EXHIBIT H

No. 2008-1310

IN THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

ELANTECH DEVICES CORPORATION,

Plaintiff-Appellee,

v.

SYNAPTICS, INC.,

Defendant-Appellant,

and

AVERATEC, INC., and PROSTAR COMPUTER, INC.,

Defendants.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA IN CASE No. 06-CV-1839, JUDGE CHARLES R. BREYER

BRIEF OF PLAINTIFF-APPELLEE ELANTECH DEVICES CORPORATION

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Elantech Devices Corp. v. Synaptics, Inc.

No. 2008-1310

AMENDED

CERTIFICATE OF INTEREST

Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party) Elantech Devices Corp. certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

Elantech Devices Corp.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

Elantech Devices Corp.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

Elan Investment Corp.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Thomas C. Goldstein, Troy D. Cahill, Joanne Kim, Ming-Tao Yang (no longer with firm), Cindy Feng (No longer with firm), Clark A. Jablon (no longer with firm), all of Akin Gump Strauss Hauer & Feld LLP. Sean DeBruine, Yitai Hu, Ginger Liu, Elizabeth Rader, Richrd Chae, and S.H. Michael Kim all of Alston + Bird LLP.

August 19, 2008
Date

Signature of counsel

Sean P. DeBruine
Printed name of counsel

Please Note: All questions must be answered

cc: _____

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Appeal from the United States District Court for the Northern District of California
No. 06-CV-1839, Judge Charles R. Breyer.

STATEMENT OF RELATED CASES

Pursuant to Fed. Cir. R. 47.5, Elantech states that no prior appeal in or from this civil action was previously before this or any other appellate court.

The underlying litigation in this matter is pending in the United States District Court for the Northern District of California and is captioned *Elantech Devices Corp. v. Synaptics, Inc. and Averatec, Inc.*, Case No. 5:06-CV-01839 PVT.

JURISDICTIONAL STATEMENT

Synaptics identifies the jurisdictional basis for its appeal of the district court's preliminary injunction order as being 28 U.S.C. § 1292(a)(1). It appears, however, that the proper jurisdictional basis for Synaptics' appeal of the district court's preliminary injunction order is 28 U.S.C. § 1292(c)(1).

Synaptics' statement of jurisdiction does not identify any jurisdictional basis for its purported appeal of the district court's summary judgment ruling. In its brief, however, Synaptics contends that the grant of partial summary judgment by the district court is intertwined with the preliminary injunction ruling such that the summary judgment ruling is within this court's pendent appellate jurisdiction. Appellant's Brief at 31.

STATEMENT OF THE ISSUES

Claim 18 of U.S. Patent No. 5,825,352 (the "'352 Patent") discloses "[a] touch sensor for detecting the operative coupling of multiple fingers . . . ." A144 (17:27-28). The claim recites two means-plus-function elements: (1) a "means for 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, and (c) identify a second maxima in a signal corresponding to a second finger following said minima;" and (2) a "means for providing an indication of the simultaneous

presence of two fingers in response to identification of said first and second maxima." A144 (17:29-37).

The issues raised by this appeal are as follows:

A. Issues related to the district court's grant of summary judgment that Synaptics' Type 2 Code products infringe Claim 18 of Elantech's '352 Patent.

1. Literal infringement of a means-plus-function claim requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification. The district court concluded that Synaptics' Type 2 Code products perform the identical function, i.e., identify maxima and minima, as the "means for scanning" element in the '352 Patent. Did the district court err in granting summary judgment in favor of Elantech that Synaptics' Type 2 Code products satisfy the "means for scanning" element of Claim 18?

2. The district court concluded that Synaptics' Type 2 Code products contain structure that is identical or equivalent to the structure that the '352 Patent links to the "means for providing an indication" element. Did the district court err in granting summary judgment in favor of Elantech that Synaptics' Type 2 Code products satisfy the "means for providing an indication" element of Claim 18?

B. Issue related to the district court's award of a preliminary injunction against Synaptics.

3. The propriety of injunctive relief turns on, among other factors, a showing by the movant of a reasonable likelihood of success on the merits and irreparable harm. The district court concluded that Elantech had established a likelihood of success on the merits, that Synaptics had not raised a substantial question with regard to patent validity or infringement, and that Elantech would suffer irreparable harm if the preliminary injunction did not issue. Did the district court abuse its discretion in granting Elantech's motion for preliminary injunction?

STATEMENT OF THE CASE

I. Nature of the appeal.

Elantech Devices Corp. ("Elantech") filed suit against Synaptics, Inc. ("Synaptics") for infringement of U.S. Patent No. 5,825,352 (the "'352 Patent"). The district court granted Elantech's motion for summary judgment on the narrow issue of literal infringement of Claim 18 of the '352 Patent ("Claim 18") by Synaptics' accused products implementing Type 2 Code with multiple finger counting enabled. In addition, the district court granted Elantech's motion for a preliminary injunction enjoining Synaptics from infringing the '352 Patent by importing, making, using, selling, or offering to sell its products implementing Type 2 firmware code with multiple finger counting enabled. Synaptics now

appeals from the summary judgment order in favor of Elantech and the preliminary injunction order reasserting many of the same arguments which were made to the district court and which were properly rejected.

II. Relevant procedural history and disposition in the district court.

Claim 18, the only claim implicated in this appeal, claims:

> A touch sensor for detecting the operative coupling of multiple fingers comprising:
>
> means for 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, and (c) identify a second maxima in a signal corresponding to a second finger following said minima, and
>
> means for providing an indication of the simultaneous presence of two fingers in response to identification of said first and second maxima.

A144 (17:27-37).

The parties agreed on the function and corresponding structure of the "means for scanning" element. A1276 and A1365. The parties also agreed on the function required by the "means for providing an indication" element. *Id.* Synaptics, however, claimed that the '352 Patent does not disclose a structure that corresponds to the "means for providing an indication" element. *Id.*

According to the district court's Claim Construction Order, "scanning the touch sensor" is intended "to identify finger presence" and means "measuring the values generated by a touch sensor to detect operative coupling and determining

the corresponding positions at which measurements are made." A14. With regard to other terms in Claim 18, the district court concluded that: (1) the term "identify a first maxima in a signal corresponding to a first finger" means "identify a first peak value in a finger profile obtained from scanning the touch sensor;" (2) the term "identify a minima following the first maxima" means "identify the lowest value in the finger profile that occurs after the first peak value, and before another peak value is identified;" and (3) the term "identify a second maxima in a signal corresponding to a second finger following said minima" means "after identifying the lowest value in the finger profile, identify a second peak value in the finger profile." A17. In reaching these constructions, the district court rejected Synaptics' contention that maxima or minima relate only to a single precise point. A16.

Following the district court's Claim Construction Order, Synaptics moved for summary judgment of noninfringement of the '352 Patent. Similarly, Elantech moved for summary judgment that the accused Synaptics products infringed Claim 18. On October 26, 2007, the district court issued its ruling on the cross-motions for summary judgment. Before addressing the merits of the parties' motions, the district court first considered Synaptics' argument that the limitations construed by the district court's Claim Construction Order "require[d] identification of 'specific' or 'particular' measured capacitance values" corresponding to maxima and

minima. A22. Because the construction espoused by Synaptics would inappropriately limit the scope of the claim, the district court concluded that "[t]he construed claims require identification of peak and lowest values, corresponding to maxima and minima, respectively. This step is satisfied by methodology that scans the finger profile to identify traces that contain the peak and lowest values." A23. The district court also considered Synaptics' contention that the "means for providing an indication" limitation of Claim 18 required that the indication of multiple fingers must be returned to the host. A24. The district court concluded that "[t]he 'providing an indication' limitation does not require that the 'indication' of two fingers be returned to the host. However, the limitation does require that infringing methodology perform some affirmative step to provide an indication of multiple fingers." A24.

With regard to the merits of the parties' motions for summary judgment, the district court held that Synaptics was entitled to partial summary judgment of noninfringement of Claim 18. According to the district court, the accused Synaptics products implement either Type 1 Code or Type 2 Code. The district court concluded that Type 1 Code does not literally, or under the doctrine of equivalents, infringe Claim 18 as a matter of law. A29-31. With regard to Type 2 Code, the district court denied Synaptics' motion for noninfringement. A32. As for Elantech's motion for summary judgment on infringement of Claim 18, the

district court denied the motion on a procedural ground, but indicated that, if relief was properly requested, it would award Elantech summary judgment on infringement of Claim 18 for Synaptics products implementing Type 2 Code with multiple finger counting enabled (hereinafter "Type 2 Code"). A32.

Thereafter, Elantech sought summary judgment that Synaptics' products implementing Type 2 Code infringe Claim 18. The district court rejected Synaptics' contention that Claim 18 was indefinite and concluded that Elantech had satisfactorily identified the structures in the '352 Patent and in the Synaptics products which serve as the "means for providing an indication" and the "means for scanning." A54 ("Elantech has satisfactorily identified the structures in both the written description of the '352 patent and in the accused device that correspond to *both* means-plus-function elements of claim 18") (emphasis added). In comparing the structures for purposes of infringement, the district court concluded that each limitation of the "means for scanning" element and the "means for providing an indication" element were met by Synaptics' products implementing Type 2 Code. A56. Thus, the district court granted Elantech's motion for partial summary judgment of infringement for those products. A55-56.

In addition to granting Elantech's motion for partial summary judgment, the district court also preliminarily enjoined Synaptics from infringing the '352 Patent. A65. According to the district court, Elantech established a likelihood of success

on infringement and validity. A57-61. In doing so, the district court rejected Synaptics' arguments that it had raised a substantial question whether Claim 18 failed for indefiniteness or whether Claim 18 was obvious. In addition, the district court concluded that Elantech established a likelihood of irreparable harm if the injunction was not granted. A64. Lastly, the district court concluded that the balance of hardships and public interest weighed in Elantech's favor. A64.

STATEMENT OF FACTS

I. The '352 Patent.

Touchpad devices, which are also commonly referred to as touch sensing devices, take a number of different forms. A136 (1:18-26) (listing various types of touch sensing devices). One "touch sensing technology is capacitive sensing, in which the location of a finger (or in some instances another object such as a stylus) over a sensing device is determined by virtue of variations in capacitance under and around the location of the finger." A136 (1:27-32).

Prior to the '352 Patent, touchpad inventions sensed any contact as that of only one finger at a time. A136 (1:40-41). Studies showed that those prior inventions were not as efficient as a mouse. A136 (2:8-14). Thus, there was an industry need for a touchpad capable of yielding the same productivity as a mouse. A136 (2:13-14).

The '352 Patent met this industry need and "provide[d] a novel method and apparatus for sensing the proximity of multiple simultaneous fingers or other appropriate objects to a touch sensor." A136 (2:17-19). As explained in the patent, the "invention can be described in most of its applications by establishing one finger as controlling movement of the cursor, and the second finger as controlling functions equivalent to a mouse button or switch." A136 (2:56-60). The '352 Patent contains 31 separate claims. The only claim implicated by this appeal is Claim 18.

II. Claim 18.

Claim 18 is comprised of two means-plus-function elements and states:

> A touch sensor for detecting the operative coupling of multiple fingers comprising:
>
> means for 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, and (c) identify a second maxima in a signal corresponding to a second finger following said minima; and
>
> means for providing an indication of the simultaneous presence of two fingers in response to identification of said first and second maxima.

A144 (17:27-37).

To carry out the "means for scanning" element, the '352 Patent measures the capacitance on each trace in an X or Y direction and examines the resulting finger profile to identify a first maximum or peak, a minima following the peak, and a

second maxima or peak following the minima. In other words, the two-finger presence may be accurately identified by identifying two peak values separated by a low point between the two peak values. A138 (6:26-38) and A121 (Fig. 3 and 4).

III. Synaptics' Type 2 Code Products.

Synaptics products contain one of two types of driver and firmware software – Type 1 Code or Type 2 Code – to perform functions related to multiple finger detection. A1466 at ¶ 21. Synaptics products do not contain both Type 1 Code and Type 2 Code in the same product. A2107 at ¶ 7. Each product contains one or the other. A2107 at ¶ 7. Only Type 2 Code products are implicated in this appeal.

A. Type 2 Code identifies maxima and minima.

In operation, Synaptics' touchpads implementing Type 2 Code scan the touch sensor to identify finger touches. The scan records the digital value of the variations in capacitance under and around the location of the finger touch to create a finger profile. The profile is then scanned to identify a first maxima in a signal corresponding to a first finger, identify a minima following the first maxima, and identify a second maxima in a signal corresponding to a second finger following the minima. A1469 at ¶¶ 26-27. In particular, a firmware routine called oneAxis is called to count the number of fingers in this data sequence. As part of this process, the oneAxis module calls the buildPeaksBitPattern routine which identifies the

presence of a first maxima, intervening minima, and second maxima. A2170 at ¶ 18.

To make those identifications, the buildPeaksBitPattern routine examines the value corresponding to each capacitive trace and compares it to the value of the neighboring capacitive trace. If the value of the current trace is less than that of the next, the routine assigns the current trace a value of "0." If the value of the next trace is lower than the current trace, the routine assigns the current trace a value of "1." When the resulting variable string (or "bit vector") is analyzed, the maxima and minima are represented by the stored pattern of 1s and 0s. Any instance of "0" followed by "1" indicates a local maxima – *e.g.*, the point where the finger profile begins to decrease following an increasing slope is identified by the "1" in the pattern "01." Similarly, a "1" followed by a "0" in the bit pattern indicates a minima – *e.g.*, a location where the finger profile ceases to decrease is identified by the "0" in the pattern "10." A2169 at ¶ 16; A2170 at ¶ 18; A2171-72 at ¶ 23; and A2175-76 at ¶ 30.

B. Type 2 Code provides an indication of the simultaneous presence of two fingers.

In the course of carrying out the oneAxis module, Synaptics products implementing Type 2 Code provide an indication of the simultaneous presence of two fingers in response to the identification of the first maxima and second maxima. When two fingers are present on the touchpad, the oneAxis module

provides an indication of the presence of those two fingers – a count of 2 in the FingerInfo_FingerCount##ArrayNum register. A2171 at ¶ 21.

In addition, Synaptics Type 2 Code always executes the buildPeaksBitPattern routine (a second time if the oneAxis module is enabled) to identify maxima and minima and use the presence of those maxima, or peaks, to determine the presence of two fingers. This occurs in the PrimaryFingerTracking module. In particular, this module first calls the buildPeaksBitPattern routine which identifies two maxima and the intervening minima if two fingers are present on the touchpad. The module then calls the findPeaksAboveTrackingThreshold to identify legitimate peak values indicating the presence of one or more fingers. The module findPeaksAboveTrackingThreshold uses the identification of peaks provided to it from buildPeaksBitPattern to determine how many of the fingers are to be considered in contact with the touchpad for tracking purposes by comparing the values stored for the traces identified as the peaks, or maxima, to a given threshold value. Those peak values over the threshold are considered fingers, which are indicated by the value "1" stored in a bit vector. The next routine, findNearestPeak, determines which of the traces with a "1" – or finger contact – is nearest the last known tracking position. This indication determines which of the two fingers identified by the maxima is to be used as the tracking finger to control the cursor. A2171-72 at ¶ 23.

SUMMARY OF THE ARGUMENT

As the district court properly concluded, "there is no genuine issue as to any material fact that each element of claim 18 of the '352 patent is found within Synaptics' touchpads for implementing Type 2 Code." A56 The district court also properly concluded that "considering each of the equitable factors for a preliminary injunction, the Court finds that on balance the factors favor Elantech, especially in its proof of likelihood of success and irreparable harm." A64 These conclusions were the result of the district court's careful review of the record, which included expert declarations, expert depositions, three fully briefed and argued summary judgment motions and a fully briefed and argued preliminary injunction motion.

In granting summary judgment of infringement against Synaptics, the district court concluded that Synaptics' Type 2 Code products contained an equivalent structure that performed the identical function as claimed in the "means for scanning" limitation in Claim 18. Synaptics' arguments on appeal challenging this finding emanate from its position that its Type 2 Code does not identify and then store or process the particular measured capacitance values of maxima and minima and, as a result, cannot be deemed to infringe Claim 18. Contrary to Synaptics' contentions, the record before the district court provided clear, indisputable evidence showing that Synaptics' Type 2 Code products identify the values generated by fingers touching the touch sensor and identify a first peak

value, a following lowest value, and a second peak value. A2169 at ¶ 15 and A2171 at ¶ 22. Specifically, the oneAxis module calls the buildPeaksBitPattern routine, which analyzes finger profile data and creates a "bit vector." A2169 at ¶ 16; A2170 at ¶ 18; A2171-72 at ¶ 23; and A2175-76 at ¶ 30. Each bit corresponds to a particular capacitive trace in the touch sensor. *Id.* The resulting variable string (or "bit vector") reflects the point where the finger profile begins to decrease, i.e. a maxima, and where the finger profile ceases to decrease, i.e., a minima. This, as the district court properly realized, is precisely the functionality of the "means for scanning" limitation in Claim 18.

The district court also held in granting summary judgment that Synaptics' Type 2 Code products satisfy the "means for providing an indication" limitation in Claim 18. On appeal, Synaptics' primary arguments in relation to this issue relate to whether the "means for providing an indication" limitation is indefinite and whether the corresponding structure, if any, is sufficient. The district court was correct in concluding that no reasonable finder of fact would conclude that Synaptics satisfied its burden to prove, by clear and convincing evidence, that the "means for providing an indication" limitation is indefinite or that the corresponding structure is insufficient. The written description of the '352 Patent makes plain that the operation of the touchpad is controlled by microcontroller 60 running appropriate firmware. A138 (5:49-51) ("[M]icrocontroller 60, which

operates to form, among other things, a finger profile for one or more fingers, X-Y cursor data, and control signals."). In addition, the '352 Patent also discloses exemplary firmware executing on the microcontroller 60 that includes a simplified algorithm called "Xcompute," which when executed provides an indication of the presence of two fingers by setting the "Xfinger" variable to 2. A135 (Fig. 9-2 at Step 980).

Lastly, because Synaptics did not raise a substantial question concerning the indefiniteness or obviousness of the '352 Patent, because Elantech had made a clear showing of infringement, and because Elantech made a sufficient showing of irreparable harm in the absence of an injunction, the district court did not abuse its discretion in granting Elantech's motion for a preliminary injunction.

ARGUMENT

I. Synaptics does not appeal the district court's Claim Construction Order.

Before analyzing a claim to determine whether infringement occurs, the court must properly interpret the claims. Claim construction is an issue of law, which this Court reviews *de novo*. *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1351 (Fed. Cir. 1999).

Claim 18 is a means-plus-function claim and is, therefore, governed by 35 U.S.C. § 112, ¶ 6. Pursuant to 35 U.S.C. § 112, ¶ 6, an inventor may express an element in a combination claim as a "means or step for performing a specified

function without the recital of structure, material, or acts in support thereof . . . ." The claim, however, is "construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." *Id.*

For purposes of this appeal, Synaptics does not challenge any of the district court's findings in the Claim Construction Order. Appellant's Brief at 9. To the extent that Synaptics' arguments on appeal implicate subsequent claim construction rulings by the district court, they are addressed within the context of Synaptics' arguments.

II. The district court properly concluded that Synaptics' Type 2 Code products infringe Claim 18.

The trial court's grant of summary judgment of infringement is reviewed *de novo*. *Mitutoyo Corp. v. Central Purchasing, LLC*, 499 F.3d 1284, 1289 (Fed. Cir. 2007). Summary judgment is appropriate when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); *AquaTex Indus., Inc. v. Techniche Solutions,* 419 F.3d 1374, 1379 (Fed. Cir. 2005).

Literal infringement of a means-plus-function claim limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification. *WMS Gaming*, 184 F.3d at 1351. Once the relevant structure in the accused device has been identified, a party may prove it is equivalent to the

disclosed structure by showing that the two perform the identical function in substantially the same way, with substantially the same result. *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999).

Claim 18 of the '352 Patent involves two elements written in means-plus-function form. The first element is the "means for scanning the touch sensor" limitation and the second element is the "means for providing an indication of the simultaneous presence of two fingers" limitation. Because there are no genuine issues of material fact as to whether each of the elements of Claim 18 is met by the Synaptics' Type 2 Code products, the district court's award of summary judgment on infringement of Claim 18 in favor of Elantech should be affirmed.

A. Synaptics' Type 2 Code products perform the same function and utilize equivalent structure as the "means for scanning" limitation of Claim 18.

In the Claim Construction Order, the district court construed, in relevant part, the sub-limitations (a)-(c) of the "means for scanning" limitation in the following manner: "identify a . . . maxima . . ." to mean "identify a . . . peak value . . ." and "identify a minima" to mean "identify the lowest value." A17. The district court later considered the meaning of the terms "peak value" and "lowest value" and concluded that "the claims neither mention nor require any sort of operation to be performed on capacitance values," and "the claims construed

require identification of peak and lowest values, corresponding to maxima and minima, respectively." A23.

At summary judgment, there was no dispute before the district court regarding either the function of or the disclosed structure in the '352 Patent in relation to the "means for scanning" limitation. A1276 and A1365. In granting summary judgment of infringement against Synaptics, the district court concluded that the Type 2 Code products contained an equivalent structure that performed the identical function as claimed in the "means for scanning" limitation in Claim 18 – detecting two maxima with an intervening minima. That finding was correct and Synaptics' arguments to the contrary are premised on its attempts to impose additional limitations not found in the "means for scanning" element of Claim 18.

1. Synaptics' Type 2 Code products identify maxima and minima.

All of Synaptics' arguments emanate from its position that a methodology that does not identify and then store or process particular measured capacitance values of maxima and minima cannot be deemed to infringe Claim 18. Synaptics' primary contention is that its Type 2 Code products do not perform the function of "identify[ing] the lowest value." Appellant's Brief at 34. Synaptics also argues that while the Type 2 Code scans and compares the capacitance on each trace with the capacitance on the next trace to generate a vector of 1s and 0s, there is no functionality to identify the location of "lowest values." Appellant's Brief at 35.

Similarly, Synaptics also contends that while Type 2 Code may determine maxima, it does not attempt to identify actual peak values. Appellant's Brief at 44.

These arguments are unavailing because they do not relate to limitations of Claim 18 as construed correctly by the district court. Synaptics' Type 2 Code compares each trace to the subsequent trace to determine where capacitance values begin to increase or decrease. In other words, Type 2 Code identifies local minima and local maxima. This, as the district court properly realized, is precisely the functionality of the "means for scanning" limitation in Claim 18. If the system is given the information necessary to identify a capacitance value – whether a maxima or a minima – that value has been identified for purposes of the "means for scanning" limitation. A23 (stating that "the construed claims require identification of peak and lowest values, corresponding to maxima and minima, respectively"). As the district court correctly acknowledged, Claim 18 neither mentions nor requires any sort of operation to be performed on capacitance values. A23; *see also* A144 (17:27-37).

The record before the district court provided clear, indisputable examples showing that Synaptics' Type 2 Code products identify the values generated by fingers touching the touch sensor and identify a first peak value, a following lowest value, and a second peak value. Specifically, Synaptics' Type 2 Code includes the peak_detect_subr.asm file which contains a module entitled oneAxis. A2169 at

¶ 15 and A2171 at ¶ 22. The oneAxis module calls the buildPeaksBitPattern routine, which analyzes finger profile data and creates a "bit vector." A2169 at ¶ 16; A2170 at ¶ 18; A2171-72 at ¶ 23; and A2175-76 at ¶ 30. Each bit corresponds to a particular capacitive trace in the touch sensor. *Id.* A "0" bit indicates that the capacitive value of the trace is less than the value of the next trace. *Id.* Similarly, a "1" bit indicates where the capacitance of the current trace is greater than that of the next trace. *Id.* In the resulting variable string (or "bit vector"), any instance of a "01" in the pattern reflects the point where the finger profile begins to decrease, i.e. a maxima, and any instance of a "10" in the pattern reflects the point where the finger profile ceases to decrease, i.e., a minima. *Id.* The purpose of this bit vector is to provide the touchpad with the identity of the traces and their corresponding values.

Claim 18 does not require any analysis of the bit vector to identify the value of capacitance or location of the high and low points. A144 (17:27-37). Claim 18 merely requires identifying the high and low points corresponding to maxima and minima. This is precisely what Synaptics' Type 2 Code products do. Thus, the district court properly concluded that, as a matter of law, Synaptics' products with Type 2 Code, when executed, "(a) identify a first maxima in a signal corresponding to a first finger, (b) identify a minima following the first maxima and (c) identify a

second maxima in a signal corresponding to a second finger profile following said minima" and satisfy the "means for scanning" limitation of the '352 Patent.

2. Synaptics is estopped from adopting a new claim position on appeal relating to the "means for scanning" element of Claim 18.

Before the district court, the parties agreed that the corresponding section 112, ¶ 6 structure of the "means for scanning" limitation is the "analog multiplexor 45, capacitance measuring circuit 70, analog to digital converter 80, microcontroller 60." A1276 and A1365. This position was presented in the parties Third Amended Joint Claim Construction Chart. *Id.* On appeal, however, Synaptics contends that the district court erred because it "never determined, much less analyzed, the precise algorithm that is part of the recited structure." Appellant's Brief at 44 (citations omitted). The decisions of this court, however, preclude Synaptics from proffering or adopting a new claim construction on appeal after presenting the district court with an agreed upon construction.

The doctrine of judicial estoppel/waiver provides that a party will be judicially estopped from asserting a position on appeal that is directly opposed to a position that the party successfully urged at trial. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1345-46 (Fed. Cir. 2001); *see also Key Pharms. v. Hercon Labs. Copr.*, 161 F.3d 709, 715 n.1 (Fed. Cir. 1998) (listing additional sources that endorse this characterization of judicial estoppel); *see also Sage*

Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1426 (Fed. Cir. 1997) (precluding Sage's claim construction of "elongated slot" and "container body" because they differed from the claim construction urged before the trial court).

In *Key Pharmaceuticals,* the trial court adopted the claim construction set forth by the accused infringer, Hercon Laboratories Corp. *Key Pharms.*, 161 F.3d at 712. On a motion for reconsideration and on appeal, Hercon changed positions and argued a different claim construction than it had urged before the trial court. *Id.* at 715. This court noted that Hercon's change in position was "an obvious attempt to salvage its invalidity case." *Id.* This court then noted that the obvious impropriety of such reversals of position justified an estoppel, even in that case, but declined to estop Hercon out of "an abundance of fairness" because this court had not previously explicitly so ruled. *Id.* at 715-16. Nonetheless, as this court has since acknowledged, "*Key Pharmaceuticals* thus stands for the proposition that a party will be judicially estopped from asserting a position on appeal that is inconsistent with a position it advocated at trial and persuaded the trial court to adopt." *Interactive Gift Express,* 256 F.3d at 1346.

Having agreed that the corresponding structure to the "means for scanning" limitation was the "analog multiplexor 45, capacitance measuring circuit 70, analog to digital converter 80, microcontroller 60" and having urged the district court to adopt that construction, Synaptics' previously unasserted argument for a

narrower claim construction with an algorithm being part of the structure corresponding to the "means for scanning" limitation should be rejected. *See Superguide Corp. v. DirctTV Enters., Inc.*, 358 F.3d 870, 889-90 (Fed. Cir. 2004) (refusing to address a broader construction on appeal when before the district court the parties had agreed upon and presented the construction to the trial court); *see also Finnigan Corp. v. Int'l Trade Comm'n,* 180 F.3d 1354, 1363 (Fed. Cir. 1999) (stating that a court is not required "to effectively retry claim construction *de novo* by consideration of novel arguments not first presented to the tribunal whose decision is on review.").

Even if Synaptics could raise an argument that its Type 2 Code algorithm is "entirely different" from the algorithm disclosed in the '352 Patent, that argument should fail. The proper test for determining whether the structure in an accused device is equivalent to the structure recited in a section 112, ¶ 6, claim is whether the differences between the structures are insubstantial. *WMS Gaming*, 184 F.3d at 1351. In this case, there was no dispute or factfinding in the district court on this point precisely because Synaptics accepted (and urge the district court to accept) the construction that the corresponding section 112, ¶ 6 structure of the "means for scanning" limitation is the "analog multiplexor 45, capacitance measuring circuit 70, analog to digital converter 80, microcontroller 60." A1276 and A1365. Having charted its course in the district court, Synaptics cannot now advocate a

different corresponding structure. Thus, at the very least, it is appropriate to infer equivalence. Otherwise, Synaptics stands to reap a windfall by simply reversing a position it previously adopted and urged upon the district court.

B. Synaptics' Type 2 Code products utilize equivalent structure to the structure linked to the "means for providing an indication" limitation of Claim 18.

The district court did not construe the meaning of the "means for providing an indication" limitation in the Claim Construction Order. In relation to the parties' cross-motions for summary judgment, however, the district court later considered the meaning of the limitation and concluded that the limitation does not require that the indication of two fingers be returned to the host. Instead, the limitation merely requires the infringing methodology to "perform some affirmative step to provide an indication of multiple fingers." A24.

At summary judgment, there was no dispute about the function of this limitation. A1276 and A1365. Whether the '352 Patent identified a structure corresponding to the "means for providing an indication" limitation, however, was disputed. Synaptics contended that there was none identified. A1276 and A1365.

Synaptics offers three arguments as to why the district court erred in granting summary judgment to Elantech on whether the "means for providing an indication" limitation is satisfied by Synaptics' Type 2 Code. First, Synaptics contends that Claim 18's "means for providing an indication" limitation is

indefinite because nothing in the '352 Patent links any structure to the recited function. Second, Synaptics argues that the district court erred as a matter of law in holding that "microcontroller" alone was the structure corresponding to the function. Third, Synaptics contends that the district court did not compare the algorithmic routine(s) of the Synaptics' Type 2 Code products with those described in the '352 Patent. None of Synaptics' arguments withstands scrutiny.

1. The '352 Patent clearly links structure to the "means for providing an indication" limitation.

The district court was correct in concluding that no reasonable finder of fact would conclude that Synaptics satisfied its burden to prove, by clear and convincing evidence, that the "means for providing an indication" limitation is indefinite. *See Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376-77 (Fed. Cir. 2001) ("[A] challenge to a claim containing a means-plus-function limitation as lacking structural support requires a finding, by clear and convincing evidence, that the specification lacks disclosure of structure sufficient to be understood by one skilled in the art as adequate to perform the recited function.").

The written description of the '352 Patent makes plain that the operation of the touchpad is controlled by microcontroller 60 running appropriate firmware. A138 (5:49-51) ("[M]icrocontroller 60, which operates to form, among other things, a finger profile for one or more fingers, X-Y cursor data, and control signals."). "Depending on the operation being performed at the particular time, the

output of microcontroller 60 is then supplied to an interface to a PC or other device . . . ." A138 (5:52-55). In addition, the description makes clear that the operation of the system that includes the microcontroller "is controlled in either firmware, software or hardware. Shown in FIG. 5 is a flow diagram showing the general operation of such software or firmware which is capable of detecting multiple fingers, and which uses the algorithm of FIG. 6 . . . ." A139 (7:1-5). The '352 Patent also discloses exemplary firmware executing on the microcontroller 60 that includes a simplified algorithm called "Xcompute," which when executed provides an indication of the presence of two fingers by setting the "Xfinger" variable to 2. A135 (Fig. 9-2 at Step 980).

In short, the written description of the '352 Patent plainly discloses that the microcontroller 60 operates to form various data, including an indication of the presence of multiple fingers. Thus, one of ordinary skill in the art would surely recognize that the algorithm of FIG. 9 would be executed by the microcontroller 60. In addition, one of ordinary skill in the art would recognize that the microcontroller, which governs the operation of the touchpad, along with the algorithm implemented by the microcontroller to "form, among other things, a finger profile for one or more fingers . . . ." is the corresponding structure to the "means for providing an indication" limitation. A138 (5:48-51) and A135 (Fig. 9-2). The district court properly concluded that the '352 Patent links the

microprocessor system and disclosed algorithm with the "means for providing an indication" limitation.

WMS Gaming, Inc. v. Int'l Game Tech., 184 F.3d 1339 (Fed. Cir. 1999), is instructive on the proper disposition of this issue, and it supports Elantech's position. Although the written description of the patent at issue in that case did not actually disclose "a microprocessor, or computer, to control the operation of the slot machine, including the operation of the machine in the assignment of numbers to reel stop positions," this Court accepted that construction, however, because the parties had entered into a stipulation on the subject, the district court had accepted the stipulation, and the stipulation was not being disputed on appeal. *Id.* at 1347, fn 2. The specification also included an algorithm that controlled the assignment of numbers to reel stop positions on a slot machine. *Id.* This Court held, as a matter of law, that the structure disclosed by the limitation at issue was a microprocessor programmed to perform the algorithm illustrated in the patent. *Id.* at 1349. The same result is mandated in this case – the patent at issue discloses a microprocessor and algorithm to be executed thereon and the algorithm provides an indication of multiple fingers on the touchpad; as a matter of law, the '352 Patent sufficiently discloses the corresponding structure for the "means for providing an indication" limitation. *See id.*

In re Dossel, 115 F.3d 942, 946 (Fed. Cir. 1997), which involved a claim for a "means for reconstructing," also supports a conclusion that the '352 Patent sufficiently discloses the corresponding structure for the "means for providing an indication" element. In *Dossel*, this court concluded that the specification sufficiently disclosed a computer as corresponding structure. *Id.* Although the specification did not use the term "computer," it described a structure that "receive[d] digital data, perform[ed] complex mathematical computations and output[ ] the results to a display." *Id.* at 946-47. This court concluded that one of skill in the art of medical imaging would understand that a computer must be the structure to perform these functions. *Id.* Further, although no code that the computer would use to perform the functions was disclosed, the specification did explain that "known algorithms" could be used in the reconstruction process. *Id.* at 946. This case presents an even stronger showing than that found in *Dossel* because the '352 Patent discloses a microprocessor and algorithm to be executed thereon. Moreover, the algorithm provides an indication of multiple fingers on the touchpad. The '352 Patent sufficiently discloses the corresponding structure that is linked to the "means for providing an indication" limitation. *See also Allvoice Computing, PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1244-45 (Fed. Cir. 2007 (affirming district court's definiteness determination where the patent

disclosure and accompanying figures provided sufficient structure to define the structure for the ordinarily skilled artisan).

The cases cited by Synaptics in support of its indefiniteness argument do not dictate a different conclusion. For example, in *Aristocrat Tech. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1334-35 (Fed. Cir. 2008), the specification at issue did not designate any particular algorithm to perform the claimed function. Thus, the court concluded that the patentee had only disclosed a general microprocessor insufficient to satisfy 35 U.S.C. § 112, ¶ 6. Unlike the patent at issue in *Aristocrat*, the '352 Patent plainly provides an algorithm to perform the claimed function for the "means for providing an indication" limitation. A135 (Fig. 9-2).

Tehrani v. Hamilton Medical, Inc., 331 F.3d 1355, 1362 (Fed. Cir. 2003), also cited by Synaptics, recognized that the corresponding structure was the disclosed microprocessor programmed to perform the disclosed algorithm. Due to a lack of clarity in the record on appeal, however, the court remanded the matter to the district court to determine the algorithm that was part of the recited structure. *Id.* Such a result is not called for in this case because the algorithm that is part of the microprocessor is plainly identified in Figure 6 and Figure 9-2 of the '352 Patent.

Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1340-41 (Fed. Cir. 2008), is also unavailing for Synaptics. In that case, the patent simply recited that "software" would carry out the function. *Id.* Because the patent did not provide enough of an algorithm to satisfy one of ordinary skill in the art that the structure corresponded with the function, the patent was indefinite. Here the '352 Patent specification clearly provides that "In the exemplary algorithm shown in FIGS. 8 and 9, a determination is made whether zero, one or two fingers are in contact with the touchpad. . . . It will be appreciated that FIG. 8 is analogous to FIG. 5, while FIG. 9 is analogous to FIG. 6." A142 (13:61-67). One of ordinary skill in the art would recognize that the algorithm of Figure 9, executed by the microcontroller, is the disclosed structure linked to the "means for providing an indication" limitation.

Synaptics bears the burden of proving indefiniteness by "clear and convincing" evidence. *Intel Corp. v. VIA Tech., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003). The record presented to the district court confirms that the '352 Patent clearly links the microcontroller (and its associated software or firmware executing on it, including the algorithm of Figure 9-2) to the "means for providing an indication" limitation. When viewed through the lens of the clear and convincing evidence standard (or any other proof standard) Synaptics has not provided any basis to establish a substantial question that the microcontroller (and its associated software or firmware executing on it, including the algorithm of Figure 9-2) is not

adequately linked to the "means for providing an indication" limitation. *See Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1382 (Fed. Cir. 2001) (affirming district court finding that patent disclosed adequate corresponding structure because language of the specification and its accompanying figure made clear that the structure was capable of performing the function recited in the claim limitation).

2. The '352 Patent clearly links the microcontroller and its associated software or firmware executing on it, including the algorithm of Figure 9-2, to the "means for providing an indication" limitation.

Synaptics argues that the microcontroller alone could not be a corresponding structure. Synaptics' argument distorts the district court's ruling and misapprehends relevant caselaw.

The district court identified the corresponding structure of the "means for providing an indication" limitation to be "the microcontroller which governs the operation of the touchpad." A54. In order to govern the operation of the touchpad the microcontroller forms data in the manner described in the '352 Patent, i.e., in accordance with the software or firmware executing on it, including the algorithm of Figure 9-2. Despite Synaptics' attempts to narrow the district court's ruling beyond recognition, the district court did not identify the corresponding structure as the microcontroller alone. Implicit in the district court's conclusion regarding the corresponding structure were the programs and algorithms executed on the microcontroller and disclosed by the '352 Patent. *See, e.g.*, A135 (Fig. 9-2).

In any event, Synaptics' argument on this point is simply a re-distillation of the indefiniteness argument which, as made clear above, fails because the '352 Patent makes clear that the corresponding structure to the "means for providing an indication" limitation is the microcontroller 60 and its associated software or firmware, including the algorithm in Figure 9-2. *See* discussion *supra* II.B.1.

3. Synaptics' Type 2 Code provides an indication of the presence of two fingers in the same manner as the '352 Patent.

Third, Synaptics argues that the district court failed to compare the routines of the two structures. This argument ignores the record presented to the district court. The district court properly concluded the Type 2 Code, specifically the oneAxis module and related firmware provides an indication of the presence of two fingers in the same manner as the '352 Patent. A54 (5:15-25) and A56 (7:11-15).

The '352 Patent discloses exemplary firmware executing on the microcontroller 60 that includes a simplified algorithm called "Xcompute," which when executed provides an indication of the presence of two fingers by setting the "Xfinger" variable to 2. A135 (Fig. 9-2). The written description of the '352 Patent plainly discloses that the microcontroller 60 operates to form various data, including an indication of the presence of multiple fingers. A139 (7:1-5). Synaptics' own expert conceded this point. A3155 at ¶ 25.

Synaptics' Type 2 Code also provides an indication of the presence of two fingers. For example, when two fingers are present on the touchpad, the oneAxis module provides an indication of the presence of those two fingers – a count of 2 in the FingerInfo_FingerCount##ArrayNum register. A2171 at ¶ 21; *see also* A1469 at ¶ 27 (Synaptics' expert conceding that "[a] firmware routine called oneAxis is called to count the fingers in this data sequence"). That indication is provided in direct response to the earlier identification of two maximum values in the finger profile. A2171 at ¶ 21. Indeed, the district court credited Synaptics' own expert with conceding that point. A28 (11:12-13).

In addition, Synaptics' Type 2 Code always executes the buildPeaksBitPattern routine to identify maxima and minima and use the presence of those maxima, or peaks, to determine the presence of two fingers. A2171-72 at ¶ 23. This occurs in the PrimaryFingerTracking module. In particular, this module first calls the buildPeaksBitPattern routine, which, as set forth above, identifies two maxima and the intervening minima if two fingers are present on the touchpad. *Id.* The module then calls the findPeaksAboveTrackingThreshold to identify legitimate peak values indicating the presence of one or more fingers. *Id.* The module findPeaksAboveTrackingThreshold uses the identification of peaks provided to it from buildPeaksBitPattern to determine how many of the fingers are to be considered in contact with the touchpad for tracking purposes by comparing

the given threshold values to the values stored for the traces identified as the peaks, or maxima. *Id.* The next routine, findNearestPeak, determines which of the maxima indicating the presence of a finger is nearest the last known tracking position. *Id.* This indication will determine which of the two fingers identified by the maxima will be used as the tracking finger to control the cursor. *Id.*

All of this evidence was before the district court when it properly concluded that the Type 2 Code, specifically, the oneAxis module and related firmware code, counts fingers. Implicit in that conclusion was a comparison of the routines and a conclusion that no reasonable factfinder could find that the oneAxis algorithm is not the same as, or equivalent to, the algorithms of the '352 Patent. As prior decisions make clear, the implicit conclusions of a district court are regularly recognized by this court. *See Tehrani v. Hamilton Medical, Inc.*, 331 F.3d 1355, 1362 (Fed. Cir. 2003) (recognizing the implicit claim construction that formed the basis of the district court's analysis of the claim at issue); *ACS Hospital Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1582-83 (Fed. Cir. 1984) (crediting and affirming the implicit conclusion of the district court regarding whether the accused device functioned in substantially the same way as the patented device). In addition to the oneAxis module relied upon by the district court, the PrimaryFingerTracking module described above relies on the presence of more than one finger to determine which finger will be used as the tracking finger to

control the cursor. Although not relied upon by the district court, this module also satisfies the district court's claim construction of the "means for providing an indication" limitation and further supports the district court's conclusion that Synaptics' Type 2 Code provides an indication of the presence of two fingers in the same or equivalent manner as the '352 Patent.

For all the foregoing reasons, the district court's conclusion that no reasonable factfinder could conclude that each element of Claim 18 of the '352 Patent is not found within Synaptics touchpads implementing Type 2 Code should be affirmed.

III. The district court properly enjoined sales of Type 2 Code Products.

A decision to grant or deny a preliminary injunction is within the sound discretion of the district court, based upon its assessment of four factors: (1) the likelihood of the patentee's success on the merits; (2) irreparable harm if the injunction is not granted; (3) the balance of hardships between the parties; and (4) the public interest. *Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1451 (Fed. Cir. 1988). This court reviews the district court's decision for an abuse of discretion, a lapse that occurs when the decision is premised on an error of law, a clearly erroneous finding of fact, or a clear error of judgment in weighing the factors. *Id.* at 1449. To the extent the court's decision depends upon an issue of law, this court

reviews that issue *de novo*. *Tate Access Floors, Inc. v. Interface Architectural Resources, Inc.*, 279 F.3d 1357, 1364 (Fed. Cir. 2002).

In the context of a preliminary injunction, while "[t]he burden of proving invalidity is with the party attacking validity," the party seeking the injunction "retain[s] the burden of showing a reasonable likelihood that the attack on its patent's validity would fail." *H.H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 387 (Fed. Cir. 1987). When the presumptions and burdens applicable at trial are taken into account, the injunction should issue if the party seeking the injunction shows that the alleged infringer's defenses lack substantial merit. *Tate Access Floors,* 279 F.3d at 1365 (internal quotation marks omitted).

Synaptics argues on appeal that it raised substantial questions concerning the indefiniteness, obviousness, and noninfringement of the '352 Patent claims. Appellant's Brief at 54-61. In addition, Synaptics argues that the district court erred in determining that Elantech had established irreparable harm. Appellant's Brief at 62.

A. Synaptics' argument that Claim 18 is indefinite lacks substantial merit.

Synaptics contends that Claim 18 is indefinite. All of Synaptics' arguments on this point relate to whether the '352 Patent adequately discloses structure that corresponds to the claimed "means for providing an indication" limitation. Because the '352 Patent unquestionably discloses a corresponding structure clearly

linked to the "means for providing an indication" limitation, Synaptics' arguments must be rejected.

Synaptics first contends that it presented sufficient evidence to raise a substantial question as to whether the '352 Patent clearly links the microcontroller to the "means for providing an indication" limitation. According to Synaptics, the '352 Patent "refers to only some unspecified operations resulting in data being output from the microcontroller to another device." Appellant's Brief at 57. This argument is inaccurate (and puzzling) in light of the plain text of the '352 Patent and its accompanying figures.

A structure in the specification is a corresponding structure if the specification or prosecution history clearly links or associates that structure to the means recited in the claim. *See Budde*, 250 F.3d at 1377. "The plain and unambiguous meaning of [35 U.S.C. § 112, ¶ 6] is that one construing mean-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure." *In re Donaldson Co.,* 16 F.3d 1189, 1193 (Fed. Cir. 1994) (en banc). While the specification must link the disclosed structure to claimed means, this is not a high bar. "All one needs to do in order to obtain the benefit of [35 U.S.C. § 112, ¶ 6] is to recite some structure corresponding to the means in the

specification." *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999). "Interpretation of what is disclosed [in the specification] must be made in light of the knowledge of one skilled in the art." *Id.* at 1380.

The '352 Patent specification makes clear that "[i]n an exemplary embodiment, the operation of the system of FIG. 2 is controlled in either firmware, software or hardware. Shown in FIG. 5 is a flow diagram showing the general operation of such software or firmware which is capable of detecting multiple fingers, and which uses the algorithm of FIG. 6, discussed hereinafter." A139 (7:1-6). The '352 Patent specification also makes clear that "the system of FIG. 2" includes the microcontroller. A120 (Fig. 2). One of ordinary skill in the art would surely recognize that the software or firmware described would be executed by the microcontroller 60. The '352 Patent specification further clearly provides that "[i]n the exemplary algorithm shown in FIGS. 8 and 9, a determination is made whether zero, one or two fingers are in contact with the touchpad. . . . It will be appreciated that FIG. 8 is analogous to FIG. 5, while FIG. 9 is analogous to FIG. 6." A142 (13:61-67). One of ordinary skill in the art would recognize that the algorithm of FIG. 9, which provides an indication of the presence of multiple fingers, would be executed by the microcontroller 60. Synaptics failed to raise a substantial question whether the '352 Patent clearly links the microcontroller to the "means for providing an indication" limitation.

Second, Synaptics contends that the district court wrongly relied on the microcontroller as the corresponding structure. According to Synaptics, the '352 Patent describes only that the "'output' of the microcontroller is supplied 'to an interface to a PC or other device,'" and because Elantech has taken the position (which the district court agreed with) that the "providing an indication" limitation does not require that the indication of multiple fingers must be returned to the host, the '352 Patent fails to link the microcontroller to the "means for providing an indication" limitation. Appellant's Brief at 58. Nothing in the '352 Patent supports Synaptics' constrained view of the operation of the microcontroller.

The '352 Patent plainly states that "[d]epending on the operation being performed at the particular time, the output of the microcontroller 60 is then supplied to an interface to a PC or other device, such as a PS/2 interface, an RS-232 interface, or an Apple Desktop Bus (ADB)." A138 (5:52-55) (emphasis added). The '352 Patent also provides that "[i]n an exemplary embodiment, the touchpad of the present invention reports to a host either the relative motion of a finger across a touchpad or changes in 'button' status." A138 (5:16-19) (emphasis added). One of ordinary skill in the art would surely understand these passages, taken together, to mean that when the microcontroller 60 is operating to process data to indicate movement of a finger across a touchpad or simulation of a button up or down event, the output of the microcontroller 60 is supplied to a host

interface. Of course, when the microcontroller 60 is operating to form other data, such as intermediate data, it may not send its output to the host. As the district court properly concluded, the "means for providing an indication" limitation does not require the microcontroller to return the indication of two fingers to the host, and, as a result, Synaptics has not raised a substantial question whether the '352 Patent clearly links the microcontroller to the "means for providing an indication" limitation.

Synaptics' final argument in support of its theory of indefiniteness is that the district court erred in concluding that the microcontroller alone was the corresponding structure for the "means for providing an indication" limitation. This argument is identical to its prior argument on this point in relation to the infringement of the "providing an indication" limitation and fails for the same reasons. *See* discussion *supra* II.B.2.

The district court did not clearly err in finding that Synaptics failed to raise a substantial question in its indefiniteness defense.

B. Synaptics' argument that the '352 Patent is invalid due to obviousness lacks substantial merit.

An invention is unpatentable as obvious if the differences between the patented subject matter and the prior art would have been obvious at the time of invention to a person of ordinary skill in the art. 35 U.S.C. § 103(a); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ----, 127 S. Ct. 1727, 1734 (2007). Because a patent is

presumed to be valid, 35 U.S.C. § 282, the accused infringer is required to prove by clear and convincing evidence that the claim or claims at issue are invalid as obvious. *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1355 (Fed. Cir. 2007).

The Supreme Court recently reiterated the basic principles for an obviousness inquiry – an issued patent is presumed valid (35 U.S.C. § 282), and the three relevant factors of the obviousness inquiry are: (a) the scope and content of the prior art; (b) the differences between the prior art and the claims at issue; and (c) the level of skill in the pertinent art. *KSR Int'l Co.,* 127 S. Ct. at 1729-30. In the specific context of a patent claiming the combination of elements of prior art, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *Id.* at 1741.

The district court held that all of the prior art identified by Synaptics had been considered by the Examiner before the '352 Patent was issued. In addition, the district court concluded that Synaptics had not identified prior art that involved identifying a minima and had failed to provide articulated reasoning with some rational underpinning from which it could be concluded that the '352 Patent was obvious to a person of ordinary skill in the art. None of Synaptics' arguments on appeal cast doubt on the correctness of the district court's conclusions.

Synaptics argues that Claim 18 is invalid for obviousness in view of two patents that it claims as prior art: U.S. Patent No. 7,109,978 B2 (the "'978 Patent") and U.S. Patent No. 4,686,332 (the "'332 Patent"). Although the '978 Patent was filed on March 26, 2004, well after the '352 Patent was filed on February 28, 1996, Synaptics contends that the '978 Patent claims priority on the basis of an earlier patent, U.S. Patent No. 5,543,591 (the "'591 Patent"), filed on October 7, 1994.

Although not readily clear, it appears that on appeal Synaptics contends first that the district court did not actually decide whether the art relied upon by Synaptics was indeed prior art. This is wrong. The district court made plain that: (1) the '332 Patent was prior art and was before the Examiner; (2) the '591 Patent was before the Examiner and to the extent the claims of the '978 Patent were supported by the disclosure of the '591 Patent, the claims of the '978 Patent would obtain the benefit of the earlier filing date making them prior art against the '352 Patent; and (3) to the extent that the claims of the '978 Patent were not supported by the disclosure of the '591 Patent, they were not considered prior art. A59-60. Thus, the '332 Patent, the '591 Patent, and the '978 Patent (to the extent the claims were supported by the '591 Patent disclosure) were fully considered by the Examiner. A118 (noting the '332 and '591 Patents as cited prior art references for the '352 Patent).

As a corollary to its first argument, Synaptics contends that the mere fact that the prior art upon which it relied was before the Examiner is insufficient to show that Elantech met its burden of showing that there was no substantial question with regard to obviousness. Synaptics misapprehends the burdens of proof in relation to its assertion of invalidity due to obviousness.

Deference to the decisions of the Examiner takes the form of the presumption of validity under 35 U.S.C. § 282. *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1329 (Fed. Cir. 2000). Within the presumption of validity is a presumption of non-obviousness. *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 714 (Fed. Cir. 1984). Since a patent is presumed valid, the patent challenger bears the burden of proving the factual elements of invalidity by clear and convincing evidence. That burden of proof never shifts to the patentee to prove validity. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1375 (Fed. Cir. 1986). Indeed, this court has recognized that if the challenger's evidence is inadequate, a patentee's motion for judgment that the challenger had not established invalidity would be appropriately granted before the patentee introduces any rebuttal evidence. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1570-71 (Fed. Cir. 1986) (refuting the "erroneous" impression that patentees have a burden of proving validity). Thus, contrary to Synaptics' assertion, it was not the burden of Elantech to show there was no substantial

question as to obviousness. Rather, it was (and remains) Synaptics' burden to offer some proof to overcome the Examiner's determination of nonobviousness and the deference afforded that determination. Synaptics failed to offer such proof.

Lastly, Synaptics contends that it offered sufficient evidence to support a finding that one in the ordinary skill of the art would have been motivated to select the references and to combine them to render the claimed invention obvious. The evidence Synaptics relies upon is the declaration of its expert Dr. Andrew Wolfe. Appellant's Brief at 61. Central to Dr. Wolfe's assertions, however, is that the claims of the '978 Patent (as prior art) in conjunction with the '332 Patent rendered the '352 Patent obvious. A3157-3163. Contrary to Dr. Wolfe's assertions, however, the claims and abstract of the '978 Patent are not prior art because they were added during a continuation application filed well after the '352 Patent issued. Indeed, Dr. Wolfe appears to concede this point. A3157 at ¶ 31 (conceding that the abstract and claims of the '978 Patent were not included in the '591 Patent application). As the district court correctly concluded, any new material included in the '978 Patent claims cannot claim priority to the earlier '591 Patent, and therefore cannot be prior art to the '352 Patent and cannot serve as a basis to find the '352 patent invalid for obviousness.

For all these reasons, the district court did not clearly err in finding that Synaptics' obviousness defense failed to raise a substantial question regarding validity.

C. Elantech made a clear showing that Synaptics' Type 2 Code products infringe Claim 18.

At the preliminary injunction stage, the burden is on Elantech to make a persuasive showing of infringement. *Nutrition 21 v. United States*, 930 F.2d 867, 869 (Fed. Cir. 1991). For all the reasons, discussed in Section II *supra*, Elantech has made a clear showing of infringement such that there is no substantial question whether Synaptics has infringed Claim 18.

For all the foregoing reasons, the district court's determination that Elantech had established a likelihood of success on the merits should be affirmed.

D. The district court properly concluded that Elantech established a showing of irreparable harm if an injunction did not issue.

Because the court found that Elantech had established a clear likelihood of success on the merits with regard to infringement and validity, it noted that Elantech was entitled to a rebuttable presumption of irreparable harm. A63. Synaptics contends this was legal error.

First, according to Synaptics, the presumption of irreparable harm was not available to Elantech because the '352 Patent has not been tested in litigation. Appellant's Brief at 62. It appears that Synaptics contends that because the patent

has not been adjudicated to be valid the presumption is inapplicable. This argument finds no support in the case relied upon by Synaptics and has been flatly rejected by this court. *Nutrition 21 v. United States*, 930 F.2d 867, 871 (Fed. Cir. 1991), cited by Synaptics, held only that because the district court had not made any findings on whether the patentee had made a clear showing of validity, the presumption of irreparable harm was inapplicable. *Id.* ("But without a clear showing of validity and infringement, a presumption of irreparable harm does not arise in a preliminary injunction proceeding.") (emphasis in original). The decisions of this court make clear that a presumption of irreparable harm is proper where, as here, the patentee has made a clear showing of validity and infringement. *See, e.g.*, *Purdue Pharma L.P. v. Boehringer Ingelheim GMBH,* 237 F.3d 1359, 1363 (Fed. Cir. 2001). The decisions of this court do not, as Synaptics contends, "suggest" that a final adjudication of validity is required in order to trigger the presumption of irreparable harm. *See Atlas Powder Co. v. Ireco Chemicals*, 773 F.2d 1230, 1233 (Fed. Cir. 1985) (rejecting argument that there must be a final, binding adjudication of validity to trigger the presumption of irreparable harm).

Second, according to Synaptics, the Supreme Court's recent holding in *eBay Inc. v. MercExchange, LLC,* 547 U.S. 388 (2006), that permanent injunctions against patent infringement should be made in accordance with the "traditional four-factor framework" *(Id.* at 394), also bars application of the presumption of

irreparable harm based on strong likelihood of success at the preliminary injunction stage. Appellant's Brief at 63. The conclusion that *eBay* precludes a presumption of irreparable injury based on likelihood of success in the preliminary injunction context is unfounded. By its terms, *eBay* applies only to permanent injunctions. *See Christiana Indus. v. Empire Elecs., Inc.,* 443 F. Supp. 2d 870, 884 (E.D. Mich. 2006). Moreover, *eBay* dealt with a categorical award of permanent injunctive relief, not just a rebuttable presumption of one factor (irreparable harm) of the traditional four-factor test. *See eBay* 547 U.S. at 393-94. Indeed, the district court expressly noted the proper teaching of *eBay* when it acknowledged that district courts are not automatically required to grant or deny injunctive relief. *See* A62 ("the decision whether to grant or deny injunction relief rests with the equitable discretion of the district courts," to be "exercised consistent with traditional principles of equity."). Lastly, this Court's recent, post-*eBay* decision in *Abbott Labs. v. Andrx Pharm., Inc.,* strongly suggests that the presumption based on likelihood of success survives *eBay*. *Abbott* cited and discussed *eBay* but nonetheless indicated that the presumption would continue to apply in cases, unlike *Abbott* itself, in which a strong likelihood of success exists. *Abbott Labs. v. Andrx Pharm., Inc.*, 452 F.3d 1331, 1347 (Fed. Cir. 2006) ("Abbott has not established a likelihood of success . . . . As a result, Abbott is no longer entitled to a presumption

of irreparable harm."). The district court properly applied the presumption of irreparable harm in this case.

Third, Synaptics argues that Elantech failed to provide any evidence of irreparable harm. Appellant's Brief at 64. This argument overlooks that in light of the presumption of irreparable harm, the burden was on Synaptics to rebut that presumption. Synaptics failed to present such evidence to the district court and does not even contend on appeal that the presumption has been rebutted.[1]

Even if, however, there was no presumption of irreparable harm, there was sufficient evidence of irreparable harm before the district court. As this Court has recognized, entry by a competitor can cause permanent changes in the marketplace. *See Polymer Tech., Inc. v. Bridwell,* 103 F.3d 970, 975-76 (Fed. Cir. 1996). Because such changes in the market are irreversible, the patentee cannot be adequately compensated by money damages. *See Hybritech Inc. v. Abbott Labs.,* 849 F.2d 1446, 1457 (Fed. Cir. 1988) ("[F]uture infringement . . . may have market

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[1] In the district court, Synaptics argued that the presumption of irreparable harm was rebutted on the grounds that Elantech unreasonably delayed in seeking injunctive relief and that money damages would be adequate to compensate Elantech. These arguments have been abandoned on appeal and, in any event, were properly rejected by the district court in light of the parties' attempts to negotiate a settlement and in light of the ongoing threat of depriving Elantech of its patent grant. A63-64. These determinations by the district court were not an abuse of its discretion or based on an error of law. *Hybritech Inc. v. Abbott Labs.,* 849 F.2d 1446, 1457 (Fed. Cir. 1988) ("[A] showing of delay does not preclude, as a matter of law, a determination of irreparable harm.").

effects never fully compensable in money."). In this case, the entry or, more accurately, the continued presence of Synaptics in this particular market will, as the district court recognized, affect Elantech in ways that are difficult to calculate and compensate with money damages.[2] A64.

Moreover, this court has repeatedly recognized that the principal value of a patent is the right to exclude and money damages will not always make a patentee whole. *Hybritech Inc.*, 849 F.2d at 1456-57. This "exclusionary" value is especially heightened where, as here, the alleged infringer is a direct competitor and the patent's remaining life is dwindling. Without the protection afforded by its '352 Patent, Elantech's position in the touchpad market will be threatened. *See Bio-Technology Gen. Corp. v. Genentech, Inc.*, 80 F.3d 1553, 1565-66 (Fed. Cir. 1996) (noting that loss of revenues and loss of goodwill supported finding of irreparable harm). Moreover, the remaining life of the '352 Patent is limited and, as recognized by the district court, in the absence of a preliminary injunction, the '352 Patent "could lose its value over the course of [this] litigation." A64.

Considering the totality of the circumstances, the district court did not clearly err in concluding that Elantech will be irreparably harmed if Synaptics' infringing conduct is not enjoined.

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[2] While Synaptics may claim that it is no longer manufacturing the infringing Type 2 Code products, the district court properly concluded that there was no record evidence to support that conclusion. A64

E. Elantech established that the balance of hardships and public interest factors favor Elantech.

In balancing the harms, the district court was required to balance the harm that will occur to Elantech from the denial of the preliminary injunction with the harm that Synaptics will incur if the injunction is granted. *Hybritech Inc.*, 849 F.2d at 1457. Before the district court, Synaptics did not contest this factor. A64. Elantech's patent grant is for a finite term and denial of a preliminary injunction would convert Elantech's patent into a wasting asset. This result would be exacerbated by a long and protracted litigation, which Elantech faces a risk of in this case. Finally, relative size of the parties is an appropriate consideration when balancing the equities. *See Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 708 (Fed. Cir. 1997). Elantech is a much smaller company than Synaptics. Thus, the district court did not err in concluding that the balance of equities tips decidedly in Elantech's favor.

There is a strong public interest in enforcing patents that are likely valid and infringed. *Hybritech Inc.*, 849 F.2d at 1457. In light of Elantech's showing of validity and infringement, the district court properly concluded that the public interest supported the award of a preliminary injunction.

CONCLUSION

The district court properly concluded that there is no genuine issue as to any material fact that each element of Claim 18 of the '352 Patent is found within

Synaptics' touchpads for implementing Type 2 Code. Thus, the grant of partial summary judgment on infringement in favor of Elantech should be affirmed. In addition, the district court properly concluded that each of the equitable factors for a preliminary injunction favor Elantech. Thus, the grant of a preliminary injunction enjoining Synaptics' from importing, making, selling, or offering to sell the infringing Type 2 Code products should be affirmed.

Respectfully Submitted,

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PROOF OF SERVICE

I hereby certify that an original and twelve (12) copies of the foregoing Brief of Plaintiff-Appellee Elantech Devices Corporation were filed on this 26th date of August 2008 via hand delivery to the Clerk's Office, U.S. Court of Appeals for the Federal Circuit, 717 Madison Place, N.W., Washington, D.C. 20439.

I hereby further certify that two (2) true and correct copies of the foregoing Brief of Plaintiff-Appellee Elantech Devices Corporation were served via overnight delivery on this 26th day of August, 2008 to:

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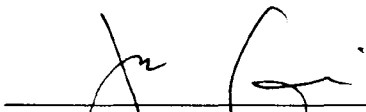

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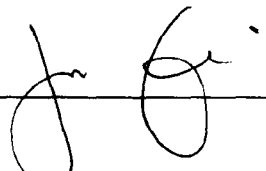
(s) 

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