.3d 1345, 1349-50 (Fed. Cir. 2001) and *J&M Corp., v. Harley-Davidson, Inc.*, 269 F.3d 1360, 1368 (Fed. Cir. 2001)).) Apple quotes, and asserts, the following declaration from *Felix v. Am. Honda Motor Co., Inc.*, 562 F.3d 1167, 1183 (Fed. Cir. 2009): "The presumption of surrender applies to all claims containing the [added] [l]imitation, regardless of whether the claim was, or was not, amended during prosecution." (*Id.*)

According to Apple, during prosecution of the '114 patent, the examiner rejected pending claim 1 as "unpatentable over US Patent # 5,909, 207 ("Ho") in view of US Patent # 6,525,749

("Moran et al."). (*Id.* (citing Tr. (Abowd) at 1664; RX-1658 at 3250).) Apple cites the following excerpts from the prosecution history:

> **1.** (Previously Presented) A computer device having a system for simulating tactile control over a document, comprising
>
> a processor, memory, and a display,
>
> system code stored within the memory and adapted to be executed by the processor to provide a digital representation of a document including data content and a page structure representative of a page layout of the document,
>
> an engine for rendering an image of at least a portion of the page layout of the digital representation on the display,
>
> a plurality of user-interface commands,
>
> a plurality of command strokes having corresponding shapes, wherein at least one command stroke corresponds to one of the plurality of user interface commands,
>
> a display monitor for detecting an input stroke traced on the display by a user, wherein the input stroke has a display location and a shape, an interface process for identifying an input by a user of a user interface command by comparing the shape of the detected input stroke to the shapes associated with the plurality of command strokes, the identifying being independent of the display location of the input stroke in relation to the location of other visible elements on the display; and a navigation module for navigating through the digital representation of the document by changing the rendered image in response to an identification by the interface process of one of the plurality of user interface commands.

(*Id.* at 218-219 (citing RX-1658 at 3210).) Apple says that in response to the rejection of application claim 1, the applicant narrowed the patent's scope by cancelling this claim and adding application claim 50 (issued claim 3). (*Id.* at 219 (citing RX-1658 at 3265, 3269-70; Tr. (Abowd) at 1662-63).) Apple notes that application claim 50 added the underlined limitations to application claim 1 as shown here:

> **50**. A computer device having a system for simulating tactile control over a document, comprising:
>
> a processor, memory, and a <u>touch-sensitive</u> display,

> system code stored within the memory and adapted to be executed by the processor to provide a digital representation of a document including data content and a page structure representative of a page layout of the document,
>
> an engine for rendering an image of at least a portion of the page layout of the digital representation on the touch sensitive display,
>
> a display monitor in communication with the touch-sensitive display screen for detecting motion of a pointer across the touch sensitive display,
>
> a velocity detector for determining a velocity vector associated with the detected motion,
>
> an interface process in communication with the display monitor for processing the motion detected by the display monitor to detect one of a plurality of commands,
>
> wherein the plurality of commands includes a pan command, wherein, in response to the command detected by the interface process being the pan command, the engine renders a series of pages of the document on the touch-sensitive display at a rate based on the determined velocity vector and a page inertia.

(*Id.* (citing RX-1658 at 3269-70).) Apple says the applicant expressly argued that these amendments distinguished added claim 50, which issued as claim 3, from the Ho and Moran references that were used by the examiner for rejecting pending claim 1. (*Id.* at 219-220 (citing Tr. (Abowd) at 1663-64).) Because the amendments were made to overcome the Ho and Moran references, they were made for the purpose of patentability and thus give rise to prosecution history estoppel, according to Apple. (*Id.* at 220 (citing *Festo*, 535 U.S. 723-24 and *Mycogen*, 261 F.3d at 1349-50).) Apple says that Samsung is estopped from asserting infringement under the doctrine of equivalents with respect to any of the amended limitations, including the "velocity detector" and "rate based on the determined velocity detector" limitations in both claims 1 and 3. (*Id.*)

Apple says that Samsung, in its pre-hearing brief, incorrectly argued that "[n]ew claim 50 was not made in order to narrow the scope of a cancelled claim but rather to redefine a limitation," citing *TurboCare Div. of Demag Delaval Turbomachinery Corp v. GE Elec. Co.*,

264 F.3d 1111, 1126 (Fed. Cir. 2001). (*Id.* (citing Samsung's pre-hearing brief at 128, n. 57).) To that argument, Apple responds that in *TurboCare* the applicants added a new claim during prosecution that replaced a claim term in a cancelled claim with "the meaning that the patentee gave the [claim] term [] in the specification." (*Id.* (citing *TurboCare,* 264 F.3d at 1125).) Apple argues that that is not the case here, because the applicant for the '114 patent did not redefine one claim term, but, instead, cancelled pending claim 1 and added claim 50, which amended the limitations of claim 1 for the purpose of narrowing the patent's scope in order to overcome the Ho and Moran prior art that were the bases for rejecting pending claim 1. (*Id.* (citing Tr. (Abowd) at 1663-64; RX-1658 at 3276).)

With respect to its second argument for why Samsung's infringement argument based on the doctrine of equivalents does not hold, Apple says that Dr. Abowd's testimony regarding whether the Accused Products meet the "velocity detector" limitation should be stricken because his opinions in this regard were not disclosed in his expert report or deposition testimony, as required by Ground Rule 9.5.6. (*Id.*) Apple provides a comparison between what Dr. Abowd said in his expert report and his testimony at the hearing with respect to the doctrine of equivalents:

> (1) *Function-Way-Result Test recited in Dr. Abowd's Expert Report—Function*
>
> The function provided by this claim limitation is to determine a velocity vector based on a velocity of the user's detected motion on the touch-sensitive display. The Apple Accused Products perform substantially the same function of determining a velocity vector based on a velocity of the user's detected motion in {
>
> }

(Abowd Rep. ¶ 146.)

Hearing Testimony given by Dr. Abowd

> Q. Dr. Abowd, if Dr. Balakrishnan is correct, do you have an opinion whether the accused products would infringe under the doctrine of equivalents?
>
> A. Yes, I do. So in my opinion, it would still infringe under the doctrine of equivalents in that {
>
> }

(*Id.* (citing Tr. (Abowd) at 1593-94).)

> Q. Is this doing substantially the same function or not doing substantially the same function?
>
> A. It is doing substantially the same function in calculating that velocity vector based on the detected motion.
>
> * * *
>
> Q. Why is it doing it -- why is it doing substantially the same function?
>
> A. It is doing substantially the same function because {
>
> }

(*Id.* at 221 (citing Tr. (Abowd) at 1601-02).)

> (2) *Function-Way-Result Test recited in Dr. Abowd's Expert Report—Way*
>
> The claim limitation and the corresponding components identified above in the Apple Accused Products perform the function in substantially the same way. The claim limitation performs a function of determining a velocity vector based on a velocity of the user's detected motion on the touch-sensitive display. The corresponding components identified above in the Apple Accused Products perform substantially the same function {

}

(*Id.* (citing Abowd Rep. ¶ 147).)

Hearing Testimony given by Dr. Abowd

Q. Dr. Abowd, if Dr. Balakrishnan is correct, do you have an opinion whether the accused products would infringe under the doctrine of equivalents?

A. Yes, I do…It is doing it in the same way {

}. I think that's another important point I want to raise here is that the claim language says that it has to be based on a velocity of the detected motion. {

}.

(*Id.* at 221-222 (citing Tr. (Abowd) at 1593-95).)

Q. Why is it doing it substantially the same way?

A. {

}

(*Id.* at 222 (citing Tr. (Abowd) at 1602).)

(3) *Function-Way-Result Test recited in Dr. Abowd's Expert Report—Result*

The claim limitation and the corresponding components identified above in the Apple Accused Products achieve substantially the same result. Specifically, the result of this claim limitation is to determine a velocity vector based on the velocity of the user's detected motion on the touch-sensitive display. This result is substantially the same in the corresponding components identified above in the Apple Accused Products. {

}. It is therefore my opinion that each of the Apple Accused Products satisfies limitation [1F] of claim 1 under the doctrine of equivalents.

(Abowd Rep. ¶ 148.)

(4) *Hearing Testimony given by Dr. Abowd*

Q. Dr. Abowd, if Dr. Balakrishnan is correct, do you have an opinion whether the accused products would infringe under the doctrine of equivalents?

A. Yes, I do…It is doing it in the same way {

} and it is providing the same result, which is this velocity vector based on the detected motion. And so it is based on the detected motion. I think that's another important point I want to raise here is that the claim language says that it has to be based on a velocity of the detected motion. {

}

(*Id.* (citing Tr. (Abowd) at 1593-95).)

Q. Is this getting substantially the same result or not getting substantially the same result?

A. It is getting substantially the same result.
Q. Why is it getting substantially the same result?
A. {

}

(*Id.* at 222-223 (citing Tr. (Abowd) at 1602-03).)

Apple says the foregoing comparison shows that Dr. Abowd offered a new "function," a new "way," and a new "result" at the hearing in opining that the Accused Products meet the "velocity detector" limitation under the doctrine of equivalents. (*Id.* at 223 (citing Tr. (Abowd) at 1593-95, 1601-03).) {

}.

(*Id.*) Apple says this analysis was not disclosed in either Dr. Abowd's expert reports or in his deposition and allowing him to present these entirely new doctrine of equivalents opinions at the hearing prejudices Apple and circumvents the notice requirements of Ground Rule 9.5.6. (*Id.*)

Lastly with respect to Samsung's doctrine of equivalents argument, Apple maintains that the Accused Products do not satisfy the "velocity detector" limitation anyway, for three reasons. First, according to Apple, the Accused Products do not perform substantially the same function as the "velocity detector" limitation as opined by Dr. Abowd. (I*d.*) Apple notes that Dr. Abowd testified as follows with respect to the alleged offending device in the Accused Products:

{

}

(*Id.* (citing Tr. (Abowd) at 1602).) Apple says that Dr. Abowd's assumption {

} is incorrect. (*Id.* (citing Tr. (Balakrishnan) at 2669-70).) Apple says the Dr. Abowd admits that he does not know one way or the other whether { }. (*Id.* at 223-224 (citing

Tr. (Abowd) at 1705-06).) Apple argues that {

}. (*Id.* at 224.)

According to Apple, the testing data of the Accused Products shows that {

}. (*Id.* (citing Tr. (Balakrishnan) at 2649, 2656-58, 2669-70).)

Therefore, argues Apple, Dr. Abowd's assumption that {

} (*Id.*)

Second, according to Apple, the Accused Products do not perform in substantially the same way as the "velocity detector" limitation. (*Id.*) Apple notes that Dr. Abowd gave this testimony at the hearing:

> Q. Why is it doing it substantially the same way?
> A. {
>
> }

(*Id.* (citing Tr. (Abowd) at 1602).) Apple says Dr. Abowd's analysis here is incorrect. (*Id.* (citing Tr. (Balakrishnan) at 2607).) {

}. (*Id.* at 224-225 (citing Tr. (Balakrishnan) at 2649, 2656-58, 2670; RX-0365).)

Third, Apple says the Accused Products do not achieve substantially the same result as the "velocity detector" limitation because the proper "result" of the "velocity detector" limitations is to calculate the actual velocity of the user's pointer on the touch-sensitive display; however, {

}. (*Id.* (citing Tr. (Balakrishnan) at 2649, 2656-58, 2670-71).) Therefore, the UIPanGestureRecognizer does not achieve the same "result" as the "velocity detector" limitations because { }. (*Id.*)

(5) *Rate Based on the Determined* Velocity *Vector Limitation—All Claims*

Apple says that at his deposition Dr. Abowd specifically identified {

} as the "determined velocity detector." (*Id.* at 227 (citing Tr. (Abowd) at 1733-34.) Apple argues that if these are "the determined velocity vector" the Accused Products do not practice the "rate based on the determined velocity vector" limitation of the asserted claims. (*Id.* at 227-228 (citing Tr. (Balakrishnan) at 2672-73).) Specifically, argues Apple, the Accused Products do not satisfy this limitation because the "determined velocity vector" identified by Dr. Abowd, { }" Apple says that it is undisputed that "the determined velocity vector" must be determined by the "velocity detector," which Dr. Abowd contends is UIPanGestureRecognizer. (*Id.* at 228 (citing Tr. (Abowd) at 1734-36).) However, argues Apple, {

}. (*Id.* (citing Tr. (Balakrishnan) at 2672-73).)

Apple cites the following testimony for support of this assertion:

> Q. I didn't ask you that question, but let me get it again.
> { }
> A. That's correct.
> Q. { }
> A. That's correct.
> Q. So you know that the determined velocity vector needs to be determined by the velocity detector, correct?
> A. That's correct.
> * * *
> Q. You have identified UIPanRecognizer as the velocity detector, correct?
> A. Yes, I have.
> * * *
> Q. Now, sir, my question, I am going to repeat my question, if we take you at your word in the deposition and the { } there is no infringement, is there?
> A. Well, if you take me at my word there, then I am contradicting myself in other places in that same deposition.
> Q. Dr. Abowd, if we accept what you said there as true, there is no infringement, correct?
> A. That's correct.

(*Id.* at 228-229 (citing Tr. (Abowd) at 1735, 1737-38).) Therefore, argues Apple, because "the determined velocity vector" { } is not determined by the alleged "velocity detector (i.e., UIPanGestureRecognizer), it is undisputed that the Accused Products do not infringe. (*Id.* at 228 (citing Tr. (Balakrishnan) at 2672-73).)

Apple contends that even if Dr. Abowd's testimony that the claims require a two-dimensional "velocity vector" are permitted over Apple's objections, the Accused Products nevertheless still do not determine a "velocity vector" under Dr. Abowd's new construction of that term. (*Id.* at 229.) Apple says that Samsung's demonstrative regarding the "determining a velocity vector" and "rate based on the determined velocity vector" limitations show {

}." (*Id.* (citing

CDX-05.56C; CDX-05.66C; CPDX-28C).) For instance, says Apple, CDX-05.56C and CDX-05.66C show two-dimensional vectors as solid orange and red arrows, as depicted here:

(*Id.* at 229-230.)

Apple says that both parties' experts agree that the Accused Products {

}. (*Id.* (citing Tr. (Abowd) at 1836-38, (Balakrishnan) at 2637).) Apple says its Engineering Manager on the UIKit team, Joshua Shaffer, explained that {

}. (*Id.* at 230-231 (citing Tr. (Shaffer) at 1838-39).)

Apple says that with regard to CDX-05.56, Dr. Abowd testified that "the determined velocity vector" is {

} (*Id.* at 231.)

Apple says further that Dr. Abowd did not offer any testimony or opinion regarding the doctrine of equivalents for the "rate based on the determined velocity vector" limitation, and in any event, as previously argued, Samsung is estopped from asserting the doctrine of equivalents with respect to this limitation because of prosecution history estoppel. (*Id.*)

3. Staff's Infringement Contentions:

a) Claim 1

Staff submits that the Accused Products infringe claim 1 of the '114 patent for the following reasons. First, each of the Accused Products is a "[a] computer device having a system for simulating tactile control over a document," and each includes a processor, memory, and a touch-sensitive display. (SBr. at 112 (citing CX-1034; Tr. at 1520, 1546 (Abowd)).)

Second, each has "system code stored within the memory and adapted to be executed by the processor to provide a digital representation of a document including data content and a page structure representative of a page layout of the document[.]" (*Id.* at 113 (citing JXM-9 at 16:5-9; Tr. (Abowd) at 1520).) Staff says the Accused Products use either the iOS 4 or iOS 5 operating

system, which is stored within the memory and executed by the processor. (*Id.* (citing Tr. (Abowd) at 1520-21).) Within iOS 5, the iOS UIKit source code is responsible for providing a digital representation of documents, including data content and a page structure representative of a page layout of the document. (*Id.* (citing Tr. (Abowd) at 1521-22, 1537-39).) In particular, according to Staff, the UIView class is a module within the UIKit framework that is used to represent some visual content on the screen. (*Id.* (citing Tr. (Abowd) at 1542-43).) The UIScrollView operates with rendered views to perform scrolling. (*Id.* (citing Tr. (Shaffer) at 1846-47).)

One example of visual content represented by UIView is the Safari Web browser application. (*Id.*) In the iPhone 4, Safari is stored in memory and executed by the Apple 4A processor, Staff argues. (*Id.*) It displays Web pages that are digital representations of an HTML document. (*Id.*) The HTML document includes both data content and a page structure. (*Id.* (citing Tr. (Abowd) at 1521-22).) The UIKit framework, including UIView and UIScrollView, is used to render the digital content of an HTML document on the touch screen display, says Staff. (Id. (citing Tr. (Shaffer) at 1847).)

Third, according to Staff, the Accused Products contain "an engine for rendering an image of at least a portion of the page layout of the digital representation on the touch-sensitive display[.]" (*Id.* (citing JXM-9 at 16:10-12).) Staff cites the following testimony from the hearing regarding this issue:

> Q. Does the iPhone 4S have an engine for rendering an image?
>
> A. Yes, it does. So the software essentially that's running to show this web browser, the Safari application is determining how it displays information on the screen.
>
> Q. Does the iPhone 4S have an engine for rendering at least a portion of the digital representation of a document on the touch sensitive display?