EXHIBIT N

IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

ELANTECH DEVICES CORP., a corporation existing under the laws of Taiwan, R.O.C.,	No. C 06-01839 CRB
Plaintiff,	**MEMORANDUM AND ORDER RE: SUMMARY JUDGMENT MOTIONS**
v.	**FILED UNDER SEAL**
SYNAPTICS, INC., a Delaware corporation; and AVERATEC, INC., a California corporation,	
Defendants.	

Elantech Devices Corp. ("Elantech") filed suit against Synaptics, Inc. ("Synaptics") for infringement of U.S. Patent No. 5,825,352 ("the '352 patent"). Synaptics counterclaimed for infringement of U.S. Patents No. 5,880,411 ("the '411 patent"), No. 5,943,052 ("the '052 patent"), No. 5,543,592 ("the '592 patent"), and No. 6,380,931 ("the '931 patent"). The court issued a Claim Construction Order on April 6, 2007.

Now pending before the Court is Synaptics' motion for summary judgment of noninfringement of the '352 patent. Also before the Court is Elantech's cross motion for summary judgment of infringement of the '352 patent. The patent discloses a method for recognizing the presence of multiple fingers on a computer touchpad and emulating various mouse functions.

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I. BACKGROUND

A. Procedural History

The Court construed eight terms from the asserted patents as selected by the parties, including one term from Synaptics' '411 patent, three terms from Synaptics' '931 patent, and four terms from Elantech's '352 patent. See generally Claim Construction Order. Elantech properly filed its Final Infringement Contentions 30 days after the Claim Construction Order pursuant to Northern District Patent Local Rules 3-6(a). See Declaration of Sean P. DeBruine ("DeBruine Decl."), filed May 11, 2007, Ex. E (Elantech's Final Infringement Contentions) ("Final Infringement Contentions"). Fourteen days after the Claim Construction Order issued, Synaptics moved for summary judgment of noninfringement of the '352 patent.[1] Elantech subsequently cross-moved for summary judgment of infringement. The Court heard oral argument from both parties in support of their motions for summary judgment on October 5, 2007.

B. The '352 Patent

The '352 patent, entitled "Multiple Fingers Contact Sensing Method for Emulating Mouse Buttons and Mouse Operation on a Touch Sensor Pad," discloses a method for recognizing the presence of multiple fingers on a touchpad and emulating various mouse functions. The patent also discloses a touchpad with such capabilities. The patent was issued October 20, 1998, and by assignment, Elantech is the owner of the entire right, title, and interest of the '352 patent.

The '352 patent has two independent claims: 1 and 18. Claim 1 discloses a method to detect multiple fingers in contact with a touch sensor. Claim 18 discloses a touch sensor that carries out the method of claim 1. Both claims require "scanning the touch sensor to (a) identify a first maxima in a signal corresponding to a first finger, (b) identify a minima following the first maxima, (c) identify a second maxima in a signal corresponding to a

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[1]Elantech amended its complaint on July 20, 2006, naming Averatec, Inc. ("Averatec") and Prostar Computer, Inc. ("Prostar") as additional defendants. Elantech and Prostar subsequently settled. *See* Stipulated Consent Judgment, filed on November 1, 2006. Averatec has joined in Synaptics' instant motion and opposition.

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1 second finger following said minima" and "providing an indication of the simultaneous

2 presence of two finger in response to identification of said first and second maxima."

3   In the Claim Construction Order, the Court construed "scanning the touch sensor" to

4 mean "measuring the values generated by a touch sensor to detect operative coupling and

5 determining the corresponding positions at which measurements are made." Claim

6 Construction Order at 12:22-24. The Court construed the sub-limitations (a)-(c) to mean (a)

7 "identify a first peak value in a finger profile obtained from scanning the touch sensor," (b)

8 "identify the lowest value in the finger profile that occurs after the first peak value, and

9 before another peak value is identified," and (c) "after identifying the lowest value in the

10 finger profile, identify a second peak value in the finger profile." Id. at 15:1-7.

11   Elantech alleges that Synaptics and its customer Averatec infringe claims 1 and 18 of

12 the '352 patent. Specifically, Elantech alleges infringement by Synaptics' TM41 series of

13 touchpad devices, and by Averatec products that incorporate those devices (collectively,

14 "Accused Touchpads"). See generally Final Infringement Contentions.

15 **II.   LEGAL OVERVIEW**

16   **A.   Summary Judgment**

17   Summary judgment is appropriate when there is no genuine issue as to any material

18 fact and the moving party is entitled to judgment as a matter of law. Summary judgment is

19 improper "if the evidence is such that a reasonable jury could return a verdict for the

20 nonmoving party." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986); Vanmoor v.

21 Wal-Mart Stores, Inc., 201 F.3d 1363, 1365 (Fed. Cir. 2000). An issue is "genuine" only if

22 there is sufficient evidence for a reasonable fact finder to find for the non-moving party. See

23 Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248-49 (1986). A fact is "material" if the

24 fact may affect the outcome of the case. See id. at 248. "On summary judgment, the

25 evidence must be viewed in the light most favorable to the party opposing the motion, with

26 doubts resolved in favor of the nonmovant." Crown Operations Int'l, Ltd. v. Solutia Inc., 289

27 F.3d 1367, 1375 (Fed. Cir. 2002) (citations omitted).

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B.   Literal Infringement

To determine infringement, the asserted claim must be compared to the allegedly infringing method or device. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995). To establish literal infringement, every claim limitation, or claim element, must be found in the accused subject matter. Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17, 29, 40 (1997). Thus, establishing that the accused method or device does not satisfy one claim limitation would support a finding of noninfringement. Id. The patentee must prove infringement by a preponderance of the evidence. Bayer AG v. Elan Pharm. Research Corp., 212 F.3d 1241, 1247 (Fed. Cir. 2000).

C.   Doctrine of Equivalents

Under the doctrine of equivalents, a product that does not literally infringe a patent claim may still infringe if each and every limitation of the claim is literally or equivalently present in the accused device. See Warner-Jenkinson, 520 U.S. at 40 ("In our view, the particular linguistic framework used is less important than whether the test is probative of the essential inquiry: Does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention?").

Whether an element of an accused product infringes under the doctrine of equivalents depends in part on whether that component performs substantially the same function as the claimed limitation in substantially the same way to achieve substantially the same result. See Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 149 F.3d 1309, 1315 (Fed. Cir. 1998); Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934-35 (Fed. Cir. 1987) (en banc) ("Under the doctrine of equivalents, infringement may be found (but not necessarily) if an accused device performs substantially the same overall function or work, in substantially the same way, to obtain substantially the same overall result as the claimed invention."). If the differences between a claim and an accused device are "insubstantial" to one with ordinary skill in the art, the product may infringe under the doctrine of equivalents. See Ethicon, 149 F.3d at 1315; Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1423 (Fed. Cir. 1997). The doctrine prevents an accused infringer from avoiding infringement by

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1 changing minor details of a claimed invention while retaining its essential functionality. See

2 Sage, 126 F.3d at 1424.

III. DISPUTED CLAIM TERMS

4   Elantech and Synaptics dispute the meaning of certain claim terms in their respective

5 motions for summary judgment. Because the meaning of these terms are material to the

6 pending motions, the Court first considers these terms.

A. "peak value" and "lowest value"

8   In the Claim Construction Order, the Court construed sub-limitations (a)-(c) of claims

9 1 and 18 according to the construction proposed by the patent holder Elantech. See Claim

10 Construction Order at 13-15. In relevant part, the Court construed "identify a...maxima" to

11 mean "identify a...peak value" and "identify a minima" to mean "identify the lowest value."

12 See id. Elantech argues that the construed sub-limitations (a)-(c) are met by identification of

13 the traces with the peak (maximum) and lowest (minimum) values. Synaptics counters that

14 the construed claims require identification of "specific" or "particular" measured capacitance

15 values. Accordingly, methodology that does not somehow identify "particular measured

16 values" cannot infringe.

17   At oral argument on October 5, 2007, Synaptics supported its reading of the terms by

18 noting that the example method described in the '352 patent specification explicitly records

19 the maxima and minimum measure capacitance values in a number of variables. See '352

20 patent at p. 22, col. 8 l. 52 - p. 23, col. 9 l. 14. However, standing alone, an embodiment

21 disclosed in the specification does not limit the claims. Liebel-Flarsheim Co. v. Medrad,

22 Inc., 358 F.3d 898, 906 (Fed. Cir. 2004). Even when the specification describes only a single

23 embodiment, the claims of the patent are not to be construed as restricted to that embodiment

24 unless the patentee demonstrates a clear intention to limit the claim scope using "words or

25 expressions of manifest exclusion or restriction." Teleflex, Inc. v. Ficosa N. Am. Corp., 299

26 F.3d 1313, 1327 (Fed. Cir. 2002). Absent clear statements of scope, courts must follow the

27 language of the claims and not that of the written description provided by the specification.

28 Id. at 1328.

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1   The '352 patent specification states that the example embodiment is not meant to limit

2 the invention. See '352 patent, p. 26, col. 16 ll. 6-12. Therefore, the example itself does not

3 support Synaptics' view that the claim scope is limited to only cover methods that explicitly

4 identify particular measured values corresponding to maxima and minima. See Teleflex, 299

5 F.3d at 1327.

6   In addition, Synaptics' reading of the construed claims would inappropriately limit

7 their scope. The plain language of the claims reads on identifying maxima and minima. The

8 claims neither mention nor require any sort of operation to be performed on capacitance

9 values. Taken literally, Synaptics reading of the claims would allow a party to escape literal

10 infringement by transforming the measured capacitance values (e.g. trivially multiplying the

11 finger profile values by two) before identifying minima and maxima, because the

12 identification steps would not use the literally measured capacitance values. There is no

13 support for such a limited reading of the claims in the patent specification or intrinsic

14 evidence.

15   The construed claims require identification of peak and lowest values, corresponding

16 to maxima and minima, respectively. This step is satisfied by methodology that scans the

17 finger profile to identify traces that contain the peak and lowest values.

18 **B.   "providing an indication"**

19   Claims 1 and 18 of the '352 patent also require "providing an indication of the

20 simultaneous presence of two fingers in response to identification of said first and second

21 maxima." This limitation was amended during prosecution to distinguish prior art that

22 inherently produced a finger profile with two maxima separated by a minimum when two

23 fingers were placed on the touchpad. Applicants explained the amendment stating that "[t]he

24 present invention uniquely utilizes the detection of two maxima to determine if two fingers

25 are present on the touchpad. Nowhere does [the prior art] suggest analyzing profile

26 information to obtain this result, or to use the result to provide an indication of two fingers."

27 Declaration of Karl J. Kramer in Support of Synaptics' Motion for Summary Judgment of

28 Noninfringement of the Asserted Claims of the '352 patent ("Kramer SJ Decl."), Ex. 5, April

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1   6, 1998 Amendment at 4. The Court did not construe the meaning of the "providing an

2   indication" limitation in the Claim Construction Order.

3   Synaptics alleges that the parties agreed that "providing an indication" is "[t]he

4   function of detecting the simultaneous presence of two fingers and reporting that presence to

5   the host." Synaptics' MSJ Brief at 11:18-20 (emphasis supplied). Elantech disputes that the

6   claim requires an indication of multiple fingers returned to the host; instead, Elantech argues

7   that any form of indication is sufficient to satisfy the claim limitation. For example, Elantech

8   argues that the "providing an indication" step is met by Synaptics' PrimaryFingerTracking

9   code module. This module processes the finger profile to determine the location of the user's

10 primary finger on the touchpad. PrimaryFingerTracking creates a temporary data structure

11 which implicitly identifies multiple fingers in contact with the touchpad, although the code

12 never attempts to "provide" such indication outside of the code module itself. Elantech

13 alleges creating this data structure alone is sufficient to meet the "providing an indication"

14 limitation.

15   Neither party's argument is persuasive. Nothing in the claim language or prosecution

16 history supports Synaptics' argument that an indication of multiple fingers must be returned

17 to the host in order to infringe. On the other hand, Elantech's position reads the limitation

18 out of the claims. Elantech argues that implicit identification of multiple fingers is all that is

19 required to meet the claim limitation. But simply recognizing a finger profile with two

20 maxima separated by a minima also implicitly identifies the presence of multiple fingers, and

21 the "providing an indication" limitation was added to the claims of the '352 patent during

22 prosecution for the express purpose of overcoming prior art that produced such a finger

23 profile. See Kramer SJ Decl., Ex. 5, April 6, 1998 Amendment at 4. Thus, Elantech's

24 argument that implicit identification of multiple fingers is all that the claim requires

25 eviscerates the claim limitation and cannot stand.

26   The "providing an indication" limitation does not require that the "indication" of two

27 fingers be returned to the host. However, the limitation does require that infringing

28 methodology perform some affirmative step to provide an indication of multiple fingers.

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IV.   SUMMARY JUDGMENT OF NONINFRINGEMENT

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Synaptics now moves for summary judgment of noninfringement of the '352 patent,

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or, in the alternative, partial summary judgment of noninfringement. Synaptics is entitled to

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summary judgment of noninfringement only if the facts and inferences, when viewed in the

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light most favorable to Elantech, could not persuade a reasonable jury to return a verdict in

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favor of Elantech, the non-moving party. See Anderson, 477 U.S. at 255.

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The Accused Touchpads use one of two software algorithms with multiple-finger

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detection capabilities. The first, "Type 1 Code," uses a threshold method to determine the

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position of fingers contacting the touchpad. See, e.g., Declaration of Dr. Andrew Wolfe in

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Support of Synaptics' Motion for Summary Judgment on Non-Infringement of the Asserted

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Claims of the '352 patent ("Wolfe SJ Decl."), ¶ 21. The second, "Type 2 Code," uses a "bit

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vector," or "bit pattern," algorithm to identify peaks in the finger profile. See id., ¶ 25.

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Because the Accused Touchpads implement either Type 1 or Type 2 Code, but not both, the

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two algorithms and devices using them must be considered separately to determine whether

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summary judgment is appropriate.

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A.   Partial summary judgment of noninfringement for touchpads that do not enable multiple-finger detection functions

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Synaptics moves for partial summary judgment of noninfringement as to accused

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touchpads that do not enable multiple-finger detection functions.

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Synaptics argues that "many implementations of the Accused Touchpad devices

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[have] no multiple-finger detection function enabled" and therefore these devices are

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incapable of "providing an indication of the simultaneous presence of two fingers in response

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to identification of said first and second maxima," as required by asserted claims 1 and 18.

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Synaptics' Notice of Motion and Motion for Summary Judgment of Noninfringement of

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the Asserted Claims of the '352 patent ("Synaptics' MSJ Brief"), filed April 20, 2007.

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Specifically, Synaptics argues that its "'current' version of code does not use a finger

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counting algorithm and or provide any indication of the presence of multiple fingers on the

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touch sensor." Synaptics' Reply Brief in Support of Motion for Summary Judgment of

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Noninfringement of the Asserted Claims of the '352 patent ("Synaptics' Reply Brief") at

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1 4:20-21. To support its argument, Synaptics' expert Dr. Wolfe testifies that the "current"

2 code is specifically designed so that the firmware and driver software cannot be set to enable

3 finger-counting functions. See Wolfe SJ Decl., ¶ 19-20. Because Synaptics' "current" code

4 uses the Type 2 Code algorithm, Synaptics requests that the Court enter partial summary

5 judgment of non-infringement as to devices implementing the "current" version of Type 2

6 Code.

7   The Federal Circuit has held that "an accused device may be found to infringe if it is

8 reasonably capable of satisfying the claim limitations, even though it may also be capable of

9 non-infringing modes of operation." Hilgraeve Corp. v. Symantec Corp., 265 F.3d 1336,

10 1343 (Fed. Cir. 2001). Nevertheless, "a device does not infringe simply because it is

11 possible to alter it in a way that would satisfy all the limitations of a patent claim." High

12 Tech Med. Instrumentation, Inc. v. New Image Indus., Inc., 49 F.3d 1551, 1555 (Fed. Cir.

13 1995). To determine infringement, the Court must consider whether the accused party

14 "intended or anticipated" the device being modified for use in an infringing manner. High

15 Tech Med., 49 F.3d at 1555. "If a device is designed to be altered or assembled before

16 operation, the manufacturer may be held liable for infringement if the device, as altered or

17 assembled, infringes a valid patent." Id. at 1556.

18   The Accused Products contain driver and firmware software. Software programs

19 directly infringe a patent if they present users with options to enable infringing functionality,

20 regardless of whether the users ever activate or utilize those functions. Fantasy Sports

21 Properties, Inc. v. Sportsline.com, Inc., 287 F.3d 1108, 1118 (Fed. Cir. 2002). But programs

22 built from source code containing infringing functions do not infringe if users cannot access

23 the accused functionality. Southwest Software, Inc. v. Harlequin Inc., 226 F.3d 1280, 1291

24 (Fed. Cir. 2000) (affirming a jury verdict of noninfringement where the accused software

25 program contained source code to carry out infringing functions but the functions made

26 unavailable to the end user); Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316,

27 1330 (Fed. Cir. 2001) (affirming summary judgment of noninfringement when the source

28 code for a device contained code to carry out infringing functions, but the source code also

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1   contained code that prevented users of the device from accessing those functions).

2   Accordingly, one way for the Accused Touchpads to carry out the "providing an

3   indication" step is to provide purchasers (e.g. computer manufacturers) with options that can

4   enable finger counting functions, regardless of whether the purchasers are shown to have

5   used those functions. See Fantasy Sports, 287 F.3d at 1118. But the Accused Products do

6   not infringe if they are incapable of practicing the "providing an indication" step, even if

7   their driver and firmware software are built from source code containing modules that could

8   carry out that step. See Southwest Software, 226 F.3d at 1291; Telemac, 247 F.3d at 1330.

9   Elantech presents convincing evidence that some Accused Touchpad devices

10   containing Type 2 Code are "reasonably capable" of "providing an indication of the

11   simultaneous presence of two fingers," that users are able to access this functionality, and

12   that Synaptics "intended or anticipated" such usage. Type 2 Code can generate a data packet

13   labeled "W" that provides the host computer with an indication of the presence of multiple-

14   fingers. See Wolfe SJ Decl., ¶¶ 17, 30. Synaptics' own customer guide, the Synaptics'

15   Touchpad Interfacing Guide, instructs computer vendors how to interface with Synaptics

16   touchpads, including instructions for enabling the "W" multiple-finger detection option. See,

17   e.g., Wolfe SJ Decl., Ex. 4, Synaptics' Touchpad Interfacing Guide ("Synaptics' Guide")

18   § 2.3.4. Thus, Synaptics "intended or anticipated" multiple-finger detection for at least some

19   touchpads containing Type 2 Code. See High Tech Med., 49 F.3d at 1555. By following the

20   instructions provided in the Synaptics' Guide, Elantech engineers were able to direct

21   computers purchased at retail which contain Synaptics' touchpads and driver software to

22   report "W" values. See Declaration of Jeng-Yin Wu in Support of Elantech's Reply Brief in

23   Support of Motion for Summary Judgment of Infringement ("Wu Decl."), ¶¶ 3-5. The values

24   returned when one, two or three fingers were held down corresponded to those reported in

25   the Synaptics' Guide. Id., ¶ 5. Like the software product found to infringe in Fantasy Sports,

26   Elantech was able to enable the multiple-finger detection functions without modifying the

27   underlying code. See 287 F.3d at 1118. These Accused Touchpads meet the "providing an

28   indication" limitation of claims 1 and 18 as a matter of law.

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1   However, Synaptics moves for partial summary judgment of noninfringement for

2   Accused Touchpads using the "current" version of the Type 2 Code. Synaptics contends that

3   the computers Elantech purchased and enabled to set the "W" multiple-finger detection

4   option do not contain this "current" code version. Synaptics' expert Dr. Wolfe testifies that

5   the "current" Type 2 Code cannot be set by the customers to enable finger counting

6   functionality. Wolfe SJ Decl. ¶¶ 19-20. He states that the "OptionalMultiFinger" flag must

7   be set for the multiple finger detection code to be executed in the firmware software, but that

8   in the "current" version of Type 2 Code this flag is disabled by default, and the Synaptics'

9   driver software never sends a message to enable multiple-finger detection. Id. Dr. Wolfe

10   explains that when "OptionalMultiFinger" is not set, the "W" value that would return

11   multiple finger count to the host does not report finger count values. Id. ¶ 30.

12   But Dr. Wolfe also testifies that the oneAxis routine in the Type 2 Code firmware

13   counts fingers. Id. at ¶ 27. Because this routine is capable of providing an indication of the

14   simultaneous presence of two fingers, its execution satisfies the "providing an indication"

15   claim limitation. As explained above, the limitation is met whether or not the indication is

16   provided to the host, for example, via the "W" flag. Although Synaptics contends that

17   oneAxis is not enabled or activated in the "current" version of Type 2 Code (see, e.g.,

18   Synaptics' Brief in Opposition to Elantech's Motion for Summary Judgment of Infringement

19   ("Synaptics' Opp. Brief") at 12:17-18, 12:23-26), Dr. Wolfe's testimony never states that

20   oneAxis is not executed in the "current" Type 2 Code. See id. at ¶¶ 18-20. Rather, he

21   testifies that the "W" value never indicates finger count if "OptionalMultiFinger" is not set.

22   Id. at ¶ 30. Because Synaptics has not presented evidence that the oneAxis routine is not

23   executed in the "current" version of Type 2 Code, it has failed to meet its burden of showing

24   that the code does not practice the "providing an indication" limitation of claims 1 and 18.[2]

25   Accordingly, the Court denies Synaptics' motion for partial summary judgment of

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27   [2]In addition, Elantech has presented evidence that oneAxis is included in all Synaptics
products containing Type 2 Code, and that it is either executed in those products or can be
28   enabled. Declaration of Ian Scott MacKenzie, Ph.D. in Support of Elantech's Motion for
Summary Judgment of Claim 18 of the '352 Patent ("MacKenzie Decl."), ¶ 22.

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1 noninfringement as to Accused Touchpads that do not enable multiple-finger detection

2 functions. Synaptics has not proved that any of the Accused Touchpads do not enable

3 multiple-finger detection.

4 **B. Partial summary judgment of noninfringement for touchpads containing Type 1 Code**

5 Next, Synaptics moves for partial summary judgment of noninfringement as to

6 accused touchpads containing Synaptics' Type 1 Code.

7 Type 1 Code uses a threshold method to detect the number of fingers in contact with

8 the touchpad. See Wolfe SJ Decl., ¶ 21-24. The code creates a data array by assigning 1's or

9 0's for each trace value depending on whether the trace value is above or below a certain

10 threshold. A group of contiguous 1's in the data array indicates the presence of a finger. If

11 two fingers are present, the data array will contain two contiguous groups of 1's separated by

12 a group of 0's. For example, the data array might consist of the following bits when two

13 fingers are present, wherein each group of 1's represents a finger: 001110001110000. See

14 id., Figure at ¶ 22 ("Type 1 Code Figure").

15 **1. Literal infringement**

16 Synaptics first argues that Type 1 Code does not literally infringe claims 1 and 18

17 because it does not detect the presence of multiple fingers by looking for a 'minima' between

18 two 'maxima' and thus does not perform the steps required by sub-limitations (a)-(c).

19 Synaptics notes that Type 1 Code never identifies particular maximum or minimum scan

20 lines, but only determines whether or not the capacitance value at each scan line exceeds the

21 threshold value.

22 Elantech counters that Type 1 Code does carry out sub-limitations (a)-(c) because a

23 pattern such as "001110001110000" identifies a plateau maximum (the first group of 1's),

24 followed by a minimum (the group of 0's between the group of 1's), followed by a second

25 maximum (the second group of 1's).

26 Elantech's arguments fail to demonstrate that sub-limitations (a)-(c) are met by the

27 Type 1 Code algorithm. The Court adopted the construction of the sub-limitations proposed

28 by Elantech, which requires identification of two peak values and an intervening lowest

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1 value. See Claim Construction Order at 13:1-15:7. However, Type 1 Code never identifies

2 peak and lowest values, or the scan lines containing those values, but only determines

3 whether each scan line capacitance value exceeds the threshold value. Elantech's assertion

4 that Type 1 Code identifies plateau maxima (groups of 1's) and plateau minima (groups of

5 0's) does not rescue their infringement argument. In the Claim Construction Order, the Court

6 noted that a plateau maximum occurs where "the maximum capacitance value appears over a

7 range of X axis values and/or Y axis values." Id. at 14:20-23. Type 1 Code does not identify

8 plateau maxima or minima, as alleged by Elantech, because nothing in the algorithm

9 identifies a range of maximum or minimum capacitance values.

10   Because Type 1 Code does not literally carry out sub-limitations (a)-(c) of claims 1

11 and 18 of the '352 patent, Type 1 Code does not literally infringe those claims. See Warner-

12 Jenkinson, 520 U.S. at 29, 40.

13   **2.   Doctrine of equivalents**

14   Elantech asserts that even if Type 1 Code does not literally infringe the '352 patent, it

15 nevertheless infringes under the doctrine of equivalents.

16   Elantech's expert Dr. MacKenzie opines that the Type 1 Code algorithm presents "at

17 most only an insubstantial variation" from sub-limitations (a)-(c) of claims 1 and 18 because

18 the two methods perform substantially the same function ("determine the presence of a . . .

19 finger"), in substantially the same way ("examining the values on each trace"), to achieve

20 substantially the same result ("identification of a value that accurately represents the

21 presence of a finger"). MacKenzie Decl., ¶ 28. However, the '352 patent's claimed "way"

22 to determine whether multiple fingers are in contact with the touchpad is not merely by

23 "examining the values on each trace;" rather, claims 1 and 18 determine the presence of two

24 fingers by identifying two peak values (maxima) separated by a lowest value (minimum).

25 Indeed, identification of the two maxima corresponding to two fingers lies at the heart of

26 Elantech's claimed invention. Therefore, the claims cannot be stretched under the doctrine

27 of equivalents to cover methods that do not identify maxima and minima. And Type 1 Code

28 does not identify maxima and minima in the finger profile, but only determines whether each

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1 trace value exceeds a given threshold. Thus, Dr. MacKenzie's brief recitation of a function,

2 way, result analysis is insufficient to support infringement under the doctrine of equivalents.

3   Accordingly, the Court grants Synaptics' motion for partial summary judgment of

4 noninfringement as to accused touchpads that implement Type 1 Code.

5   **C. Partial summary judgment of noninfringement for touchpads containing Type 2 Code**

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7   Finally, Synaptics seeks partial summary judgment of noninfringement as to accused

   touchpads containing Synaptics' Type 2 Code.

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   Type 2 Code uses a "bitpattern" or "bit vector" algorithm to identify maxima in the

9 finger profile. The algorithm first creates a vector containing a 0 or 1 corresponding to each

10 scan line, depending on whether the capacitance value of the next scan line is higher or

11 lower, respectively. See MacKenzie Decl., Figure at ¶ 30 ("Type 2 Code Figure"). As a

12 result, a "01" pattern in this vector identifies the presence of a maximum and a "10" pattern

13 identifies the presence of a minimum. See id., line A. After further processing steps, the

14 code produces a bit vector containing all 0's except that 1's are found for each scan line

15 identified as containing a maximum, or peak value. See id., line D. If multiple-finger

16 counting code is enabled, the 1's in the bit array are counted to determine the number of

17 fingers in contact with the touchpad, and the count is available to the host computer. See

18 Wolfe SJ Decl., ¶¶ 27, 30.

19   Synaptics first argues that the Type 2 Code does not infringe because it never

20 identifies the lowest value in the finger profile that appears after the first peak value. But it

21 admits that a "10" pattern in the first step of the algorithm "would 'indicate' a 'minima' if

22 analyzed." See Synaptics' Reply Brief at 7:23-8:4. However, the asserted claims do not

23 require an "analysis" or "indication" of the minima or lowest value; the claims only require

24 that the minima or lowest value is "identified," and Type 2 Code identifies a minimum or

25 lowest value at the "10" transitions. See line A, Type 2 Code Figure. Synaptics attempts to

26 bolster its argument by noting that the bit pattern in line A is "immediately deleted" and

27 information about the minimum or lowest value is unavailable by the time the finger count is

28 calculated. Such immediate deletion is irrelevant, however, because the claims do not rule

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1 out intermediate processing steps between the steps of identifying maxima and minima and

2 providing an indication of finger count. Moreover, the "providing an indication" step only

3 requires that the finger count is provided in response to detection of the maxima or peak

4 values. Thus, Synaptics' contention that Type 2 Code does not identify a minimum or lowest

5 value does not support a ruling of summary judgment of noninfringement.

6 Synaptics further argues that Type 2 Code does not infringe because the code does not

7 identify particular capacitance values as maximum or peak values. It argues that any finger

8 count provided to the host "is based only upon a '1' bit defining a scan line with a 'peak' and

9 not a finger-profile capacitance value." Id. at 9:5-7. This argument is unpersuasive,

10 however, because as is explained supra, the Type 2 Code identifies maxima or peak values

11 by a "01" pattern in the first step of the algorithm. See line A, Type 2 Code Figure. Thus,

12 these contentions also fail to support summary judgment of noninfringement.

13 Accordingly, the Court denies Synaptics' motion for partial summary judgment of

14 noninfringement as to accused touchpads that implement Type 2 Code

15 **V.   SUMMARY JUDGMENT OF INFRINGEMENT**

16 The Court now turns to Elantech's cross motion for summary judgment of

17 infringement. Elantech requests that the Court enter judgment that all of the Accused

18 Touchpads literally infringe claim 18 of the '352 patent.

19 For the reasoning set forth above, the Court denies Elantech's motion for summary

20 judgment of infringement for all Accused Touchpads. In particular, Accused Touchpads

21 implementing Type 1 Code do not infringe claim 18. The Court would grant summary

22 judgment of infringement for Accused Touchpads implementing Type 2 Code and having

23 enabled finger counting functionality, but Elantech did not move for partial summary

24 judgment; instead, its motion seeks judgment on all Accused Touchpads without distinction.

25 **VI.   CONCLUSION**

26 Synaptics' motion for partial summary judgment of noninfringement for those devices

27 implementing Type 1 Code is GRANTED. A reasonable trier of fact could not find that

28 these devices infringe claims 1 or 18 of the '352 patent. Synaptics' motion for partial

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1 summary judgment of noninfringement on the ground that the "current" Type 2 Code does

2 not enable multiple finger detection capabilities is DENIED. Synaptics has not proved as a

3 matter of law that Accused Touchpads using the "current" version of Type 2 Code do not

4 carry out the "providing an indication" limitation. Synaptics' motion for partial summary

5 judgment of noninfringement for those devices implementing Type 2 Code on the grounds

6 that the code does not identify peak and/or lowest values is also DENIED. Elantech's

7 motion for summary judgment of infringement is DENIED.

8   The parties are directed to appear for a further case management conference on

9 December 7, 2007 at 8:30 a.m.

10   **IT IS SO ORDERED.**

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13 Dated: October 26, 2007   CHARLES R. BREYER
                                       UNITED STATES DISTRICT JUDGE

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