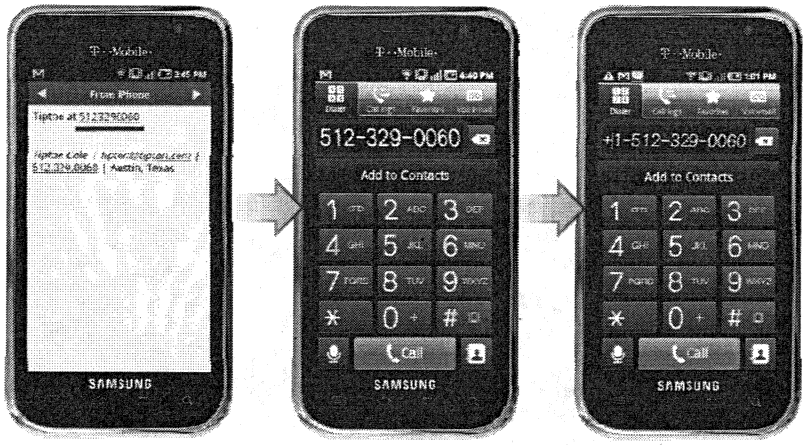
"phone program" in the DI Products is or how it is loaded after the PDA function is requested by a user.

With respect to the other limitations of element "5C," the Administrative Law Judge finds that the Galaxy S displays a "dialing icon" if the claimed PDA function is requested by a user. The Administrative Law Judge rejects Mr. Cole's assessment (CBr. at 168) that a "linkable phone number" in a PDA application is a "dialing icon." (*See* Section IV.D.1.a)(5) above.) However, the Administrative Law Judge finds that the "dialer screen" does display a "dialing icon" that contains the requisite pictorial element because there is a phone image in addition to the word "Call."

(CDX-03.92 (detail); CPX-0001.) Likewise, the Administrative Law Judge finds that the Galaxy S displays a "phone editor" if the claimed PDA function is requested by a user.

Editing a Selected Phone Number (Email)



(CDX-03.93 (showing addition of a "1" in front of the number). *See also* CPX-0001.) The dialer screen of the Galaxy S includes a user interface that allows the user to edit a phone number prior to dialing. (*Id.*)

With respect to the remaining element "5D" of claim 5, executing said phone program if said user selects a phone number during operation of said PDA function, the Administrative Law Judge finds that Mr. Cole again failed to adequately explain how the "elements" or even what parts of the phone program that he identified will execute if the user selects a phone number during operation of the claimed PDA function. (Tr. at 2438.) Some of the same discrepancies noted above apply. For example, if the Galaxy S {

}, then how could it execute in response to the user? Would that also be true of the AAF, which Mr. Cole said is part of the Galaxy S "phone program"? The Administrative Law Judge concludes that Samsung has not persuasively demonstrated that the Galaxy S phones meet element "5D" of claim 5 of the '980 patent.

Turning to Samsung's doctrine of equivalents argument, Samsung argues that

> [t]o the extent the DI products do no[t] literally practice [5C] because they do not meet the loading limitation, they practice under the doctrine of equivalents. (Cole Tr. 2443:22-2445:3.) Loading portions of a phone program into memory upon startup and subsequently bringing those portions and/or other portions of a phone program into the foreground upon selection of a phone number in a PDA function is not substantially different from loading the entire phone program into memory when the phone number or PDA function is selected. (*Id.*) The DI products perform substantially the same function, e.g., allowing the user to operate a phone program in response to a user's selection of a phone number in a PDA function, in substantially the same way, e.g., loading the phone program into memory, in order to achieve substantially the same result, e.g., allowing a user to dial a phone number displayed in a PDA function. (*Id.*)

(CBr. at 170-71 (emphasis added).) The Administrative Law Judge has reviewed the passage of testimony cited by Samsung (Tr. at 2443-2445 (Cole)) and notes that there is a serious disparity

between what Mr. Cole said on the record and what Samsung appears to have added through attorney argument:

> Q. If for some reason Apple is able to show that this limitation is not literally met, do you have an opinion under the doctrine of equivalents?
> A. Yes.
> Q. And what is that opinion?
> A. I believe that the device would still practice the method under the doctrine of equivalents.
> Q. With regard to the Galaxy S, why do you believe it would still practice under the doctrine of equivalents?
> A. Because selecting the phone number from within the PDA function accomplishes substantially the same function in substantially the same way and achieves substantially the same result.
> Q. Like we did earlier for the Apple products, you'll recall what Dr. Ingers says about the phone program. Looking at CDX—03.142: If Dr. Ingers is correct, do you have an opinion whether the Galaxy S would still practice under the doctrine of equivalents?
> A. I believe that the Galaxy S still practices under the doctrine of equivalents, for the same reasons that I discussed earlier. <u>This process is almost precisely the same as it was for the Apple</u>.
> Q. Why would the Galaxy S still practice under the doctrine of equivalents?
> A. Again, the Galaxy S still achieves ——I'm sorry, practices the same function. It does it in substantially the same way and achieves substantially the same result.
> Sorry, I forgot a "substantially" in there. Substantially the same function.

(Tr. at 2443:22-2445:3 (Cole) (emphasis added).) For example, Mr. Cole never once used the words "loading" or "portions of a phone program" in the cited passage. Nor did he use more than the barest recitation of the function/way/result test; he failed to connect it to the Galaxy S or claim language in issue. Despite the above-quoted and inappropriate[94] dressing added in Samsung's brief, the Administrative Law Judge finds that the underlying evidence relied on by Samsung (Tr. at 2443:22-2445:3 (Cole)) does not credibly or persuasively show that the Galaxy S meets element "5C" under the doctrine of equivalents. Because Mr. Cole testified that the "process is almost precisely the same as it was for the Apple" iPhones, the Administrative Law

[94] Indeed, Samsung's representation of Mr. Cole's testimony here appears to be quite misleading and borders on sanctionable behavior. Commission Rule 210.4(c)(3).

Judge additionally rejects Samsung's doctrine of equivalents arguments for the reasons discussed above with respect to infringement.

The Administrative Law Judge concludes that Samsung has not shown that the technical domestic industry requirement has been met.

b) Claim 10.

Turning to claim 10, Samsung argues that the DI Products practice claim 10 for the "same reasons they practice claim 5." (CBr. at 171.) Staff does not analyze claim 10, giving it footnote treatment. (SBr. at 103, n.35.) Apple grouped its arguments regarding claims 5 and 10 together. (RBr. at 173-181.)

Claim 10 reads as follows.

> **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 5:1-13; CBr. at 146.)

For the reasons discussed above with respect to claim 5, the Administrative Law Judge finds that the Galaxy S is a smart phone able to dial a phone number; has both PDA and mobile phone functions; is able to store an identifying name for a selected phone number into a phone book; and is able to dial the selected phone number, such that the preamble "10A" and steps "10D," and "10F" of claim 10 have been met. (Tr. at 2416-18, 2421, 2446-47; CPX-0001; CX-

595; CX-597.) The Administrative Law Judge further finds that Samsung has shown that the Galaxy S is able to perform both steps "10D" and "10E." (CDX-03.94; Tr. at 2416-18. *See also* CPX-0001.)

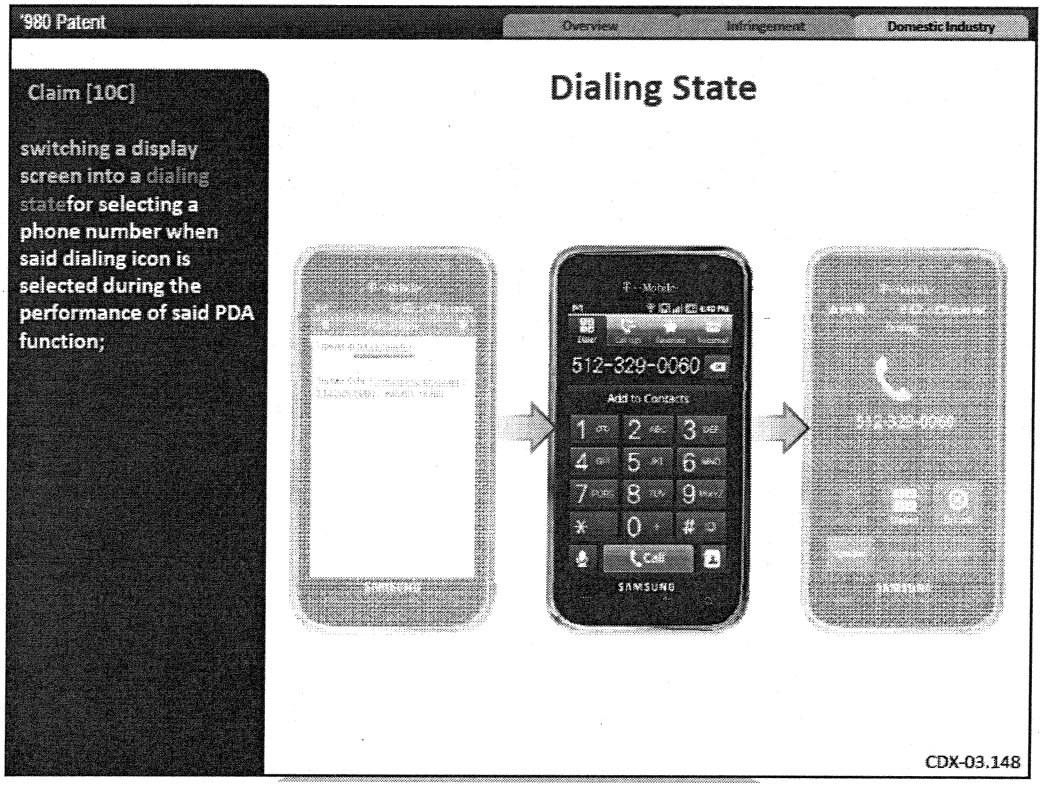
With respect to element "10B," Mr. Cole testified that

> Q. Looking at CDX-03.147. Do the DI products perform step 10B?
> A. Yes. They contain a dialing program for editing and dialing a phone number, as required by the claim.
> Q. What is the dialing program in the Galaxy S 4G?
> A. {
>
> }.
> Q. In the Galaxy S is the dialing program executed?
> A. Yes, it is.
> Q. Why is it executed?
> A. Because the functions that are performed by the dialing program of editing and dialing a phone number, you can see them operating. It can't function without being loaded ——I'm sorry, without executing. Or I guess functioning is executing.

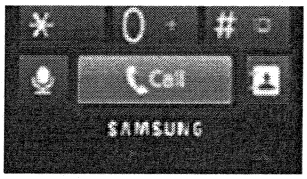
(Tr. at 2447-48 (Cole).) Samsung argues that the Galaxy S "performs [10B] for the same reasons it performs [5C]." (CBr. at 171.) The Administrative Law Judge finds that Samsung has not persuasively shown that the Galaxy S is able to perform the executing step "10B" for the reasons discussed above with respect to steps "5C" and "5D" of claim 5. However, the Administrative Law Judge finds that the Galaxy S displays a "dialing icon" and "phone editor" as noted above with respect to step "5C" of claim 5. (CDX-03.92-93; CPX-0001.)

In a single sentence, Samsung argues that the DI Products perform step "10C." (CBr. at 172 (citing Tr. at 2448-49 (Cole)).) The Administrative Law Judge finds that Samsung's analysis is lacking. (Ground Rule 10.1.) Turning to the evidence cited by Samsung, Mr. Cole testified that the Galaxy S "dialing state" is shown in CDX-03.148. (Tr. at 2448:23-2449:2.)

This demonstrative shows that Mr. Cole was identifying the Galaxy S "dialer screen" as the "dialing state":

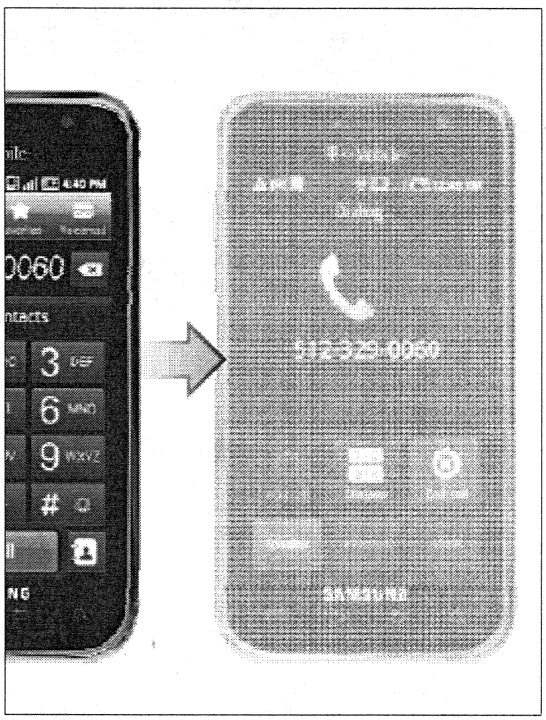


(CDX-03.148.) There are some problems with this identification, however. As noted above with respect to claim 5, of the alleged "dialing icons" identified by Samsung, the Administrative Law Judge only found one that had the requisite pictorial element:



(CDX-03.92 (detail); CPX-0001.) This "dialing icon" is already on the "dialer screen." (*Id.*; CDX-03.148.) Step "10C" says that when the user selects the dialing icon during the performance of the PDA function, the display screen is switched into a dialing state for selecting a phone number. With respect to the Galaxy S, when the user selects the "dialing icon" on the

"dialer screen," the evidence does not show that the display screen then switches to a "dialing state" for selecting a phone number:



(CDX-03.148 (detail); CPX-0001.) Instead, at that point, the Galaxy S appears to be making the call, so the user can't select a phone number. In other words, the claimed step of "10C" involves an additional action by the user that the Galaxy S does not appear to require. The Administrative Law Judge therefore concludes that the evidence does not show that the Galaxy S is able to perform the step of 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.

In sum, the Administrative Law Judge finds that the Galaxy S and therefore the DI Products are not able to practice claim 10 of the '980 patent.

4. '114 Patent.

Samsung claims that the Galaxy S 4G, Gravity Smart, and other domestic industry products practice claim 1 of the '114 patent. According to Samsung, the Galaxy S 4G has a

touch-sensitive display. (CBr. at 207 (citing Tr. (Abowd) at 1611-12, 1617-19; CPX-1).) The { }

captures information about a touch event, such as the { }. (*Id.* at 208).) The touch-event information is then passed on to the { }, which identifies the application or the application's { } to which that touch event belongs. (*Id.*) { } then passes the touch-event information to the appropriate application as a { }. (*Id.* (citing Tr. (Balakrishnan) at 2753-57; CX-730C, { }).)

The { }. (*Id.* (citing Tr. (Balakrishnan) at 2756-57; CX-1250).) It also contains information about { }. (*Id.* (citing Tr. (Balakrishnan) at 2756-57; CX-1250, MotionEvents; CX-1622C).) The state of the { } is used to determine the { }. (*Id.* (citing CX-856C; CX-730C).)

Samsung says that in Browser and Email, { }. (*Id.* (citing Tr. (Abowd) at 1614-16, 1617, 1627-36; 1639-43; CX-1250; CX-1621C; CX-730C at S-ITC-C00002156; CX-856C at S-ITC-C00002036).) When the user presses the screen, the { }. (*Id.* (citing Tr. (Abowd) at 1614-16, 1617, 1627-36; 1639-43; CX-1250; CX-1621C; CX-730C at S-ITC-C00002156; CX-856C at S-ITC-C00002036; CX-730C at S-ITC-C00002158-63).) When the user moves his finger, the

{

} in the Email application. (*Id.*)

{

}. (*Id.*)

Samsung says that Apple concedes that the domestic-industry products practice most of the limitations of claim 1 of the '114 patent: Apple concedes that these products are computer

devices having a system for simulating tactile control of a document, which have a processor, memory, and a touch-sensitive display. (*Id.* at 209-210 (citing Tr. (Balakrishnan) at 2752-53, (Abowd) at 1611-12, 1617-19; CPX-1; CX-597).) Samsung says Android implements {

}; CX-1250; CX-1622C).) Samsung says that Apple does not contest that Android has an {

}." (*Id.* (citing Tr. (Balakrishnan) at 2752-53).) According to Samsung, the Browser and Email applications contain a {

}. (*Id.* (citing Tr. (Abowd) at 1613-14; 1624-26; CX-730C; CX-856C; CX-1254).) When the content to be displayed on the screen is larger than the screen itself, the {

}. (*Id.* (citing Tr. (Abowd) at 1613-14; 1624-26; CX-730C; CX-856C; CX-1254; CX-854C; CX-1251).)

Samsung says that Apple concedes that the domestic-industry products contain a "display monitor" and an "interface process." (*Id.* (citing Tr. (Balakrishnan) at 2752-53).) The {

}. (*Id.* (citing Tr. (Abowd) at 1614-17, 1626-27, 1636-39; CX-1249: CX-1189C; CX-1190C; CX-730C; CX856C).)

Samsung says that Apple provides only one argument that the domestic-industry products do not practice claim 1, and this argument mirrors Apple's non-infringement contentions with

respect to the "velocity detector" claim limitation and is based on Apple's erroneous construction of that term. (*Id.*) Samsung says that Apple asserts that the domestic-industry products do not contain a "velocity detector, based on Apple's specialized construction of that term, which, as Samsung says it previously explained, was waived by Apple. (*Id.* at 211 (citing Tr. at 2727-28; Order No. 63 at 2).) According to Samsung, a person of ordinary skill in the art would understand "velocity vector" to mean something that detects a velocity vector, and this is what Samsung's domestic-industry products do. (*Id.* (citing Tr. (Abowd) at 1499-1501; 1510-11).)

In Browser and Email, touch events are represented by {

}. (*Id.* (citing Tr. (Abowd) at 1614-18, 1627-36, 1639-43; CX-1350: CX-1621C; CX-730C; CX-856C).) Samsung repeats that {

}. (*Id.* (citing Tr. (Balakrishnan) at 2676-77).) According to Samsung, Apple's argument ignores the language of claim 1, which states "a velocity detector for detector for determining a velocity vector based on a velocity of the detected motion." (*Id.* (citing JXM-9 at 16:16-17).) According to Samsung, the velocity vector does not need to represent the exact velocity of the detected motion, but simply must be "based" on it. This, argues Samsung, is highlighted by several facts. (*Id.*)

The identical {

}. (*Id.* (citing Tr. (Abowd) at 1614-16, 1617-18, 1627-36, 1639-43, (Balakrishnan) at 2753-60; CX-1250; CX-1621C; CX-730C; CX856C; CX-1189C; CX-1190C).) That information is then passed to the { }. (*Id.*). Because the touch information used by the { } is the same information that is collected by the {

}. (*Id.* (citing Tr. (Abowd) at 1627-36, 1639-43; CX-1250; CX-1621C; CX-730C; CX-856C; CX-1189C; CX-1190C).)

Samsung says that even under Apple's erroneous construction, the domestic-industry products still practice the claim under the doctrine of equivalents. (*Id.*) The {

}, and the way this is done is not

substantially different than Apple's construction, according to Samsung. (*Id.* at 212-213.) The {

}. (*Id.* at 213.)

According to Samsung, Dr. Balakrishnan testified during the hearing that the function of the velocity detector is to determine a velocity vector based on the velocity of the detected motion and that the way to perform this function 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 2745, 2759).) In the domestic-industry products, the {

}. (*Id.*) Samsung says Dr. Abowd explained that the way the function is performed in the domestic-industry products is insubstantially different

than the way Dr. Balakrishnan has proposed. (*Id.* (citing Tr. (Abowd) at 1645-47).) Furthermore, argues Samsung, the domestic industry products achieve substantially the same result of using position information taken from position reading from the touch screen and calculating a velocity vector. (*Id.* at 213-214.)

Apple says the claimed "velocity detector" of claim 1 must periodically take position reading from the touch panel and determine a velocity from those position readings. (RBr. at 232.) Apple argues that even Dr. Abowd admits that it is the {

}. (*Id.* (citing Tr. (Balakrishnan) at 2676-77).)

Apple says that Samsung is estopped from asserting application of the doctrine of equivalents for purposes of establishing the technical prong of the domestic-industry requirement for the reasons discussed by Apple in the infringement section of its brief. (*Id.*) More than that, argues Apple, Samsung's domestic-industry products do not satisfy the "velocity detector" limitation under the doctrine of equivalents, anyway. Apple says that Dr. Abowd gave the following explanation for why the doctrine of equivalents applies:

> Q. Why are they performing substantially the same function"
> A. Because they are calculating a velocity vector. And it is being based on the detected motion.
> Q. Do you have an opinion whether the domestic industry products are performing this function in substantially the same way?

A. Yes, they are. Because they are taking the {
}

* * *

Q. Why are they getting the same result?
A. Because they are getting {
}.

(*Id.* at 232-233 (citing Tr. (Abowd) at 1646-47).) Apple argues that Samsung's domestic-industry products do not perform substantially the same "way" as the "velocity detector" limitation; the proper "way" of the "velocity detector" limitation is to actively "detect" velocity by taking position measurements from the touch-screen. (*Id.* at 233 (citing Tr. (Balakrishnan) at 2676-77).) Apple says that, rather than performing any actual detection of the user's pointer on the touch-screen, the {

}. (*Id.* (citing Tr. (Abowd) at 1627-30, (Balakrishnan) at 2676-77).)

Staff says it believes that the evidence shows that Samsung's domestic-industry products are covered by asserted claim 1 and therefore satisfy the technical prong of the domestic-industry requirement of Section 337 as regards the '114 patent. (SBr. at 120.) According to Staff, each Samsung domestic-industry product is "a computer device having a system for simulating tactile control over a document[.]" (*Id.* (citing JXM-9 (the '114 patent) at 16:2-3; Tr. (Abowd) at 1611).) All of the Samsung domestic-industry products include a touch-sensitive display on which a user can navigate and otherwise manipulate digital documents using finger movements, says Staff. For example, the Galaxy S 4G includes a four-inch High Resolution Super AMOLED Touch Screen. (*Id.* (citing CX-597 (Samsung Mobile Galaxy S 4G Information Guide).) The Android operating system has an { } that is able to detect this

user input through the touch-sensitive display. (*Id.* (citing CX-1249 (Android Developer Guide: Input Events).) Each of the domestic-industry products includes "a processor, memory, and a touch-sensitive display." (*Id.* (citing JXM-9 at 16:4; Tr. (Abowd) at 1611-12; CX-597 (Samsung Mobile Galaxy S 4G Information Guide).)

Staff says the each of the domestic-industry products contains "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 121 (citing JXM-9 at 16:5-9).) Staff says the Android Browser application that is stored in memory and executed by the ARM Cortex processor is an example of this. (*Id.* (citing Tr. (Abowd) at 1612).) This Web browser is a standard application that is built on the { }, Staff says. (*Id.* (citing CX-1255 (Android Developer: What is Android?).) The application displays Web pages that are digital representations of an HTML document. (*Id.*) The HTML documents include both data content and a page structure representative of a page layout of the Web page. (*Id.* (citing Tr. (Abowd) at 1612-13).)

Staff says that the domestic-industry products also 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; Tr. (Abowd) at 1613-14).) The Android operating system includes a "User Interface" system for displaying content on a touch-sensitive display, and within the User Interface, the {

}

is the primary software module responsible for rendering an image of at least a portion of the

representation of a HTML document on the touch-sensitive display. {

}. (*Id.* (citing Tr. (Abowd) at 1625-26; CX-856 (source code)).)

According to Staff, the Android-based domestic industry products have "a display monitor in communication with the touch-sensitive display screen for detecting motion of a pointer across the touch-sensitive display[.]" (*Id.* at 122 (citing JXM-9 at 16:13-15; Tr. (Abowd) at 1614).) In Android, the { } is a "display monitor" used to report movement events, and each completed gesture is represented by a sequence of motion events with actions that describe { }. (*Id.* (citing CX-1250).) Touch and other motion events are processed by { }. (*Id.*) For example, the Browser application { }. (*Id.* (citing Tr. (Abowd) at 1629-30).)

Staff says the domestic-industry products have "a velocity detector for determining a velocity vector based on a velocity of the detected motion[.]" (*Id.* (citing JXM-9 at 16:16-17; Tr. (Abowd) at 1627-28).) Android has a {

}. (*Id.* (citing Tr. (Abowd) at 1628-30).)

Upon detection of a touch event, a {

}. (*Id.* (citing Tr. (Abowd) at 1633-36).)

Staff says the Android-based domestic-industry products include "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[.]" (*Id.* at 122-123 (citing JXM-9 at 16:18-22; Tr. (Abowd) at 1636-37).) Staff says the Browser application uses the {

}. (*Id.* (citing CX-1249; CX-1250).) Based on the type of motion detected, the {

}. (*Id.* (citing Tr. (Abowd) at 1640).)

In response to a pan command, "the engine pans the displayed document on the display at a rate based on the determined velocity vector." (*Id.* (citing JXM-9 at 16:23-26; Tr. (Abowd) at 1639).) In the Browser application, for example, the {

}. (*Id.* at 123-124 (citing Tr. (Abowd) at 1640).)

In light of the foregoing, Staff concludes that Samsung's domestic-industry products satisfy each element of claim 1 of the '114 patent and therefore satisfy the domestic industry with regard to the '114 patent. (*Id.* at 124.)

Apple in its reply notes, as it did in respect to the issue of infringement of the '114 patent by the Accused Products, that the position taken by Samsung and Dr. Abowd with respect to the "velocity detector" at the hearing was contrary to what Dr. Abowd expressed in his expert reports. (*See* extensive discussion of this point in the infringement section of the '114 patent, *supra.*) Apple says that the "velocity detector" must take position reading periodically and determine a velocity from those reading, and it is undisputed that the {

}. (*Id.* (citing Tr. (Abowd) at 1627-30, (Balakrishnan) at 2676-77).) Apple says that Samsung and Staff incorrectly allege that the { } is the "velocity detector" in Samsung's domestic-industry products, but as discussed in the infringement analysis section, the "velocity detector" must take position readings periodically and determine the velocity from those readings. (*Id.*) Therefore, Samsung's domestic-industry products do not have a "velocity detector." (*Id.* at 144.) As for Samsung's post-hearing argument that the { } satisfies the "velocity detector" limitation because "the velocity vector need not represent the exact velocity of the detected motion, but rather must merely be based on it[,]" Apple counters that this is false, for reasons discussed by Apple in the infringement discussion of the '114 patent; and furthermore, this

statement is directed to the wrong limitation, "velocity vector," not "velocity detector." (*Id.*) Apple says that because the { } does not take position reading periodically as required by the claim limitation, as conceded by Samsung (Tr. (Abowd) at 1627-30), the evidence does not show that the domestic-industry products practice claim 1 of the '114 patent. (*Id.*)

Apple says that Samsung is estopped from asserting the doctrine of equivalents with respect to the "velocity detector" limitations due to prosecution estoppel, as previously discussed with respect to infringement of the '114 patent. (*Id.*) Furthermore, the domestic-industry products do not satisfy the "velocity detector" limitation even under the doctrine of equivalents because they do not perform in substantially the same "way" (Tr. (Balakrishnan) at 2676-77), because Samsung's analysis incorrectly assumes that the "way" encompasses { }. (*Id.*) The proper "way" of the "velocity detector" is to "detect" velocity by taking position measurements from the touch-screen. (*Id.* (citing Tr. (Balakrishnan) at 2759). The { }. (*Id.* at 144-145 (citing Tr. (Abowd) at 1627-30, (Balakrishnan) at 2676-77).)

The Administrative Law Judge concludes that the evidence does not show to a preponderate degree that the domestic-industry products practice claim 1 of the '114 patent, because there is a lack of proof that those products include a "velocity detector" in accordance with the disclosure thereof in claim 1. The Administrative Law Judge concludes that the arguments put forth by Apple, and the evidence cited in support of those arguments, are more persuasive than Samsung's, the party that bears the burden of proof. Having previously determined that prosecution history estoppel forecloses Samsung from arguing the doctrine of

equivalents with respect to the issue of infringement, *supra*, the Administrative Law Judge concludes that Samsung is likewise foreclosed from asserting the doctrine of equivalents with respect to satisfying the domestic industry requirement of this Investigation. In addition, however, the Administrative Law Judge concludes that as a substantive matter, Samsung's doctrine of equivalents contention does not stand up, because what Samsung denotes to be the velocity detector in the domestic-industry products does not perform the detection function disclosed in the patent, for the reasons set forth by Apple, discussed above.

B. Economic Analysis

1. Applicable Law

To satisfy the economic prong, Samsung must prove, with respect to the articles it alleges are protected by the patent-at-issue: "(A) significant investment in plant and equipment; (B) significant employment of labor or capital; or (C) substantial investment in its exploitation, including engineering, research and development, or licensing." 19 U.S.C. § 1337(a)(3) (internal formatting removed). Because the statute uses the disjunctive term "or," Samsung bears the burden of establishing that the domestic industry requirement is satisfied based on any one of the three subsections (A) through (C). 19 U.S.C. § 1337(a)(3). Here, Samsung seeks to establish an economic domestic industry based upon its domestic activities in "research and development, engineering, technical training, repair and packaging and distribution related to articles that practice the Asserted Patents. . . ." (CBR. at 256.)

Establishment of an economic domestic industry is not dependent on any "minimum monetary expenditure"; nor is there a "need to define or quantify the industry itself in absolute mathematical terms." *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 25-26 (U.S.I.T.C., December 2009) ("*Stringed Instruments*"). In

the same vein, there is no need to show that large quantities of representative products must be involved to show an investment is "substantial." *Certain Video Displays, Components Thereof, and Products Containing the Same*, Inv. No. 337-TA-687, Order No. 20 at 5 (U.S.I.T.C., May 20, 2010) (unreviewed) ("*Video Displays*"). "A precise accounting is not necessary, as most people do not document their daily affairs in contemplation of possible litigation." *Stringed Instruments* at 26.

2. Analysis

Samsung argues that it has made substantial U.S. investments under subsection (C). Samsung summarizes its domestic investments and activities through Samsung Telecommunications America, LLC ("STA") in research and development, engineering, technical training, repair and packaging and distribution related to articles that practice the Asserted Patents as follows: {

}

(CBr. at 267.) Samsung's evidence will be set forth in more detail below.

Staff agrees that STA's engineering and research and development activities in the U.S. satisfy subsection (C). (SBr. at 138-147.) According to Staff, "there can be no dispute that Samsung's U.S. research and development activity, in the context of the U.S. and global

} (*Id.*)

Samsung also disputes Apple's assertions, pointing out that a precise accounting is not needed and that Apple's complaints "address only the margins of the substantial domestic investments incurred by Samsung." (CRBr. at 171.)

(1) *What categories of activities and expenditures should be considered*

With respect to Apple's first argument, that Samsung relies on activities that do not fall within the scope of subsection (C), these allegations concern the applicability of STA's "post-launch technical marketing,"' "Product Management Team's ("PMT") sales and marketing activities," "packaging and distribution," and "warranty repair and service." (RBr. at 263.)

(a) *The first 95 percent of the claimed domestic expenditures*

Taking the last and most important issue first, warranty repair and service, Samsung explains that STA's U.S. repair and service operations include supporting carrier call center training, the triage and repair diagnostic process for the carriers, and all in-warranty repairs of devices post-launch for consumers in the U.S. market. (Tr. at 904:3-17 Sheppard).) STA has approximately { } employees on staff in its U.S. repair organization, including teams of

marketplace for wireless communication devices, is 'substantial' as a matter of law, both in absolute terms and within the specific context of the mobile devices industry." (*Id.* at 146-47.)

Apple argues that several categories of Samsung's claimed activities "should be disregarded, as they constitute neither 'engineering' nor 'research and development' within the scope of Section 337(a)(3)(C)." (RBr. at 263.) In addition, Apple argues that Samsung overstated its claimed expenditures because (i) Samsung claimed full-year 2011 expenses (relying on *Certain Set-Top Boxes, and Hardware and Software Components Thereof*, Inv. No. 337-TA-761, Order No. 42 at 6-7 (Mar. 15, 2012) ("*Set-Top Boxes*")) and (ii) Samsung did not adjust for any non-domestic costs. (*Id.* at 265-66.) Apple also argues that "Samsung has failed to tie its asserted domestic industry activities to the claimed DI Products[,]" dismissing Samsung's various allocation methodologies. (*Id.* at 266.) Finally, Apple argues that Samsung's domestic industry expenditures are not substantial within the context of Samsung's worldwide activities. (*Id.* at 270.)

Staff responds that even if all of Apple's arguments were taken to be true, and Samsung's claimed domestic expenditures were accordingly reduced, Samsung's remaining investments would still be substantial. (SRBr. at 38-39.) According to Staff, for the sake of argument, cutting the expenditures pursuant to Apple's objections would still mean millions of dollars invested in just a two year period: {

engineers and technicians who operate the machinery and understand how Samsung's devices work, and STA also employs local companies to do the physical repair. These U.S.-based repair companies employ approximately { } additional U.S. workers in repairing Samsung's products, including the DI Products. (Tr. at 904:23–905:4, 906:7–907:1 (Sheppard).)

The Administrative Law Judge rejects Apple's arguments that "warranty repair and service" activities as a matter of law may not be considered economic domestic industry expenditures. Warranty activities may satisfy subsection 'c' of Section 337(a)(3). *See Video Displays*, at 8 (unreviewed). The Administrative Law Judge has specifically found that "[d]omestic activities relating to customer support, quality control and repairs. . . have supported a finding of economic domestic industry under either section (B) or (C.) (*Id.* at 8, 10-11. *See also Certain Cold Cathode Fluorescent Lamp ("CCFL") Inverter Circuits and Products Containing Same*, Inv. No. 337-TA-666, Order No. 30 at 4 (U.S.I.T.C., 2009) ("Expenditures relating to research and development, as well as product support, testing, service, and repair, are properly considered in determining whether the economic prong is satisfied.") (unreviewed) ("*CCFL Inverter Circuits*"); SBr. at 38, n. 17.) In the past, acceptable expenses have included: research and development, product support, testing, service, and repair, quality inspection, qualifying vendors, retooling manufacturing equipment, and quality control, customer training and support, the drafting of manuals, design work, and technical work performed in the U.S. by contractors. *CCFL Inverter Circuits* at 4-5 (citations omitted). *See also Certain Digital Set-Top Boxes and Components Thereof*, Inv. No. 337-TA-712, Notice of Commission Determination . . . Affirming-in-Part ALJ Order No. 33 Granting Summary Determination that Complainant Satisfied the Economic Prong of the Domestic Industry Requirement Under 19 U.S.C. §

1337(a)(3), at 2 (U.S.I.T.C., 2011) (crediting support activities); CRBr. at 170. Thus this class of expenditures may be considered.

According to Apple's expert, "95 percent[95] of the expenses that Ms. Mulhern credits as domestic investment in the exploitation of the patents, of the asserted patents is in warranty repair and service." (Tr. at 2150:15-19 (Prowse) (emphasis added).) {

} (CBr. at 267 (highlighting added).) Thus the remaining issues raised by Apple are, *de minimis* at best, because, by Dr. Prowse's reckoning, they relate to only 5 percent of the remaining claimed domestic investments.

(b) *The remaining 5 percent of the claimed domestic expenditures*

(i) Packaging & distribution

With respect to "packaging and distribution," Apple relies on conclusory statements and fails to cite to any precedent that says these expenditures may only be credited under subsections

[95] It is not clear how Dr. Prowse arrived at his 95 percent figure. Looking at Samsung's table, the "Repair and Service" figures appear to be approximately 60 percent of the total domestic expenditures. However, regardless of whether it is 95 or 60 percent, or something in between, the repair and service expenditures and activities are, in themselves, so significant under the circumstances that subsection (C) of the economic domestic industry prong may be met on them alone.

(A) or (B) of the statute. (RBr. at 264-65.) Looking at Samsung's actual allegations, it does not look like these activities are solely allocable to other subsections of the statute.[96]

The evidence shows that STA is currently packaging { } percent of its U.S. products (including the DI Products) domestically using packaging materials that were made in the U.S. and acquired from local sources. (*Id.* at 929-30, 942 (Sheppard).) STA employs domestic technicians to (i) work with approximately { } carriers to understand how the carriers wish to show the devices at point of sale, including packaging, included information, and accessories and (ii) match SIM cards with GSM devices in packaging. (CBr. at 258, 266; Tr. at 905, 944 (Sheppard).) Mr. Tim Sheppard, STA's Vice President of Finance and Operations, testified that the packing and services organizations employ engineering teams and other technically trained staff to operate equipment and understand the devices. (Tr. at 905-906.)

The Administrative Law Judge disagrees with Apple that these activities must be excluded, and instead finds that, *inter alia*, they may reasonably be considered to be tied to research and development, i.e., the research and development of the non-marketing aspects of packaging. Thus, based on the facts presented here, this class of expenditures may be included in the analysis. *CCFL Inverter Circuits* at 4-5 (citations omitted).

(ii) PMT & FMO

With respect to post-launch technical marketing and PMT sales and marketing activities, Apple argues that STA's Field Marketing Organization ("FMO") engages solely in marketing activities. (RBr. at 264 (relying primarily on expert testimony of Dr. Stephen Prowse).) According to Dr. Prowse the PMT's activities are equally problematic,

> if you look at what the product management team actually does, part of what they do is prepare launch materials. They work with STA's marketing and logistics

[96] Furthermore, expenditures may overlap such that they may support an economic domestic industry finding under more than one section of the statute.

> team and things of that nature that are clearly in my view not research and development and engineering per se. And, in addition, they seem to be more of a management group as opposed to performing any of the activities themselves.

(Tr. at 2136. *See also id.* at 2147.)

FMO.

Todd Pendleton, STA's Chief Marketing Officer, testified that the FMO provides training to sales associates, does "store checks," makes sure "merchandising and on-device videos are working correctly," makes sure the "training and benefit communications" based on carrier collaborations are being implemented, and "[o]ccasionally at times" will "go out into the marketplace and do some quick turn surveys." (JX-26C at 66 (Pendleton Depo).) Mr. Sheppard further testified that the FMO employees train the store level technical staff to understand how to diagnose or understand devices. (Tr. at 903-04.)

While Apple relies on RX-217C at SAMNDCA00024885 (RBr. at 264) to argue that the FMO's activities are nontechnical, this cannot be taken in isolation in light of Mr. Pendleton's testimony that such activities occur "occasionally." The Administrative Law Judge agrees that the "quick turn surveys" do not appear to be sufficiently related to subsection (C) to be credited, but this is a small part of what the FMO handles, and Apple does not present any actual evidence to show that the remainder of the activities that Mr. Pendleton and Mr. Sheppard described, such as making such the products and on-device videos are working correctly and training technical staff in diagnosing devices, should not be credited. *CCFL Inverter Circuits* at 4-5 (citations omitted). Therefore, the Administrative Law Judge concludes that the FMO figures should be reduced by a very slight amount, although the Administrative Law Judge finds that such a minor reduction based on an occasional activity does not materially impact the final findings here.

PMT.

Timothy Rowden, STA's Vice President of Product Management, explained that PMT manages box development such as by writing the technical user guides that go in the box or are published online for the products and its accessories, (JX-27C at 21, 103 (Rowden Depo).) He also said that they are involved with product definitions and technical design, and they work with the carriers and R&D teams to bring the products "into a state to go into the labs." (*Id.* at 13-14, 17-18, 34-35.) Mr. Sheppard, in the same vein, testified that

> [t]he product management team is an organization that is the primary interface to the carriers from a product point of view. So they work for the carriers from the earliest point in the development process to understand what are their requirements, understand the feasibility of meeting those requirements, and work on the approval process to get the approval to continue to develop a handset. They work through with all the other engineering groups I have just —-well, I have named, but I haven't described yet, to actually get the devices to be launched and ultimately they then work with the carriers to ensure that post—launch quality is assured and warranties are taken care of.
> Q. And how many employees in the United States work at STA in that product management
> A. { }.
>
> * * *
>
> Q. And are all of these groups and all of the individuals you discussed working in the United States?
> A. Yes, they are.
> Q. Are any of those employees engineers?
> A. Yes, they are. So for the teams, for the team included in the product management team, the teams in the laboratories, the wireless terminals laboratory, the mobile engineering laboratory, the MCL organizations and MNO, those are predominantly engineers.

(Tr. at 897-98, 906 (emphasis added).)

The Administrative Law Judge concludes that the preponderance of the evidence shows that the PMT activities and expenditures may be considered for purposes of subsection (C) and further that Dr. Prowse's statements to the contrary are something short of credible because they fail to account for all the evidence presented.

(iii)Other undisputed categories

Apple does not appear to dispute the remaining categories of expenditures (RBr. at 263), which are summarized as follows:

- STA's (Product Management Team), Mobile Network Operations labs, Mobile Engineering Lab, Wireless Terminals Lab and Mobile Communications Lab perform pre-launch engineering, research and development work for each of the mobile devices sold in the U.S. market, including the DI Products. (Tr. at 896:12-24 (Sheppard));
- STA works with approximately { } carriers to understand their specific requirements and develop mobile devices, customizing them to the carriers' specific requirements through product launch, and provides support and maintenance through the warranty process, including postlaunch software development. (Tr. at 895:11–896:11 (Sheppard));
- STA's Mobile Network Operations ("MNO") labs comprise approximately { } engineers responsible for customization of the user interface during the development process with the carriers, incorporating carrier specific software into mobile devices, and working on software updates after devices are launched. (Tr. at 898:3–899:2; 906:11-17 (Sheppard));
- STA's Mobile Engineering Lab ("MEL") comprises about { } engineers who work with carriers to ensure that Samsung's devices can pass certain required tests to ensure that the devices work as intended and in an efficient manner on the carriers' networks, particularly given that each carrier has its own spectrum and unique network. In addition, MEL engineers conduct quality assurance activities. MEL is primarily responsible for understanding and replicating bugs reported to STA, and assigning the job of taking care of bugs to a specific engineering team. (Tr. at 899:3–900:2; 906:11-17 (Sheppard));
- STA's Wireless Terminals Lab ("WTL") is part of its Dallas Technology Lab, located in Richardson, Texas. WTL consists of approximately { } software engineers responsible for near term development of particular technologies to be deployed on mobile handsets, such as the development of firmware for allowing software updates to be pushed to a mobile device over the air rather than requiring a consumer to physically connect a phone to a computer. (Tr. at 901:9–902:9 (Sheppard)); and
- STA's Mobile Communications Lab ("MCL") is located in San Jose, California, and employs approximately { } U.S. engineers. These engineers work with Google, which provides the Android operating system used in many of Samsung's mobile devices (including most of the DI Products), in order to make sure that the Android operating system works correctly on Samsung's mobile devices and also work to ensure that

> the operating system works with Samsung's custom user interface called Touchwiz. (Tr. at 902:10–903:2 (Sheppard).)

The Administrative Law Judge finds that the above activities may be properly considered for purposes of economic domestic industry here. *CCFL Inverter Circuits* at 4-5 (citations omitted).

(2) *Whether expenditures were overstated.*

(a) *2011 Expenses*

At issue here is whether Samsung may rely on full-year 2011 expenses or must allocate expenses to account for the June filing of the Complaint. Apple relies on the Administrative Law Judge's opinion in *Set-Top Boxes* (RBr. at 265) while Samsung relies on one of the Administrative Law Judge's other unreviewed opinions (CRBr. at 171-2) that says that expenditures after the filing of the Complaint may be considered in an economic domestic industry analysis. In *Set-Top Boxes*, the Administrative Law Judge followed the general statement that the ITC typically looks to the time a Complaint is filed and declined under the circumstances to consider, for purposes of summary determination, the post-Complaint expenditures asserted. *Set-Top Boxes* at 6-7. This would have been an unnecessary exercise considering how substantial the other evidence adduced by the Complainant Microsoft Corporation was. (*Id.* at 8-9.) It is noted that the *Set-Top Boxes* opinion was mooted by the settlement of the parties and thus was never passed on by the Commission. *See Certain Set-Top Boxes, and Hardware and Software Components Thereof*, Inv. No. 337-TA-761, Notice of Commission Determination Not to Review an Initial Determination Granting a Joint Motion by Complainant and Respondent to Terminate the Investigation in its Entirety Based upon the Execution of a Settlement Agreement; Termination of the Investigation at 2 (U.S.I.T.C., April 10, 2012).

In *Certain Electronic Devices*, the Administrative Law Judge found that while the ITC typically looks to the time a Complaint is filed for purposes of economic domestic industry, there have been a number of instances when it is acceptable to look later. *Certain Electronic Devices, Including Mobile Phones, Portable Music Players, and Computers*, Inv. No. 337-TA-701, Order No. 58 at 6 (U.S.I.T.C., 2010) (unreviewed) (*"Electronic Devices I"*). For example, the development of new, relevant, and timely disclosed evidence may be one of those instances.[97] (*Id.*) What is important, is that an Administrative Law Judge consider the totality of evidence.[98] (*Id.*) Apple is well aware of these opinions, because Apple was a party to the 701 Investigation.

The Administrative Law Judge declines to disregard Samsung's 2011 expenses solely on the basis of the *Set-Top Boxes* Investigation, which involved a completely different factual landscape. Here, Samsung relies on a two-year slice of expenses (2010-2011) for products that have a very short[99] life-cycle. *See Electronic Devices I* at 7 (brief commercial lifespan of domestic industry product a consideration). In addition, Mr. Sheppard specifically testified that some of Samsung's domestic activities are currently expanding. (Tr. at 903-04, 942.) Thus, unlike in the *Set-Top Boxes* case, where the numbers were so high that cutting them off had no noticeable effect, here arbitrarily cutting off the inquiry as of the date of filing of the Complaint would result in an incomplete picture[100] of Samsung's domestic expenditures with respect to the asserted patents.

---

[97] *See e.g.*, discussion in *Certain Laser Imageable Lithographic Printing Plates*, Inv. No. 337-TA-636, Initial Determination at 93-94 (U.S.I.T.C., July 24,2009) (unreviewed in relevant part).

[98] *See also Certain Electronic Devices with Image Processing Systems, Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Order No. 29 at 8-9 (U.S.I.T.C., 2011) (finding when party argued certain expenses were too attenuated to be credited that the Commission looks to activity *over the life of the asserted patents* and disapproving of arbitrary time limits) (unreviewed) (*Electronic Devices II*).

[99] (CRBr. at 172.)

[100] The Administrative Law Judge does note that the pre-Complaint repair expenses alone amounted to approximately { } million, and also Samsung provided other means of allocating expenses if post-Complaint expenses needed to be removed. (CBr. at 268, n. 64.) Thus, even if the Administrative Law Judge had determined that the approach followed in *Set-Top Boxes* were warranted here, Samsung still would have demonstrated

(b) *Foreign adjustments*

Apple argues that Samsung included all expenses for the claimed activities, failing to adjust for foreign costs. (RBr. at 265; Tr. at 2151:7-13 (Prowse).) With respect to repair, Apple says Samsung inappropriately included { } million for foreign made repair parts. (*Id. See also* Tr. at 931.) Samsung argues that the purchase of parts is a domestic investment. (CBr. at 265, n. 63.) It is noted that neither side cites to any controlling precedent on this issue.

At issue is whether the purchase in the United States of parts made abroad may be considered in the analysis here. The Administrative Law Judge finds that if the money was spent in the United States, the fact that some portion of it wends its way abroad is not relevant to the inquiry here. To put it in another context, the ITC does not inquire into whether the drywall credited as part of a facility included among plant and equipment domestic expenditures (subsection (A)) was originally made abroad, or whether the domestically purchased computers used by engineers in the same inquiry were at one time imported. Here, Samsung spent { } *in the United States* on parts needed to repair *in the United States* specific articles (owned by U.S customers) that Samsung alleges practice the asserted patents—essentially for the purpose of exploiting these patents domestically. *See e.g.*, *Certain Printing and Imaging Devices and Components Thereof*, Inv. 337-TA-690, Commission Opinion at 26 (U.S.I.T.C., 2011) ("*Printing and Imaging Devices*"). Those dollars therefore may be credited.

(3) *Tie between activities and claimed products*

Turning to Apple's argument that Samsung has failed to tie its asserted domestic industry activities to the claimed DI Products, Apple explains that "Samsung has not provided any substantiation that its allocation methodologies are reliable or appropriate." (RBr. at 266.)

---

substantial investments such that subsection (C) would have been met.

Samsung responds that Samsung "does not track its engineering and R&D activities on a per-model basis" and that Apple's expert testified "he had no reason to doubt the veracity of Mr. Sheppard's testimony concerning the allocations he believed were reasonable, and did not attempt to perform any alternative allocations." (CRBr. at 173; Tr. at 2168 (Prowse).)

Apple's expectations are not realistic here. It is unreasonable to expect a complainant to provide a precise accounting of model by model domestic industry activities. A massive company cannot redesign its accounting systems or operations solely on the basis that it may one day appear before the International Trade Commission. *Stringed Instruments* at 26. The economic domestic industry inquiry doesn't concern minimum dollar amounts or painstakingly calculated percentages. (*Id.*) Instead, a complainant must demonstrate a sufficiently focused and concentrated effort to lend support to a finding of a 'substantial investment.' (*Id.*)

Mr. Sheppard testified that as the principal U.S. distributor of Samsung handsets generating $17 billion in revenues in 2010-11, STA has complex U.S. operations that include about 11,000 U.S. employees, a headquarters in Texas, and about 15 other U.S. facilities. (Tr. at 893-895, 930.) This employee count doesn't even include contractors. (*Id.* at 905.) STA works with {} carriers in the United States on the R&D and other activities that the Administrative Law Judge described above. (*See also* Tr. at 896-907 (Sheppard).) Samsung did not attempt to include all 11,000 employees or its 16 U.S. locations, but instead sought to carve out only its eight operations and activities that are reasonably related to subsection (C). (*Id.*)

In addition, Mr. Sheppard testified that it is his job to regularly allocate cost and expenses to cost centers, and that this is done "on a usage or activity basis." (Tr. at 907.) The costs of the eight groups identified by Samsung as supportive of its economic domestic industry with respect to the asserted patents are tracked by STA in its financial database. (*Id.*) Mr. Sheppard further

explained that STA's packaging and repair operations are primarily tracked on a model by model basis. (*Id.* at 908. *See also id.* at 1770.) In order to further allocate expenses for the activities not tracked by model, Mr. Sheppard gathered information specific to these activities:

> A. Information I would need is to first understand group by group what is their activity, how are they organized, how does the management direct the staff and how do they prioritize their work. Based on that, I can then determine an appropriate method to take that activity and allocate it on a model—by-model basis. I think I need some extra information, for example, I need the cost for those cost centers, the activity in terms of revenue and also units or devices launched in a period, launched by carrier.

(*Id.* at 908-909.) Mr. Sheppard looked at various reports and spoke to organization heads to determine an allocation strategy for each operation that would account for the claimed DI Products and the asserted patents. (*Id.* at 910-924, 940.)

Ms. Mulhern, Samsung's economics expert, worked with Mr. Sheppard and other sources to develop opinions with respect to Samsung's domestic investments. (Tr. at 1765-66, 1768 (Mulhern).) According to Ms. Mulhern, the Samsung products alleged to practice the asserted patents account for about { } percent of STA's total U.S. revenues in 2011 and { } percent of STA's total U.S. unit sales for the same year. (Tr. at 1768.) For the eight operations and activities identified by Mr. Sheppard, Ms. Mulhern finds that STA has invested more than { } domestically in 2010-11. (*Id.* at 1769-70.) Ms. Mulhern explained her allocation methodologies for each of those activities that STA typically did not track by model in the ordinary course of business, including her rationale for each allocation and underlying support. (*Id.* at 1770-85.) It is noted that Ms. Mulhern looked qualitatively as well as quantitatively at the claimed activities. (*Id.*)

Dr. Prowse, Apple's expert, criticized Ms. Mulhern's analysis, because "she hasn't tested any of her methods for accuracy." (Tr. at 2135.) This is not the standard. Having failed to

provide an alternative manner of apportioning domestic expenditures to the claimed products, Dr. Prowse's testimony appears to be focused solely on Ms. Mulhern's alleged lack of precision and further does not appear to be supported by actual evidence. (*See, e.g., id.* at 2137-38 ("the product development teams at STA presumably are doing...") (emphasis added).) The Administrative Law Judge further finds that Dr. Prowse's attempts to give low priced, top selling phones less weight because they "are not complex products" to be unsupported by fact and less than credible. (Tr. at 2143.) This was also true of some other testimony of Dr. Prowse, as noted in the discussions above. (*See e.g.* discussion above discounting Dr. Prowse's criticism of STA's PMT on the basis that he took a piece of evidence out of context.)

Having reviewed the pertinent arguments, evidence, and testimony, the Administrative Law Judge concludes that Apple's objections to Samsung's allocations are, in material part, without merit. The Administrative Law Judge notes that the figures adduced by Samsung are not intended to be anything other than reasonable estimates, but finds that Samsung's arrival at these figures is based on a sufficiently focused and concentrated effort to allocate its activities and expenditures in a way that may be evaluated here. *Printing and Imaging Devices*, at 27.

(4) *Whether Samsung's domestic industry expenditures are substantial in the context of its worldwide activities*

Apple further argues that "Samsung has made no attempt[101] to show that its claimed domestic industry expenditures are substantial in the context of its own operations or the mobile telephone industry." (RBr. at 270.) However, such an analysis is not a requirement. *Printing and Imaging Devices*, at 33 n.11. Indeed, the Commission acknowledged the viewpoint that such a comparison would hurt large, diversified companies that produce a wide range of

[101] It is noted that Staff does make this analysis to Staff's credit. (SBr. at 145-46. *See also* Tr. at 944 (Sheppard).)

products.[102] (*Id.*) Indeed, the inappropriateness of this type of analysis in the context of many of the types of domestic expenditures Samsung is claiming is exemplified in this passage of Mr. Sheppard's cross examination:

> Q. Now, would you agree with me that STA's revenues in 2010 and 2011 for sale of mobile devices in the U.S. were about { }?
> A. That sounds approximately correct, yes.
> Q. And would you agree with me that the packaging operation as a percentage of revenue would be well under 1 percent?
> A. Yes, I would certainly hope that my packaging is not the most expensive part of my product.

(Tr. at 930:8-19.) No company wants to make huge expenditures on packaging, service and repair, or distribution efforts. That Apple would seek to discredit the significance of STA's monetary investments in these areas by comparing them with STA's total revenues makes no sense within this industry. STA unquestionably is a large company that issues more than one new handset every week. (Tr. at 894 (Sheppard).) Therefore, the Administrative Law Judge rejects Apple's argument as being misplaced in this Investigation.

> (5) *Whether Samsung's investments in the exploitation of the asserted patents, including its engineering, R&D, and other related activities, are substantial*

Although Samsung's FMO figures should be reduced as noted above by a very slight amount to discount occasional "quick turn survey" activity, this is not a close issue. The Administrative Law Judge finds that the totality of the evidence discussed above, and particularly the testimony of Mr. Sheppard, supports a finding that STA's substantial domestic research and development, engineering, technical training, repair and packaging and distribution activities and expenditures with respect to the claimed DI Products meet the economic prong of

[102] In such a situation, perhaps if a large company normally invested a certain average sum in each product, but invested a demonstrably puny sum in the claimed domestic industry product, this contrast would be well worth considering. However, Apple does not attempt to make such a showing here.

the domestic industry requirement pursuant to subsection (C). *Video Displays*, at 7, 11. It is noted that the Administrative Law Judge's evaluation of the economic prong of the domestic industry requirement is made separately from, and does not alter, the technical domestic industry analyses above.

IX. WAIVER OR WITHDRAWAL OF RESPONDENT'S OTHER DEFENSES

Apple's response to the Complaint and Notice of Investigation contains defenses and arguments that were not raised in Apple's pre-hearing briefing, discussed at the hearing, or raised in post-hearing briefing ("non-asserted defenses"). The non-asserted defenses include the "lack of unfair act," invalidity based on 35 U.S.C. §§ 101 ('644, '980, and '114 patents), 112 ('348, '644, and '980 patents), 116, and 256, "relief not in the public interest," and inequitable conduct affirmative defenses. (See Respondent Apple Inc.'s Response to the Complaint of Samsung Electronics Co., Ltd. and Samsung Telecommunications America, LLC under Section 337 of the Tariff Act of 1930, as Amended, and Notice of Investigation, dated August 17, 2011.) These non-asserted defenses and arguments are deemed abandoned or withdrawn. (See Ground Rules 7.2, 10.1.)

X. CONCLUSIONS

1. The Commission has personal jurisdiction over the parties, subject-matter jurisdiction, and in rem jurisdiction over the Accused Products.
2. The importation or sale requirement of Section 337 is satisfied.
3. None of the Accused '348 Products identified in Section I.E. above literally infringe asserted claims 75-76 and 82-84 of the '348 patent.
4. None of the Accused '644 Products identified in Section I.E. above literally infringe asserted claims 9-16 of the '644 patent.

5. None of the Accused '980 Products identified in Section I.E. above literally infringe asserted claims 5, 9, 10, and 13 of the '980 patent.
6. None of the Accused '114 Products identified in Section I.E. above literally infringe asserted claims 1-5 of the '114 patent.
7. None of the Accused '348 Products identified in Section I.E. above infringe asserted claims 75-76 and 82-84 of the '348 patent under the doctrine of equivalents.
8. None of the Accused '644 Products identified in Section I.E. above infringe asserted claims 9-16 of the '644 patent under the doctrine of equivalents.
9. None of the Accused '980 Products identified in Section I.E. above infringe asserted claims 5, 9, 10, and 13 of the '980 patent under the doctrine of equivalents.
10. None of the Accused '114 Products identified in Section I.E. above infringe asserted claims 1-5 of the '114 patent under the doctrine of equivalents.
11. The asserted claims 75-76 and 82-84 of the '348 patent are not invalid under 35 U.S.C. § 102 for anticipation.
12. The asserted claims 9-16 of the '644 patent are not invalid under 35 U.S.C. § 102 for anticipation.
13. The asserted claims 5, 9, 10, and 13 of the '980 patent are not invalid under 35 U.S.C. § 102 for anticipation.
14. The asserted claims 1-5 of the '114 patent are invalid under 35 U.S.C. § 102 for anticipation.

15. The asserted claims 75-76 and 82-84 of the '348 patent are not invalid under 35 U.S.C. § 103 for obviousness.

16. The asserted claims 9-16 of the '644 patent are not invalid under 35 U.S.C. § 103 for obviousness.

17. The asserted claims 5, 9, 10, and 13 of the '980 patent are not invalid under 35 U.S.C. § 103 for obviousness.

18. The asserted claims 1-5 of the '114 patent are invalid under 35 U.S.C. § 103 for obviousness.

19. The asserted claims 75-76 and 82-84 of the '348 patent are not invalid under 35 U.S.C. § 101 for lack of patentable subject matter.

20. The asserted claims 1-5 of the '114 patent are not invalid under 35 U.S.C. § 112 for indefiniteness.

21. The asserted claims of the '348 and '644 patents are not barred under Samsung commitments to ETSI.

22. The asserted claims of the '348 and '644 patents are not barred under the doctrine of patent exhaustion.

23. The asserted claims of the '644 patent are not rendered unenforceable based on alleged standards setting misconduct.

24. The asserted claims of the '644 patent are not rendered unenforceable based on alleged inequitable conduct.

25. A domestic industry does not exist with respect to the '348 patent, as required by Section 337.

26. A domestic industry does not exist with respect to the '644 patent, as required by Section 337.

27. A domestic industry does not exist with respect to the '980 patent, as required by Section 337.

28. A domestic industry does not exist with respect to the '114 patent, as required by Section 337.

29. With respect to Apple Inc., it has been established that no violation exists of Section 337 for claims 75-76 and 82-84 of the '348 patent.

30. With respect to Apple Inc., it has been established that no violation exists of Section 337 for claims 9-16 of the '644 patent.

31. With respect to Apple Inc., it has been established that no violation exists of Section 337 for claims 5, 9, 10, and 13 of the '980 patent.

32. With respect to Apple Inc., it has been established that no violation exists of Section 337 for claims 1-5 of the '114 patent.

This Initial Determination's failure to discuss any matter raised by the parties, or any portion of the record, does not indicate that it has not been considered. Rather, any such matter(s) or portion(s) of the record has/have been determined to be irrelevant, immaterial or meritless. Arguments made on brief which were otherwise unsupported by record evidence or legal precedent have been accorded no weight.

XI. INITIAL DETERMINATION AND ORDER

Based on the foregoing, it is the INITIAL DETERMINATION ("ID") of this Administrative Law Judge that with respect to Respondent Apple Inc., no violation of Section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States,

the sale for importation, or the sale within the United States after importation of certain electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers by reason of infringement of claims 75-76 and 82-84 of United States Patent No. 7,706,348.

The Administrative Law Judge further determines that with respect to Respondent Apple Inc., no violation of Section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers by reason of infringement of claims 9-16 of United States Patent No. 7,486,644.

The Administrative Law Judge further determines that with respect to Respondent Apple Inc., no violation of Section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers by reason of infringement of claims 5, 9, 10, and 13 of United States Patent No. 6,771,980.

The Administrative Law Judge further determines that with respect to Respondent Apple Inc., no violation of Section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers by reason of infringement of claims 1-5 of United States Patent No. 7,450,114.

Further, this ID, together with the record of the hearings in this Investigation consisting of:

(1) the transcripts of the Markman and evidentiary hearings, with appropriate corrections as may hereafter be ordered, and

(2) the exhibits received into evidence in this Investigation, as listed in the attached exhibit lists in **Appendix A**,

are CERTIFIED to the Commission. In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given in camera treatment.

The Secretary shall serve a public version of this ID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order (Order No. 1) issued in this Investigation, and upon the Commission Investigative Attorney.

RECOMMENDED DETERMINATION ON REMEDY AND BOND

I. REMEDY AND BONDING

The Commission's Rules provide that subsequent to an initial determination on the question of violation of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, the Administrative Law Judge shall issue a recommended determination containing findings of fact and recommendations concerning: (1) the appropriate remedy in the event that the Commission finds a violation of Section 337, and (2) the amount of bond to be posted by respondents during Presidential review of Commission action under Section 337(j). See 19 C.F.R. § 210.42(a)(1)(ii).

A. Applicable Law

The Commission may issue a remedial order excluding the goods of respondents found in violation of Section 337 (a limited exclusion order) or, if certain criteria are met, excluding all infringing goods regardless of the source (a general exclusion order). 19 U.S.C. § 1337(d); *Certain Hydraulic Excavators and Components Thereof*, Inv. No. 337-TA-582, Comm'n Op., at 15 (U.S.I.T.C., February 3, 2009) ("Certain Excavators"). Here, Samsung requests a limited exclusion order if it prevails in this Investigation. (CBr. at 269.) A limited exclusion order instructs the U.S. Customs and Border Protection ("CBP") to exclude from entry all articles that are covered by the patents at issue and that originate from a named respondent in the investigation. See 19 U.S.C. § 1337(d).

B. Remedy with Respect to the '348, '644, '980, and '114 Patents

Samsung argues that "[i]f the Commission determines that Apple has violated Section 337 through its importation of electronic devices, including wireless communication devices, portable music and data processing devices and tablet computers, it should issue a limited

exclusion order against all infringing devices imported by or on behalf of Apple and its affiliated companies, parents, subsidiaries or other related business entities, or their successors or assigns." (CBr. at 269.)

Apple argues that it has not violated Section 337 and therefore no exclusion order is warranted. (RBr. at 271.) Apple further argues that should the Commission find a violation, "any remedial order should except service, repair, or replacement articles imported for use in servicing, repairing, or replacing the accused Apple products under warranty or an insurance contract (whether the warranty or contract is offered by Apple, a carrier, or by a third party) for an identical article that was imported prior to the effective date of the remedial order." (*Id.*)

Staff submits that if a violation is found, a limited exclusion order is appropriate. (SBr. at 148.)

Samsung responds that Apple's request for an exception is new and would more appropriately be argued after issuance of the final initial determination. (CRBr. at 174.)

As noted in the final initial determination above, the Administrative Law Judge has found that a Section 337 violation has not occurred with respect to the asserted patents. However, should the Commission find a violation, the Administrative Law Judge recommends that the Commission issue a limited exclusion order. The limited exclusion order should apply to Apple and all of its affiliated companies, parents, subsidiaries, or other related business entities, or its successors or assigns, and should prohibit the unlicensed entry of all electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers, that infringe the claims of the asserted patents for which a Section 337 violation is found.

II. Cease and Desist Order

Section 337 provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a cease and desist order as a remedy for violation of Section 337. *See* 19 U.S.C. § 1337(f)(1). The Commission generally issues a cease and desist order directed to a domestic respondent when there is a "commercially significant" amount of infringing, imported product in the United States that could be sold so as to undercut the remedy provided by an exclusion order. *See Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293, Comm'n Op. on the Issue Under Review, and on Remedy, the Public Interest and Bonding at 37-42, Pub. No. 2391 (U.S.I.T.C., June 1991). Cease and desist orders have been declined when the record contains no evidence concerning infringing inventories in the United States. *Certain Condensers, Parts Thereof and Products Containing Same, Including Air Conditioners for Automobiles*, Inv. No. 337-TA-334, Comm'n Op. at 28 (U.S.I.T.C., Aug. 27, 1997).

The Administrative Law Judge found in Order No. 89 that certain facts relating to Apple's inventories were deemed undisputed and established:

1. Apple's business includes importing and selling electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers.

2. Apple sells accused products within the United States that it has imported from abroad. {

3.

4.

5.

6. } Apple's general practice is to { }.

7. Apple tracks its inventory {

}.

8. {

9.

}

10. Apple's fiscal year begins and ends on the last Friday in September.

11. At the close of Apple's first fiscal quarter of 2012, Apple held {
}.

12. At the close of Apple's first fiscal quarter of 2012, Apple held {
}.

13. The lowest standard cost of a { } iPhone { } as of the close of Apple's first fiscal quarter of 2012- {
}.

14. At the close of Apple's first fiscal quarter of 2012, Apple held {
}.

15. At the close of Apple's first fiscal quarter of 2012, Apple held more than { }.

16. The lowest standard cost of a { } as of the close of Apple's first fiscal quarter of 2012- {
}.

17. At the close of Apple's first fiscal quarter of 2012, Apple held {
} in the United States.

18. At the close of Apple's first fiscal quarter of 2012, Apple held more than { } in the United States.

19. At the close of Apple's first fiscal quarter of 2012, Apple held more than { }.

20. The lowest standard cost of a { }
as of the close of Apple's first fiscal quarter of 2012- {
}.

(Order No. 89 at 3-4.) Samsung and Staff argue that these facts establish that Apple has commercially significant inventory in the U.S.—a point that Apple does not dispute. (CBr. at 269-70; RBr. at 271; RRBr. at 173; SBr. at 149-50.)

The Administrative Law Judge concludes that a cease and desist order would be appropriate in the event a violation is found because the undisputed evidence shows that Apple has commercially significant U.S. inventory.

III. Bond During the Presidential Review Period

The Administrative Law Judge and the Commission must determine the amount of bond to be required of a respondent, pursuant to Section 337(j)(3), during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. 19 C.F.R. § 210.42(a)(1)(ii). The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. § 210.50(a)(3).

When reliable price information is available, the Commission has often set the bond by eliminating the differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op., at 24 (U.S.I.T.C., December 15, 1995). In circumstances where pricing information is unclear, or where variations in pricing make price comparisons complicated and difficult, the Commission typically has set a 100 percent bond. *Id.*, at 24-25; *Certain Digital Multimeters and Products with Multimeter Functionality*, Inv. No. 337-TA-588, Comm'n Op., at 12-13 (U.S.I.T.C., June 3, 2008) (finding 100 percent bond where each respondent set its price differently, preventing clear differentials between complainant's products and the infringing imports). When a pricing comparison is impossible, it is also appropriate to set the bond based on a reasonable royalty. *Certain Digital Televisions and Certain Products Containing Same and Methods of Using Same*, Inv. No. 337-TA-617, Commission Opinion at 18 (U.S.I.T.C., April 23, 2009).

Samsung argues that a price differential analysis would not be practicable because the accused products and the domestic industry products "are sold through different channels at widely-varying prices" and because Apple didn't provide requested evidence. (CBr. at 271; Tr. at 1788 (Mulhern) (a comparison of averages is not meaningful here).) Samsung also argues that the accused iPads and iPod Touches do not compete with Samsung's domestic industry products, preventing a price comparison. (*Id.*) In addition, Samsung argues that there is no evidence to permit calculation of a reasonable royalty rate because Samsung's licenses are "broad cross-licenses. . . ." (*Id.*) Samsung therefore requests a 100 percent bond. (*Id.*)

Apple argues that bond should be set at zero. (RBr. at 271; Tr. at 2154-57 (Prowse) (To the extent they are comparable, Apple's products are uniformly more expensive than Samsung's).) In response to Samsung's arguments, Apple argues that Samsung's 2.4 percent offer to license, which is discussed above in detail with respect to Apple's affirmative defenses, "demonstrates that the requested bond rate of 100 percent is wholly inappropriate, and far in excess of a reasonable royalty." (RRBr. at 175.)

Staff is of the opinion that a bond based on a price differential or on a reasonable royalty rate would be inappropriate. (SBr. at 150; RRBr. at 40.)

Samsung does not claim that it sought to compel the needed pricing information from Apple. While the Administrative Law Judge does not approve of withholding requested discovery, Samsung had an affirmative obligation to obtain the evidence it needs to support its proposed remedy. Samsung cannot simply say that because no one did anything it should automatically be granted a windfall of 100 percent. Thus with respect to the accused iPhones, which directly compete with Samsung's claimed domestic industry mobile handset products ((Tr. at 1786 (Mulhern)), the Administrative Law Judge recommends that bond be set at zero.

With respect to the accused media players and tablet computers, the Administrative Law Judge credits Ms. Mulhern's testimony (Tr. at 1788-89) that these are not in competition with Samsung's domestic industry products. Apple and its expert are silent on this issue, although Apple agrees in the Post-Hearing Reply Brief that the iPad and iPod Touch "do not even compete with any of the claimed DI Products." (Tr. at 2154-58; RBr. at 272; RRBr. at 175.) Thus there does not appear to be a dispute that a differential would not be calculable with respect to these products. In the absence of a reasonable alternative, the Administrative Law Judge recommends that for the accused iPad and iPod Touch a bond of 100 percent[103] be set. *Certain Microsphere Adhesives*, at 24.

IV. Conclusion

In accordance with the discussion of the issues contained herein, it is the RECOMMENDED DETERMINATION of the Administrative Law Judge that in the event the Commission finds a violation of Section 337, the Commission should issue a limited exclusion order against Respondent Apple Inc. and all of its affiliated companies, parents, subsidiaries, or other related business entities, or its successors or assigns, and should prohibit the unlicensed entry of all electronic devices, including wireless communication devices, portable music and data processing devices, and tablet computers that infringe the claims of the asserted patents for which a Section 337 violation is found. Should the Commission determine that a violation has occurred, the Administrative Law Judge recommends that the Commission issue a cease and desist order against Apple. Furthermore, if the Commission intends to impose a remedy following a finding of violation the Administrative Law Judge recommends that the Commission

[103] This number, while consistent with precedent, seems to be an arbitrary form of compensation for harm here. The Commission could alternatively require the parties to provide expert declarations setting forth a reasonable royalty based upon hypothetical arm's length negotiations in the manner of damages calculations in district court.

set a bond of zero dollars for the accused iPhones and a bond of 100 percent for the accused iPad and iPod Touch products.

Within seven days of the date of this document, each party shall submit to the office of the Administrative Law Judge a statement as to whether or not it seeks to have any portion of this document deleted from the public version. The parties' submissions must be made by hard copy by the aforementioned date.

Any party seeking to have any portion of this document deleted from the public version thereof must submit to this office a copy of this document with red brackets clearly indicating any portion asserted to contain confidential business information by the aforementioned date. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

E. James Gildea
Administrative Law Judge

PUBLIC VERSION

APPENDIX A

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

Before The Honorable E. James Gildea
Administrative Law Judge

In the Matter of

CERTAIN MOBILE ELECTRONIC DEVICES, INCLUDING WIRELESS COMMUNICATION DEVICES, PORTABLE MUSIC AND DATA PROCESSING DEVICES, AND TABLET COMPUTERS	Investigation No. 337-TA-794

COMPLAINANTS' COMBINED FINAL ADMITTED EXHIBIT LIST

In the Matter of

CERTAIN ELECTRONIC DEVICES, INCLUDING WIRELESS COMMUNICATION DEVICES, PORTABLE MUSIC AND DATA PROCESSING DEVICES, AND TABLET COMPUTERS

Investigation No. 337-TA-794

Complainants' Combined Final Admitted Exhibit List

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
CDM-1	Technology Tutorial Demonstratives			Admitted
CDM-2	Introduction and U.S. Patent 7,706,348 Markman Demonstratives			Admitted
CDM-3	U.S. Patent 7,486,644 Markman Demonstratives			Admitted
CDM-4	U.S. Patent 6,771,980 Markman Demonstratives			Admitted
CDM-5	U.S. Patent 6,879,843 Markman Demonstratives			Admitted
CDM-6	U.S. Patent 7,450,114 Markman Demonstratives			Admitted
CXM-01	RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY (Random House 1999) (excerpts)	Extrinsic evidence as to common meaning of "equivalent"		Admitted
CXM-02	Simon Collin, DICTIONARY OF MULTIMEDIA (2d ed. 1997) (excerpts)	Extrinsic evidence as to common meaning of "PDA"		Admitted
CXM-03	AM. HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (3d ed. 1996) (excerpts)	Extrinsic evidence as to common meaning of "vector"		Admitted
CXM-04	Apple Changes to Revised Proposed Joint Claim Construction Chart (12/01/2011)	Evidence of Apple's changes to Apple's proposed claim constructions		Admitted
CXM-05	Email from N. Tallon to A. Whitehurst (Dec. 1, 2011)	Evidence of Apple's changes to Apple's proposed claim constructions		Admitted

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
CXM-06	MICROSOFT COMPUTER DICTIONARY (5th ed. 2002) (excerpts)	Extrinsic evidence as to common meaning of "block," "controller," and "process"		Admitted
CXM-07	NEWTON'S TELECOM DICTIONARY (23d ed. 2007) (excerpts)	Extrinsic evidence as to common meaning of "block" and "block diagram"		Admitted
CXM-08	THE ILLUSTRATED DICTIONARY OF ELECTRONICS (7th ed. 1997) (excerpts)	Extrinsic evidence as to common meaning of "block" and "adapter"		Admitted
CXM-09	Frank Hargrave, HARGRAVE'S COMMUNICATIONS DICTIONARY (2001) (excerpts)	Extrinsic evidence as to common meaning of "block," "interface," and "process"		Admitted
CXM-10	U.S. Patent No. 7,479,949	Extrinsic evidence as to meaning of "rate dematcher"		Admitted
CXM-11	NetHopper Version 3.0 User's Manual, copyright Allpen Software, Inc. (1997)	Extrinsic evidence as to meaning of "PDA function"		Admitted
CXM-12	Chapman and Hall, COMMUNICATIONS STANDARD DICTIONARY (3d ed. 1996) (excerpts)	Extrinsic evidence as to common meaning of "adapter"		Admitted
CXM-13	John Wiley and Sons, DICTIONARY OF COMMUNICATIONS TECHNOLOGY (2d ed. 1995) (excerpts)	Extrinsic evidence as to common meaning of "adapter"		Admitted
CXM-14	U.S. Patent No. 7,576,730	Intrinsic evidence to U.S. Patent No. 7,450,114		Admitted
CXM-15	U.S. Patent Publication No. 20100185975	Intrinsic evidence to U.S. Patent No. 7,450,114		Admitted

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
CXM-16	U.S. Patent Publication No. 20100185948	Intrinsic evidence to U.S. Patent No. 7,450,114		Admitted
CXM-17	Respondent Apple Inc.'s List of Patent Claim Terms for Construction (Sept. 19, 2011)	Evidence Apple's list of claim terms for construction		Admitted
CXM-18	Stan Gibilisco, THE ILLUSTRATED DICTIONARY OF ELECTRONICS (8th ed. 2001) (excerpts)	Extrinsic evidence as to common meaning of "interface" and "monitor"		Admitted
CXM-19	Julie K. Petersen, THE TELECOMMUNICATIONS ILLUSTRATED DICTIONARY (2d ed. 1999) (excerpts)	Extrinsic evidence as to common meaning of "interface" and "human-machine"		Admitted
CXM-20	RANDOM HOUSE WEBSTER'S COMPUTER & INTERNET DICTIONARY (3d ed. 1999) (excerpts)	Extrinsic evidence as to common meaning of "process"		Admitted
CXM-21	Houghton Mifflin Co., THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (3d ed. 1996) (excerpts)	Extrinsic evidence as to common meaning of "according to"		Admitted
CXM-22	*Toshiba Corp. v. Lexar Media, Inc.*, 2005 U.S. Dist. LEXIS 46842 (N.D. Cal. Jan. 24, 2005)	Extrinsic evidence as to meaning of "controller for outputting"		Admitted
CXM-23	*Koninklijke Philips Elecs. NV v. Defibtech LLC*, 2005 U.S. Dist. LEXIS 39859 (W.D. Wash. Dec. 21, 2005)	Extrinsic evidence as to meaning of "controller for outputting"		Admitted
CXM-24	*Powell v. Home Depot U.S.A.*, Inc., Nos. 2010-1409, 2010-1416, 2011 WL 5519820 (Fed. Cir. Nov. 14, 2011)	Extrinsic evidence as to meaning of "display monitor"		Admitted
CXM-25	*Wimco, LLC v. Lange Indus.*, No. 06-CV-3565 (PJS/RLE), 2007 U.S. Dist. LEXIS 92502, 2007 WL 4461629 (D. Minn. Dec. 14, 2007)	Extrinsic evidence as to meaning of "from among a plurality of [30 or 32] bit codewords"		Admitted

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
CXM-26	*Carnegie Mellon University v. Marvell Tech. Grp., LTD* ., No. 09-290, 2010 U.S. Dist. LEXIS 10891 (W.D. Pa. Oct. 1, 2010)	Extrinsic evidence as to meaning of "predetermined position"		Admitted
CXM-27	*Caritas Techs., Inc. v. Comcast Corp* ., 2:05-CV-339-DF, 2006 U.S. Dist. LEXIS 98006 (E.D. Tex. Oct. 18, 2006)	Extrinsic evidence as to meaning of "predetermined position"		Admitted
CXM-28	*Jajah Inc. v. Stanacard LLC* , C 09-00580 JW, 2010 WL 1838970 (N.D. Cal. May 3, 2010)	Extrinsic evidence as to meaning of "phone module" and "digital audio data module"		Admitted
CXM-29	*C2 Commc'ns Techs., Inc. v. AT & T, Inc* ., No. 2:06–CV–241, 2008 WL 2462951 (E.D. Tex. June 13, 2008)	Extrinsic evidence as to meaning of "digital audio data module"		Admitted
CXM-30	*Foundry Networks v. Lucent Techs., Inc* ., No. 2-04-CV-40, 2005 WL 6217420 (E.D. Tex. May 24, 2005)	Extrinsic evidence as to meaning of "phone module" and "digital audio data module"		Admitted
CXM-31	*Ranpak Corp. v. Storopack* , Inc., No. 98-1009, 1998 U.S. App. LEXIS 16348 (Fed. Cir. 1998)	Extrinsic evidence as to meaning of "phone module"		Admitted
CXM-32	*Autobytel, Inc. v. Dealix Corp.* , No. 2:04-CV-338, 2006 U.S. Dist. LEXIS 3381 (E.D. Tex. Jan. 18, 2006)	Extrinsic evidence as to meaning of "digital audio data module"		Admitted

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
CXM-33	*Certain Coaxial Connectors and Components Thereof and Products Containing Same*, 337-TA-650, 2009 WL 3694421 (Oct. 13, 2009)	Extrinsic evidence as to meaning of "enabling digital audio data to be downloaded . . . according to a key input through said key pad" and "enabling the sound of the digital audio data to be reproduced according to a key input of said key pad"		Admitted
CXM-34	*Intellect Wireless, Inc. v. Kyocera Commc'ns, Inc.*, No. 08 C 1350, 2009 WL 3259996 (N.D. Ill. Oct. 8, 2009)	Extrinsic evidence as to meaning of the "wherein" clauses of asserted U.S. Patent No. 7,450,114		Admitted
CXM-35	*Freedom Wireless, Inc. v. Alltel Corp.*, Nos. 2:06cv504, 2:06cv505, 2:07cv151 & 2:07cv152, 2008 WL 4647270 (E.D. Tex. Oct. 17, 2008)	Extrinsic evidence as to meaning of the "wherein" clauses of asserted U.S. Patent No. 7,450,114		Admitted
CXM-36	*Toshiba Corp. v. Juniper Networks, Inc.*, No. Civ. 03-1035, 2006 WL 1788479 (D. Del. June 28, 2006)	Extrinsic evidence as to meaning of the "wherein" clauses of asserted U.S. Patent No. 7,450,114		Admitted
CXM-37	*Collaboration Properties, Inc. v. Tandberg ASA, No.* C 05-01940, 2006 WL 1752140 (N.D. Cal. June 23, 2006)	Extrinsic evidence as to meaning of the "wherein" clauses of asserted U.S. Patent No. 7,450,114		Admitted

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
CXM-38	U.S. Patent No. 4,839,634	Intrinsic evidence to meaning of "display monitor"		Admitted
CXM-39	U.S. Patent No. 5,463,725	Intrinsic evidence to meaning of "display monitor"		Admitted
CXM-40	U.S. Patent No. 5,615,384	Intrinsic evidence to meaning of "display monitor"		Admitted
CXM-42	Joint List of Disputed Claim Terms and Proposed Constructions (Oct. 21, 2011)	Evidence of disputed claim terms and the parties' proposed constructions		Admitted
CXM-45	U.S. Patent No. 6.167,116	Intrinsic evidence as to meaning of "adapter"		Admitted
CXM-46	JOHN G. PROAKIS, DIGITAL COMMUNICATIONS (3rd ed. 1995) (excerpts)	Extrinsic evidence as to common meaning of "decoding the coded bits at a coding rate of 1/3"		Admitted
CXM-47	ROBERT H.MORELOS-ZARAGOZA, THE ART OF ERROR CORRECTING CODE(2nd ed. 2006) (excerpts)	Extrinsic evidence as to common meaning of "puncturing"		Admitted
CXM-48	PIERRE LESCUYER, UMTS ORIGINS, ARCHITECTURE AND THE STANDARD (2004) (excerpts	Extrinsic evidence as to common meaning of "puncturing"		Admitted
CXM-49	U.S. Patent No. 6,614,850	Extrinsic evidence as to common meaning of "puncturing"		Admitted
JXM-01	U.S. Patent No. 7,706,348	Intrinsic evidence		Admitted (Markman); 6/4/12 HW Kang testimony;
JXM-02	U.S. Patent No. 7,706,348 File History	Intrinsic evidence		Admitted
JXM-03	U.S. Patent No. 7,486,644	Intrinsic evidence		Admitted

Exhibit No.	Description/ Title	Purpose for Exhibit in Evidence	Sponsoring Witness	Received
JXM-04	U.S. Patent No. 7,486,644 File History	Intrinsic evidence		Admitted
JXM-05	U.S. Patent No. 6,771,980	Intrinsic evidence		Admitted
JXM-06	U.S. Patent No. 6,771,980 File History	Intrinsic evidence		Admitted
JXM-07	U.S. Patent No. 6,879,843	Intrinsic evidence		Admitted
JXM-08	U.S. Patent No. 6,879,843 File History	Intrinsic evidence		Admitted
JXM-09	U.S. Patent No. 7,450,114	Intrinsic evidence		Admitted
JXM-10	U.S. Patent No. 7,450,114 File History	Intrinsic evidence		Admitted
JXM-11	Initial Expert Report of Dr. Tim A. Williams on Claim Construction	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-12	Initial Expert Report of J. Tipton Cole on Claim Construction	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-13	Expert Report of James A. Storer, PH.D. Regarding Claim Construction for U.S. Patent No. 6,879,843	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-14	Expert Report of Wayne E. Stark Regarding Claim Construction for U.S. Patent No. 7,468,644	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-15	Expert Report of Ravin Balakrishnan Regarding Claim Construction for U.S. Patent No. 7,450,114	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-16	Expert Report of James A. Davis Regarding Claim Construction for U.S. Patent No. 7,706,348	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-17	Rebuttal Expert Report of Dr. Tim A. Williams Regarding Claim Construction for U.S. Patent No. 7,489,644 and 7,706,348	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-18	Rebuttal Expert Report of J. Tipton Cole on Claim Construction	Extrinsic evidence as to the meaning of disputed terms		Admitted
JXM-19	Rebuttal Expert Report of James A. Storer Regarding Claim Construction for U.S. Patent No. 6,879,843	Extrinsic evidence as to the meaning of disputed terms		Admitted