EXHIBIT 8

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA SAN JOSE DIVISION

ELAN MICROELECTRONICS CORPORATION,

No. C 09-01531 RS

CLAIMS CONSTRUCTION ORDER

E-Filed 11/1/10

Plaintiff.

v.

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APPLE, INC.,

Defendant.

I. INTRODUCTION

The four patents-in-suit in this action—two owned by plaintiff Elan Microelectronics Corporation, and two owned by defendant Apple, Inc., all claim advances in the field of "touchpad" technology. Touchpads are computer input devices that sense the presence, position, and movements of a user's finger or a stylus on or very close to the surface of the device. The prototypical embodiments of the claimed inventions are implemented in the familiar touchpads common on the keyboards of laptop computers, typically just below the keys. The inventions also have potential application in a wide range of electronic devices, including ATMs, airline ticketing kiosks, "smart" phones, and control panels for virtually any type of electronically operated apparatus that requires or allows for user input.¹

Some of these applications might be more precisely described as "touchscreens"—i.e. devices capable of displaying dynamically varying information in addition to accepting user input. Because

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Pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir. 1995) (en banc), aff'd 517 U.S. 370 (1996), and the Local Patent Rules, the parties have presented approximately nine terms found in the claims of the patents for construction by the Court. Upon consideration of the parties' briefing, oral argument, and the various materials submitted subsequent to the hearing, the disputed terms are construed as set out below.

II. LEGAL STANDARD

Claim construction is a question of law to be determined by the Court. Markman, 52 F.3d at 979 (Fed.Cir. 1995) (en banc), aff'd 517 U.S. 370 (1996). "Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim." Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed.Cir. 2005), quoting Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed.Cir.1998). Accordingly, a claim should be construed in a manner that "most naturally aligns with the patent's description of the invention." *Id*.

The first step in claim construction is to look to the language of the claims themselves. "It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips*, 415 F.3d at 1312, quoting *Innova/Pure Water*, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed.Cir. 2004). A disputed claim term should be construed in a manner consistent with its "ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1312-13. The ordinary and customary meaning of a claim term may be determined solely by viewing the term within the context of the claim's overall language. See id. at 1314 ("the use of a term within the claim provides a firm basis for construing the term."). Additionally, the use of the

the addition of a dynamic output does not in and of itself preclude infringement of a claim relating to input functions, use of the term "touchpads" in this order should generally be understood to include any touchscreens that embody the same inventions. Where a distinction between the two terms is potentially significant, it will be highlighted.

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term in other claims may provide guidance regarding its proper construction. Id. ("Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.").

A claim also should be construed in a manner that is consistent with the patent's specification. See Markman, 52 F.3d at 979 ("Claims must be read in view of the specification, of which they are a part."). Typically the specification is the best guide for construing the claims. See Phillips, 415 F.3d at 1315 ("The specification is . . . the primary basis for construing the claims."); See also Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir. 1996) ("the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term."). Although in limited circumstances the specification may be used to narrow the meaning of a claim term that otherwise would appear to be susceptible to a broader reading, see SciMed Life Sys., Inc. v. Advanced Card. Sys., Inc., 242 F.3d 1337, 1341 (Fed.Cir. 2001); Phillips, 415 F.3d at 1316, precedent forbids a construction of claim terms that imposes limitations not found in the claims or supported by an unambiguous restriction in the specification or prosecution history. Laitram Corp. v. NEC Corp., 163 F.3d 1342, 1347 (Fed.Cir. 1998) ("[A] court may not import limitations from the written description into the claims."); Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed.Cir. 1998) ("[W]hile . . . claims are to be interpreted in light of the specification, it does not follow that limitations from the specification may be read into the claims."); SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1121, (Fed.Cir. 1985) (en banc) ("It is the *claims* that measure the invention.") (emphasis in original).

A final source of intrinsic evidence is the prosecution record and any statements made by the patentee to the United States Patent and Trademark Office ("PTO") regarding the scope of the invention. See Markman, 52 F.3d at 980 ("Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent."); Phillips, 415 F.3d at 1317. For example, statements that distinguish a claim from the prior art may narrow the scope of a disputed term. See, e.g., Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1323 (Fed.Cir. 2003) ("The

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doctrine of prosecution disclaimer . . . preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution"). Because the prosecution history reflects an ongoing negotiation between the patentee and the USPTO, however, it often is difficult to determine with exact precision the scope or meaning of particular statements. *Phillips*, 415 F.3d at 1317. Thus, the prosecution history usually is accorded less weight than the claims and the specification. Id.

The court also may consider extrinsic evidence, such as dictionaries or technical treatises, especially if such sources are "helpful in determining the true meaning of language used in the patent claims." Phillips, 415 F.3d at 1318 (quoting Markman, 52 F.3d at 980). Ultimately, while extrinsic evidence may aid the claim construction analysis, it cannot be used to contradict the plain and ordinary meaning of a claim term as defined within the intrinsic record. Phillips, 415 F.3d at 1322-23.

III. DISCUSSION

A. Elan's Patents

1. U.S. PATENT NO. 5,825,352

(a) Estoppel issues

In prior litigation, Elan's predecessor-in-interest, Elantech, advocated and obtained constructions of the terms of this patent, which it then successfully enforced against another party through summary judgment and a preliminary injunction entered in its favor. See Elantech Devices Corp. v. Synaptics, Inc., No. C 06-01839 CRB. Apple contends that under principles of judicial estoppel and of issue preclusion (also known as collateral estoppel²) Elan should now be barred from seeking constructions other than those plaintiff advanced in the *Elantech* litigation. The potential judicial estoppel or issue preclusion bears on a claim construction dispute, discussed

The Supreme Court has noted that use of the terms "claim preclusion" and "issue preclusion" avoid certain confusion arising from the older terms "res judicata" and "collateral estoppel." See Migra v. Warren City School Dist. Bd. of Educ., 465 U.S. 75, 77 n. 1 (1984). Except when quoting cases using the older terms, this order will heed that direction.

further below, as to whether there is a temporal sequence limitation embodied in the claims at issue. The parties agree that the *Elantech* court's construction includes such a limitation; the question is whether Elan may now offer a construction to the contrary.

Issue preclusion applies where "(1) the issue necessarily decided at the previous proceeding is identical to the one which is sought to be relitigated; (2) the first proceeding ended with a final judgment on the merits; and (3) the party against whom collateral estoppel is asserted was a party or in privity with a party at the first proceeding." Reyn's Pasta Bella, LLC v. Visa USA, Inc., 442 F.3d 741, 746 (9th Cir. 2006); *Hydranautics v. FilmTec Corp.*, 204 F.3d 880, 885 (9th Cir. 2000). There is no dispute here that both the finality and the privity requirements are satisfied.³ Nor is there any controversy that claims to be construed in this instance are the very same ones construed in Elantech. The sole question is whether the Elantech court "necessarily decided" the issue of whether or not the claims include a temporal sequence limitation.

Apple faults Elan for characterizing the question of temporal sequence as having not been "important" to the *Elantech* claims construction. Viewing "important" as a relative term, Apple argues that nothing in the doctrine of issue preclusion calls for evaluating how much importance the parties or the court attached to a particular point in the prior proceeding. Elan, by contrast, employs the word "important" not in a relative sense, but to convey Elan's view that the *Elantech* claims construction did not turn on resolving the temporal sequence issue one way or the other. As such, Elan's use of the term "important," while less precise than the term "necessarily decided," addresses the relevant question of whether the disputed portion of the *Elantech* construction should be given

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³ Notwithstanding the reference to a "final judgment" in typical formulations of the standard, it is well settled that "[t]o be 'final' for collateral estoppel purposes, a decision need not possess 'finality' in the sense of 28 U.S.C. § 1291." Luben Industries, Inc. v. United States, 707 F.2d 1037, 1040 (9th Cir. 1983). Rather, a "final judgment" for purposes of issue preclusion can be any prior adjudication of an issue in another action that is determined to be sufficiently firm to be accorded conclusive effect. Id.; see also, In the matter of John E. Lockhard, 884 F.2d 1171, 1175 (9th Cir. 1995).

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preclusive effect as an actually adjudicated matter, or whether it was more in the nature of "dicta" otherwise not binding on Elan.⁴

Apple makes much of the fact that Elan's predecessor succeeded in obtaining summary judgment of infringement and injunctive relief based on the construction it advanced. The difficulty with this argument is that the prior construction advocated by Elan's predecessor is *narrower* than the one Elan now asks the Court to adopt. Thus, at least as to infringement, Elan's predecessor presumably would have obtained the same summary judgment and injunctive relief in the prior action even under the broader construction Elan proposes here. Given the further fact that there is no indication that the *Elantech* parties ever identified the temporal sequence as an issue to be resolved one way or the other, Elan's contention that the issue was not "necessarily decided" in the prior litigation has at least some merit.

The question remains, however, whether Elan's predecessor may have been able to avoid certain *invalidity* defenses by urging and obtaining a relatively narrow construction. There is no evidence on that point in the present record. At the hearing, Apple implied that the uncertainty should weigh against Elan—i.e., because this Court cannot know what strategic advantages Elan's predecessor may have gained by specifically requesting and obtaining the narrow construction, it is appropriate to hold Elan to that construction now. Ultimately, however, it is Apple's burden to establish the existence of issue preclusion. See Offshore Sportswear, Inc. v. Vuarnet International, B.V., 114 F.3d 848, 850 (9th Cir. 1997) ("The party asserting preclusion bears the burden of showing with clarity and certainty what was determined by the prior judgment."). Because Apple can point neither to any express consideration by the *Elantech* court as to whether or not the claims should include a temporal sequence limitation, nor to any aspect of the summary judgment or injunction that would have been precluded even under the broader construction now proposed, Apple has not established that issue preclusion applies.

In one sense, every word in a court's claim construction is "necessary" because that construction becomes an instruction to the jury as to what the claim means. For purposes of issue preclusion, though, it does not automatically follow that the inclusion of any particular word or phrase reflects the resolution of an issue "necessarily decided" by the court.

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The separate concept of judicial estoppel "is an equitable doctrine invoked by a court at its discretion." New Hampshire v. Maine, 532 U.S. 742, 750 (2001) (quoting Russell v. Rolfs, 893 F.2d 1033, 1037 (9th Cir. 1990)). In deciding its applicability to a particular case, factors typically considered include, (1) whether a party's later position is "clearly inconsistent" with its earlier position; (2) whether the party succeeded in persuading a court to accept the earlier position, and (3) whether the party would derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped. New Hampshire, 532 U.S. at 750-751.

Here, even though neither the parties nor the court in *Elantech* may have seen the temporal sequence as an issue that necessarily had to be decided, it is indisputable that Elan's predecessor offered a construction that is "clearly inconsistent" with that Elan is now advocating. There also can be no dispute that the *Elantech* court accepted the prior position. As discussed above, however, there is no clear indication that Elan's predecessor obtained any advantage by advocating for a narrower construction than Elan seeks in this action. Nor has Apple identified any "unfair detriment" or prejudice it has suffered as a result of Elan's attempt to offer a different construction. Apple complains that it was surprised by Elan's change of course, but it has had a full opportunity to address the merits of Elan's present proposal and has not pointed to anything it did or did not do in reliance on its prior understanding of Elan's position.⁵ Accordingly, the facts here do not warrant application of judicial estoppel.

(b) "Identify a First Maxima . . ." (Claims 1 and 18)

Although principles of judicial estoppel and issue preclusion do not compel the conclusion, Elan has failed to show that disputed claims do not contain the requirement of a temporal sequence.⁶

For example, Apple does not suggest that its engineers "designed around" these claims of the '352 patent as construed in *Elantech*, and that it now faces liability for infringement only if the claims are construed more broadly in this action. While less extreme instances of prejudice also might suffice to invoke judicial estoppel, Apple has not shown they exist either.

Analysis of whether this claim requires a temporal sequence is complicated by the fact that at the time of the parties' briefing and the hearing, they disagreed as to whether the claim also required a spatial sequence, a limitation Apple proposed to incorporate into the construction by specifying that

The claims state:

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- identify a first maxima in a signal corresponding to a first finger
- identify a minima following the first maxima
- identify a second maxima in a signal corresponding to the second finger following said minima

The parties are in agreement that "maxima" should be construed as "peak value in a finger profile taken on a line obtained from scanning the touch sensor," and that "minima" means "the lowest value in the finger profile taken on said line."⁷ The dispute is over additional language proposed by Apple clarifying that identification of the first maxima, the minima, and the second maxima must proceed in that temporal sequence.

In arguing that no such temporal order is required, Elan relies on the principle that, "[u]nless the steps of a method actually recite an order, the steps are not ordinarily construed to require one." Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323,1342-43 (Fed.Cir. 2001). Interactive Gift, however, explained that the order is a proper claim limitation where the, "steps implicitly require that they be performed in the order written," or where otherwise directly or implicitly required by the specification. Id.

the finger profile be "taken on an axis." Apple's briefing, in particular, did not distinguish between the support for the temporal sequence and the spatial sequence; it argued both were intrinsic to how the claimed invention works. As the result of further meet and confer negotiations conducted in connection with a parallel proceeding involving the '352 patent that is pending before the International Trade Commission, Elan has now conceded that the claim may properly be construed to require that the finger profile be taken "on a line." Because much of Elan's briefing in this action was focused on taking issue with the term "axis," it is not entirely clear what arguments it might offer that there is no temporal sequence, even though it has agreed there is a linear spatial sequence. Because the Court relies primarily on the claim language to conclude there is a temporal sequence rather than on Apple's contentions that the spatial and temporal sequence go hand-in-hand and are both intrinsic to the nature of the claimed invention, further briefing from Elan on the point is unnecessary.

These constructions are identical to those in *Elantech*, with the addition of the now-agreed-to phrase, "taken on a line." See note 6, supra.

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Here, the claim language plainly implies, or even explicitly calls for, a particular order. The minima to be identified is described as "following" the first maxima. The second maxima is to "follow[] said minima." It is well established that where a claim step refers to the completed results of a prior step, the order is a claim limitation. E-Pass Technologies, Inc. v. 3Com Corp., 473 F.3d 1213, 1222 (Fed.Cir. 2007) (subsequent reference in claim to "said transferred data set" requires that data set first be transferred); Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1376 (Fed.Cir. 1998) (claim step of mixing ion solution with "said acidified groundwater" must follow in time step of adding acid to the groundwater). While in this instance the minima may be in existence whether or not it has already been identified, the claim reference to "said minima" strongly implies the temporal sequence.

The specification confirms that the process proceeds in order. For example, the specification explains that a variable is "initially" assigned a particular value to indicate that the algorithm is in the process of finding the first peak. '352 patent at 9:41. When the first peak is found, the specification explains that "[a]t this point, the peak has been found," but "the valley not yet been found." Id. at 9:53, 9:66-67. "[E]ventually," the specification continues, the finger profile will rise again "such that the valley has been detected." *Id.* at 10:2-4. Yet "[a]s long as" the finger profile continues its upward trend, the second peak has not yet been identified. *Id.* at 10:15-16. Finally, the finger profile "will eventually start to decrease," at which point the second peak has been found. *Id.* at 10:19-20.

Against the claim language and this evidence in the specification, Elan's suggestion that there need only be a spatial relationship among the two maximas and the minima is not persuasive. Accordingly, Apple's proposed construction, as modified by the parties' agreement regarding the phrase "on a line," will be adopted. The jury will be instructed that:

At the hearing, Elan argued there is no reason that a particular maxima must be the "first" as opposed to the "second." That is true, but it reflects only the absence of any requirement to read along the line in a specific direction, such as left to right rather than right to left. Apple confirmed that it does not advance any such directional limitation, and that either of two maximas could be designated as the first, with the other then being the second.

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1. "identify a first maxima in a signal corresponding to a first finger" means: "Identify	a
first peak value in a finger profile taken on a line obtained from scanning the touch sensor."	

- 2. "identify a minima following the first maxima" means: "Identify the lowest value in the finger profile taken on said line that occurs after the first peak value and before another peak value is identified."
- 3. "identify a second maxima in a signal corresponding to the second finger following said minima" means: "After identifying the lowest value in the finger profile taken on said line, identify a second peak value in the finger profile taken on said line."

(c) "Identify" (Claims 1 and 18)

As indicated above, the term "identify" appears in the phrases "identify a first maxima," "identify a minima," and "identify a second maxima," in claims 1 and 18 of the '352 patent. Apple contends that "identify" should be construed as "recognize a value to be," whereas Elan argues that the plain and ordinary meaning of the term suffices, with no further construction necessary. It appears that Apple is concerned that, without further construction, Elan will subsequently argue that merely collecting data that includes values that are maximas or minimas will suffice, whether or not the data points representing such maximas or minimas are recognized as such. Elan, in turn, objects to Apple's proposed construction on the grounds that it potentially includes an additional limitation that the *specific* values of the maximas or minimas be determined.

At the hearing, Apple offered the analogy of looking at a group of people of varying heights without specifically identifying which among them is either the tallest or the shortest. Elan countered that it does not object to the notion that "identifying" the tallest and shortest individuals in such a group would include recognizing and specifying the location of those persons within the group, but that there should be no requirement to determine the specific height (e.g., 6'4") of the tallest or the shortest. Elan suggests that inclusion of the phrase ". . . a value to be" would arguably call for determining such measurements.

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Thus, there is no dispute between the parties that the term "identify" includes the concept of recognition. Nevertheless, at this juncture, it does not appear that it would be useful to substitute one plain word, "identify," with another, "recognize." Additionally, Elan appears to be correct that the additional phrase, "a value to be" only adds to potential ambiguity, and possibly even creates an additional limitation that Apple has not shown to be warranted. Accordingly, the term "identify" will not be given a construction beyond its plain and ordinary meaning at this time. This ruling is without prejudice to a further construction, either in the course of deciding any dispositive motions or when jury instructions are being formulated, should some latent ambiguity that needs resolution emerge.

(d) "In Response To" (Claims 1 and 18)

Claims 1 and 18 of the '352 patent call for, "providing an indication of the simultaneous presence of two fingers in response to identification of said first and second maxima." (Emphasis added.) Apple seeks to have "in response to" construed as "after and in reaction to." Elan again contends that no construction beyond the plain and ordinary meaning is required.

The parties' dispute regarding this term appears to arise from Apple's concern that Elan may argue that the claims are infringed by a device or method that relies on additional data beyond merely the identification of a first and second maxima to determine and report the simultaneous presence of two fingers. Elan responds with the legal principle that the "mere addition of elements in the accused product or process cannot negate infringement." Dow Chemical Co. v. Sumitomo Chemical Co., Ltd., 257 F.3d 1364, 1380 (Fed. Cir. 2001).

Apple has persuasively shown that the invention claimed in the '352 patent utilizes the identification of a first and second maxima, without some amalgam of additional information, to determine and indicate the simultaneous presence of two fingers. Its proposed construction, however, only substitutes the word "reaction" for "response" and adds the redundant phrase "after and." The word "reaction" does not appear to carry any additional or clarifying connotation in this

⁹ Neither a "response" nor a "reaction" could, in ordinary usage, come *before* the antecedent event.

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context that would meaningfully distinguish it from "response." As such, the proposal does little to eliminate the potential ambiguity with which Apple is concerned.

Apple insists that this dispute is like that in O2 Micro Intern. Ltd. v. Beyond Innovation Technology Co., Ltd., 521 F.3d 1351 (Fed. Cir. 2008), and therefore the Court lacks discretion to decline to construe the term beyond its ordinary meaning because, "[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it." Id. at 1362. The absence of any proposed construction from either party that meaningfully resolves the purported dispute one way or the other, however, is problematic. Accordingly, at this juncture, the Court declines to adopt any construction of the term "in response to" beyond its plain and ordinary meaning. Again, this ruling is without prejudice to any subsequent construction that may become necessary in light of any ambiguities appearing in the course of dispositive motions or at trial.

Additionally, based on the present record and briefing, it appears that the parties' "fundamental dispute" regarding this term may be one of potential infringement analysis rather than claim construction. In other words, the question may not be so much what "in response to" means. Rather, the inquiry may turn on whether a particular accused device or method merely includes other elements that do not defeat infringement, or instead fails to indicate simultaneous finger presence "in response to" identifying two maximas. If such questions are ultimately presented in this litigation, the Court will bear in mind that claims are not to be construed "to cover" or "not to cover" the accused device, and will ensure that if any additional construction is necessary, it will precede the infringement analysis. See SRI Intern. v. Matsushita Elec. Corp. of America, 775 F.2d 1107 (Fed. Cir. 1985). At this point, however, the parties have simply presented too little information for the Court to devise its own construction to resolve the parties' dispute, even assuming any part of it relates to claim construction rather than infringement analysis. See Wilson Sporting Goods Co. v. Hillerich & Bradsby Co., 442 F.3d 1322, 1326-27 (Fed. Cir. 2006) ("While a trial court should certainly not prejudge the ultimate infringement analysis by construing claims with an aim to include or exclude an accused product or process, knowledge of that product or

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process provides meaningful context for the first step of the infringement analysis, claim construction.").

(e) "Means For Selecting An Appropriate Control Function" (Claim 19)

Claim 19 of the '352 patent depends from independent claim 18. The terms of the independent claim have not been presented for construction. There is no dispute that claim 19 is a means-plus-function claim, governed by 35 U.S.C. §112, ¶ 6. 10 Claim 19 calls for a:

means for selecting an appropriate control function based on a combination of a number of fingers detected, an amount of time said fingers are detected, and any movement of said fingers.

Apple and Elan agree that the function recited by this claim is, "selecting an appropriate control function based on a combination of a number of fingers detected, an amount of time said fingers are detected, and any movement of said fingers." The sole dispute is whether the specification discloses any structure that performs this function. Apple asserts there is no such structure in the specification; Elan contends the corresponding structure is: "Analog multiplexor 45, Capacitance measuring circuit 70, A to D convertor 80, Microcontroller 60, and/or software, firmware, or hardware performing the claimed function."

Although this is a claims construction proceeding, not a summary judgment motion, Apple nonetheless contends that the claim is invalid as indefinite under 35 U.S.C. § 112. Where a claim cannot be given a construction that satisfies section 112, courts not infrequently will find it invalid during the course of claim construction, even in advance of any separate summary judgment motion. See, e.g., Finisar Corp. v. The DirecTV Group, Inc., 416 F.Supp.2d 512, 519 (stating, in claim construction order, "[t]he court finds that this claim term is indefinite because no structure is disclosed for performing the recited function."); see also Praxair, Inc. v. ATMI, Inc., 543 F.3d 1306,

That provision states: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

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1319 (Fed. Cir. 2008) ("Indefiniteness is a matter of claim construction, and the same principles that generally govern claim construction are applicable to determining whether allegedly indefinite claim language is subject to construction."). Elan offers no procedural objection to deciding invalidity at this juncture, although it does point out that invalidity must be established by clear and convincing evidence, and argues that Apple has not met his burden in that regard.

Turning then to the merits of the dispute, the structure identified in Elan's proposed construction is plainly inadequate. Elan merely points to certain general hardware associated with a touchpad and adds a reference to unspecified "software, firmware, or hardware performing the claimed function." The law is clear that, "[f]or a patentee to claim a means for performing a particular function and then to disclose only a general purpose computer as the structure designed to perform that function amounts to pure functional claiming." Aristocrat Techs., v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008); see also Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340-41 (Fed. Cir. 2008) ("[S]imply reciting 'software' without providing some detail about the means to accomplish the function is not enough."). Rather, the Federal Circuit has instructed that "[a] computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm." Aristocrat, 521 F.3d at 1333 (Fed. Cir. 2008) (emphasis added). Elan's proposed construction identifies no algorithm whatsoever.

In its briefing, Elan argues that its construction should be adopted nonetheless because there is "copious" structure disclosed in the specification, including numerous detailed "exemplary" algorithms. At a minimum, Elan would need to propose a claim construction that specifies with greater clarity the portions of the specification it contends describe the structure—including algorithms—that perform the claimed function of selecting an appropriate control function based on the finger data described in the claim. Even assuming Elan could do that if given the opportunity to refine its proposed construction, however, nothing it has identified in its briefing as a relevant algorithm adequately discloses how the claimed function may be carried out.

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Specifically, Elan points to Figures 7A-F and the accompanying text to argue that the specification discloses algorithms for associating particular finger gestures with various control functions. Examination of the specification, however, reveals that it only explains that the finger gestures illustrated in Figs. 7A-F "can be programmed" or "can be defined" to invoke particular cursor movement or button simulation functions. '352 patent at 13:1-18.

Figure 8 and its accompanying text, on which Elan also relies, describes an exemplary procedure for reporting either cursor motion, or a simulated button click, or both, depending on the number of fingers detected and their movements. The specification states that this partly describes an algorithm for "recognizing movement by one 'cursor' finger while the other 'button' finger is maintained in position." '352 patent at 13:51-55. The specification suggests that such finger movements could be used for marking text, as one example, or to implement "other functions." '352 patent at 13:50-51; 55-58. The specification further explains that although Figure 8 and the accompanying text is "associated" with the one "cursor" finger and one "button" finger depicted in Figure 7F, "various operations are permitted." '352 patent at 13:59-65.

Thus, what Figure 8 and the explanatory text describe is, as Apple contends, essentially a procedure for providing *input* to a logic process which would then "select an appropriate control function" based on that process. While Figure 8 does describe distinguishing between certain finger gestures as a simulated button click and others as cursor movement, it falls short of providing an algorithm for "selecting an appropriate control function" based on the finger data.

At bottom, Elan's argument reduces to its further assertion that a person of ordinary skill in the art would have little difficulty in developing "software, firmware, or hardware" that could perform the claimed function. It very well may be that, given the teachings of the patent allowing for detection of multiple fingers, it would be a relatively simple matter to implement a software, firmware, or hardware means for selecting appropriate control functions based on the finger data.¹¹

The summary of the invention expressly acknowledges that it has two separate aspects, "[1] detection of multiple objects, typically fingers, and [2] assignment of various functions to particular actions by the movement of one or both fingers." '352 patent at 2:38-41. The present question is whether Elan has validly claimed the latter aspect in claim 19.

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In so arguing, however, Elan is conflating the requirement of *enablement* with definiteness. See Aristocrat, supra, 521 F.3d at 1336. ("Enablement of a device requires only the disclosure of sufficient information so that a person of ordinary skill in the art could make and use the device. A section 112 paragraph 6 disclosure, however, serves the very different purpose of limiting the scope of the claim to the particular structure disclosed, together with equivalents.") The problem is not that the patent cannot be practiced without undue experimentation because the specification fails to teach an algorithm for selecting appropriate control functions based on finger data. Rather, the difficulty is that Elan is effectively attempting to use the means-plus-function format to encompass any and all algorithms anyone might devise for performing that function. See Aristocrat, 531 F.3d at 1336 (rejecting argument that means-plus-function claim could validly reach any microprocessor that performed the claimed functions, "regardless of how it was programmed.").

Had Elan disclosed an algorithm, its claim would extend to that algorithm and any equivalents, but it is not entitled to preempt others from making or using any means that performs the specified function. Accordingly, claim 18 of the '352 patent is indefinite because there is no structure adequately disclosed in the specification to perform the claimed functions.

2. U.S. PATENT NO. 7,274,353

Elan's '353 Patent describes a relatively straightforward concept: a touchpad that can be switched between up to three "modes," with each mode allowing for a different kind of user input. For example, in one mode the touchpad might serve as a typical laptop computer touchpad, used for controlling movement of the cursor on the screen. In another mode it could serve as a number keypad, for entering digits and mathematical operations. In a third possible mode, the touchpad could be used for entering handwriting, either for display in image form or for conversion to printed text, assuming appropriate handwriting recognition software was available.

To implement this concept, the claims call for "a first pattern on [the surface of the touchpad] for representing a mode switch to switch said touchpad between a key mode and a handwriting mode." '323 Patent, Claims 1, 4, 7, and 10. Additionally, the same claims recite "a

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plurality of second patterns on said plurality of regions for operation in said key and handwriting modes." There is no dispute that in both instances, "patterns" refers to information visible on the touchpad intended to convey to the user what the effect of touching a particular location on the touchpad will have. In other words, touching the "first pattern" will switch between the various operational modes. Touching any one of the "second patterns" will have an effect that corresponds to whatever that particular "pattern" represents. For example, if the touchpad has been switched to operate in number keypad mode, touching the pattern "2" will cause a 2 to be entered.

The parties' dispute centers on whether or not the claims should be construed to require the "patterns" to be *printed* on the touchpad. Apple contends that the specification plainly and repeatedly describes the patterns as printed; Elan argues that Apple's proposed construction impermissibly imports a limitation from the preferred embodiment described into claims that have no such restrictive language.

Thus, in this patent, the distinction between the terms "touchpad" and "touchscreen" becomes potentially relevant. Apple contends that disputed claims of the patent should be construed in such a way that they would only reach what would be considered a touchpad, in the narrow sense of a device that accepts user input, but that does not display any dynamic, variable output. On a traditional touchpad, the patterns could *only* be printed or otherwise permanently marked, because such a device lacks a dynamic output. Elan, on the other hand, is effectively arguing that the claim language is broad enough to encompass a touch screen, where the patterns are not necessarily printed on the surface, but can be *displayed*. 12 Nevertheless, Apple has not requested that the term "touchpad" in the claims be construed to exclude touchscreens, likely because a distinction between the two terms does not appear to be rigorously observed in the art, and there would be insufficient evidence to conclude such a distinction is embodied in the claims here. Accordingly, the term "touchpad" will continue to be used herein to encompass touchscreens.

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Even a device that might more precisely be described as a touchscreen may have specific areas labeled with permanent printing that are dedicated to particular functions. Apple exhibited a touch screen phone configured in such a manner at the tutorial in this action.

Elan further points to fairly typical language in the specification warning that the claims are not limited to specific embodiments described and that "variation or modifications are possible within the scope of the present invention." '323 Patent, 3:39-43. This principle of law, which likely would have the same effect whether or not recited in the specification, is undoubtedly correct, but it does not significantly further the analysis in and of itself.

Next, Elan argues that one of the innovations of the patent is that a specific area of the touchpad can have different functions depending on the mode selected, and that this "innovation could not be realized" if the display were "static." The very analogy Elan uses—that a single key on a keyboard can represent either a "5" or the "%" symbol, depending on whether the shift key is pressed—undermines this argument, because on an ordinary keyboard both the "5" and the "%" symbol are printed and static.

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Finally, Elan relies on the fundamental rule that limitations from the written description generally may not be imported into the claims. See Laitram, supra, 163 F.3d. at 1347; Comark, supra, 156 F.3d at 1186 (Fed.Cir. 1998). Here, Elan is on solid ground. The fatal flaw in Apple's proposed construction is that it seeks simply to inset the term "printed," which is not present in the claims and which is not offered to modify or explain any term that does appear. The line between permissibly reading claim terms in light of the specification and impermissibly importing limitations from the specification may not always be bright, ¹³ but here there is no basis to insert "printed" into these claims. Cf. Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 93 F.3d 1572 (Fed. Cir. 1996) ("Here, the district court did not import an additional limitation into the claim; instead, it looked to the specification to aid its interpretation of a term already in the claim, an entirely appropriate practice." (emphasis added).).

The remaining aspects of the parties' proposed constructions are designed to buttress their respective positions as to whether the "patterns" must be fixed and static or not. Accordingly, the jury will be instructed that:

- 1. "a first pattern on said panel for representing a mode switch to switch said touchpad between a key mode and a handwriting mode" means "a graphical representation on said panel of a mode switch to switch said touchpad between a key mode and a handwriting mode."
- 2. "a plurality of second patterns on said plurality of regions for operation in said key and handwriting modes" means "additional graphical representations on the regions of said panel for performing operations in key and handwriting modes."

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See Phillips, supra, 415 F.3d at 1323 ("we recognize that the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice."); Comark, supra, 156 F.3d at 1186-87 ("there is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification").

B. Apple's Patents

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1. U.S. PATENT NO. 5,764,218

(a) "Cursor Control Operation" (Claims 1 and 5)

Apple's '218 patent relates generally to using a touchpad to simulate mechanical buttons by detecting and tracking "contact intervals" (how long a user touches a point on the touchpad) and "gap intervals" (the amount of time between contacts). For example, a user's quick tap on the touchpad can be interpreted as equivalent to a button "click," as opposed to the beginning of cursor movement.

The parties' sole dispute presented for claim construction is whether "cursor control operation" as used in Claims 1 and 5 applies solely to commands that include cursor movement, such as "click and drag", "double click and drag," "sticky drag," and ordinary cursory movement, or whether it also encompasses touchpad operations intended *only* to simulate button clicks that do not include moving the cursor.¹⁴

In arguing that the claims are limited to operations that include cursor movement, Elan relies on (1) the presence of the word "cursor" in the disputed phrase, and (2) a portion of the specification that it contends shows that "cursor control operation" specifically defined as a "cursor tracking operation." While there is some merit to Elan's suggestion that the presence of the word "cursor" in the claims could be read to imply that the operation should affect the cursor, its reliance on the specification is misplaced. The passage in the specification to which Elan points is expressly describing part A of figure 5—a timing diagram showing when touchpad contact will be interpreted

Apple points out that even button clicks not involving cursor movement are ordinarily meaningful only if the cursor has first been moved to some portion of the screen that has "clickable" content, such as an icon, or a word in a word processing program. In one sense, therefore, all touchpad operations usually implicate cursor movement. Nevertheless, there is still a basis for distinguishing between operations that involve cursor movement while a button or simulated button has been activated, and merely clicking a simulated or mechanical button without moving the cursor at the same time. Additionally, it is not always necessary to position the cursor before a button click can serve a purpose. For example, in some situations a user can move through various clickable options on a computer screen by using the tab key, and then select the desired option with button clicks (mechanical or simulated), without ever using the touchpad or other pointing device to move the cursor.

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as intended to control cursor tracking. The specification explains, with respect to this diagram, that "if the first contact interval lasts longer than the maximum tap interval . . . the operation of the touch-sensitive cursor controlling input device is identified as a cursor control operation (i.e., a cursor tracking operation)." '218 patent at 6:9-17.

Elan's attempt to cast this passage, which describes *one* specific operation, as a "clear definitional statement" of what "cursor control operation" means in the patent proves too much. Elan's own position is that the disputed phrase is *not* limited to the pure "cursor tracking operation" illustrated in part A of figure 5, but that it includes any of the cursor movement-plus-button click operations shown in parts D, E, and F of figure 5 as well. The association between "cursor control operation" and "cursor tracking operation" in the text describing part A of figure 5 cannot be seen as a general definition, as there is no basis to extend it to parts D, E, and F of figure 5, while at the same time excluding parts B and C of the same figure (which show click and double-click operations). 15

Elan further contends that the specification typically uses the less-specific term "control operations" when it lists functions that include button simulation without simultaneous cursor movement. See, e.g., '218 patent abstract ("numerous control operations such as cursor manipulation, click, multi-click, drag, click-and-drag, and multi-click-and-drag operations"); '218 patent at 10: 8-13 ("... in order to perform control operations (such as cursor manipulation, click, multi-click, drag, click-and-drag, and multi-click-and-drag operations)."). While that may be so, it is not enough to define or limit "cursor control operations" to exclude those that only simulate button clicks.

Finally any ambiguity in the specification is eliminated by reference to the prosecution history, where Apple expressly referred to button-simulation-only commands as examples of cursor

At the time it filed its opening brief, Apple believed Elan was arguing that "cursor control operations" referred *only* to cursor tracking as depicted in part A of figure 5. While such a contention would avoid the issue described above, it would be untenable in light of the fact that the claims call for distinguishing among at least three different types of cursor control operations. See '218 Patent at 13:34-38. Elan's opening brief makes clear that is not what it is contending.

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control operations. See Edwards Lifesciences LLC v. Cook Inc., 582 F.3d 1322, 1334 (Fed. Cir. 2009) (a patentee's definition controls where "the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history"); Phillips, supra, 415 F.3d at 1317 ("Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent."). Apple stated to the PTO that "claim 1 recites steps of distinguishing between a first cursor control operation (e.g., a drag), a second cursor control operation (e.g., a single-click) and a third cursor control operation (e.g., a multiple-click)." Dec. 26, 1996 Amendment at p. 15. Elan argues that the examiner did not adopt this definition and instead referred to other operations that include cursor movement when allowing the claims. The examiner's comments, however, related to his view that Apple had sufficiently distinguished certain prior art by including the capability to provide a "sticky drag" as one function, and in no way establish a rejection of the notion that "cursor control operations" may also include button-simulation-only functions such as "single-click" and "multiple-click."

Accordingly, Apple's contention that "cursor control operations" includes commands that only simulate button clicks without simultaneous cursor movement is well-taken. That said, Apple's proposed construction—"Operations by a cursor controller such as a drag, single-click and multiple click"—appears to introduce an unnecessary additional concept through its use of the term "a cursor controller," as well as potential ambiguities that might arise from listing some, but not all, of the particular control operations described in the patent. ¹⁶ Accordingly, "cursor control" operations will be construed to mean: "Operations such as moving the cursor, simulating single or multiple button clicks, and dragging objects by utilizing a combination of simulated button clicks and cursor movement." Because the parties have not had the opportunity to identify any unintended issues that might arise from this language, the construction is without prejudice to further refinement at the time jury instructions are formulated.

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²⁶ While the formulation "such as . . . ", followed by examples may be appropriate given that the claims are not necessarily limited to the operations described in the specification, the selective use 27 of an arbitrary subset of the described operations could create confusion.

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2. U.S. PATENT NO. 7,495,659

A variety of technologies exist for detecting the presence of a finger or other implement on or near a sensing surface. In some, rows of physical sensors intersect with columns of other sensors to form a grid or matrix. In others, such as resistive touchpads, there is no physical grid or matrix as such, but the location of the finger can still be calculated by reference to voltage changes on the x and y axes. Regardless of the nature and number of physical sensors, the location of a user's contact with the touchpad is ordinarily reported in terms of "coordinates." The coordinate system is an abstraction, and the number of possible coordinates may be much larger than the actual number of sensors, even where there is a physical matrix.

The aspects of Apple's '659 patent that are at issue in this claims construction proceeding relate to dividing a touchpad into different zones, such that user contact in any part of a particular zone will be reported as a contact with that zone, rather than as a more specific coordinate. The parties seek construction of two rather esoteric claim terms. To the extent that a purpose of claims construction is to devise explanations that can be given to a jury as to the meaning of the claims, neither party has proposed constructions that appear to add significant clarity to the issues a jury may ultimately be asked to decide. Accordingly, this order will not attempt to construct explanations of the disputed terms that can be used as jury instructions—further efforts from the parties in that regard will be necessary at some appropriate point in the future. The Court will, however, address the apparent substance of the parties' disputes over these terms.

(a) "One or More Logical Device Units" (Claims 1, 8, 10, 12, and 13)

The parties both propose replacing the phrase "logical device units," with "user actuation zones . . . representing areas of the touch pad encompassing . . . native sensor coordinates." The

While Apple's proposal omits the word "user" that precedes "actuation zones," it has not argued there is any problem with including that word.

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dispute lies in whether, as Elan contends, the construction should also indicate that (1) there must b
multiple "actuation zones," (2) the zones must be "discrete," and (3) there must be multiple
"groups" of "native sensor coordinates."

Apple's position that a single "logical device unit" suffices is supported by the unequivocal claim language: "one or more logical device units." Additionally, in describing an exemplary touchpad with 1024 sensor coordinates, the specification teaches that, "[t]he ratio of native sensor coordinates to virtual actuation zones may be between about 1024:1 to about 1:1." '659 patent at 7:17-21. Although the use of the word "about" arguably creates some uncertainty, this contemplates a possible embodiment with all 1024 coordinates grouped into a single actuation zone.

Elan's arguments turn on its assertion that construing the claims to include a single "actuation zone" would not "reflect the invention described in the specification." Whether or not such arguments might form a basis for a challenge to validity, Elan has not offered a sufficient reason to disregard the express language of the claim.

Similarly, Elan has not shown that each "actuation zone" must include more than one sensor coordinate. As noted, the specification discloses that the ratio of sensors to zones may be 1:1. While Elan raises an interesting point that associating every sensor coordinate with its own zone may create an argument that there would then be no basis to distinguish prior art not utilizing zones, that does not warrant a different result at this claims construction stage.

Finally, Elan has failed to show that any requirement of "discrete" zones must be read into the claims. While certain claims not at issue in this construction hearing call for discrete zones, these do not. See '659 patent, claims 33-36; see also Phillips, supra, 415 F.3d at 1315 ("Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.")

Notwithstanding the foregoing, it is not appropriate to adopt Apple's proposed construction, both because the term "actuation zone," even if undisputed, is unlikely to be understood easily by a jury, and because the term "native sensor coordinates" requires further definition, as discussed below. Accordingly, while this order has resolved the parties' substantive disputes, further

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proceedings to develop an appropriate construction of the term "one or more logical device units" may be required at an appropriate juncture in the proceedings.

(b) "Sensors Configured to Map the Touch Pad Surface into Native Sensor Coordinates" (Claim 1)

As suggested above, a typical touchpad utilizes a matrix of coordinates that essentially represents an abstraction—a "map" of a matrix existing in computational logic, but not in any tangible form on or in the touchpad. It is derived from physical sensors of the touchpad, but does not necessarily have a one-to-one correspondence with those sensors. The term "native sensor coordinates" as used in the disputed claims appears to refer to this abstract or logical matrix. The parties' respective attempts to translate this concept into terminology that can be understood by the jury each present certain difficulties.

Apple would simply substitute the phrase "sensor coordinates of the touchpad" for "native sensor coordinates." While there may be nothing incorrect about that formulation, it does little to clarify the meaning of the claim other than eliminating the term "native." Because "native" is commonly used in technical contexts to have meanings that may not be readily understood by laypersons, avoiding it in a claim construction is a laudable goal, but the term needs to be replaced with something that conveys more information than what Apple has proposed.

Elan, on the other hand, seeks to make the abstraction more concrete by defining "native sensor coordinates" as "[c]oordinates indicating the absolute position of an object on or near the touchpad." The problem with this approach is it defines the matrix in terms of what it does rather than what it is. Even assuming Elan's proposal is an accurate and fair description of the function of the native sensor coordinates, it would not be appropriate to incorporate that description into to the definition of the term. Rather, the function of the native sensor coordinates should be evaluated and understood in connection with those portions of the claims and the specification that address such matters.

In this instance, it seems that the parties may not have any significant substantive dispute
over what the term means, and that they are instead struggling over how that meaning can best be
expressed in a manner that is not overly-technical or involved. Accordingly, the Court declines to
adopt either of the proposed constructions, or to formulate one of its own. Further proposals and
argument will be entertained if it becomes necessary to do so at some future juncture in the
litigation.

IV. CONCLUSION

The disputed terms of the patents-in-suit are hereby construed as set forth above. Where the order has identified terms that may require further construction, such matters shall be presented, if it becomes necessary, in the context of any dispositive motions or at the time of formulating jury instructions.

IT IS SO ORDERED.

Dated: 11/1/2010

UNITED STATES DISTRICT JUDGE