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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

OAKLAND DIVISION

ATMEL CORPORATION, a Delaware corporation; ATMEL SWITZERLAND, a corporation; ATMEL FRANCE, a corporation; and ATMEL SARL, a corporation, Plaintiffs, v. AUTHENTEC, INC., a Delaware corporation, Defendant	Case No. 06-CV-2138 CW (EDL) Case No. 07-CV-3331 CW **PLAINTIFFS' RESPONSIVE BRIEF ON ITS COMBINED MOTION FOR PARTIAL SUMMARY JUDGMENT OF INFRINGEMENT AND OPENING *MARKMAN* BRIEF AND ITS OPPOSITION TO DEFENDANT'S MOTION FOR SUMMARY JUDGMENT OF NONINFRINGEMENT, CLAIM CONSTRUCTION AND EXCEPTIONAL CASE FINDING** Hearing: Date: May 1, 2008 Time: 2 PM Location: Courtroom 2, 4th Floor Judge: Hon. Claudia Wilken

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I. INTRODUCTION

AuthenTec's main non-infringement argument is based upon its unilateral exclusion of a key portion of its sensor, the drive ring, from the sensing surface. Based upon that narrow and unsupportable interpretation, AuthenTec spends pages and pages of its brief, including the supporting declarations, making assertions and proclamations regarding the "sensing surface" that are completely and easily refuted when the drive ring is properly considered. AuthenTec's unilateral exclusion of the drive ring is less than forthright. Atmel's Opening Brief (at p. 23, ln. 6-9, UMF I & J) makes it perfectly clear that it considers the drive ring part of the sensing surface.

Importantly, under Atmel's proposed claim constructions the drive ring is properly considered and all of the accused AuthenTec's products infringe. In contrast, under AuthenTec's construction the drive ring is excluded from the sensing surface and its sensors do not function.

AuthenTec's brief invites error. It invites the Court to commit legal error by analyzing and ruling on infringement without first construing the claims; by construing the claims in view of the accused products; by construing the claims without first identifying the level of ordinary skill in the art; by not construing the claims as would one of ordinary skill; and by considering experiments on modified sensors under abnormal conditions.[1]

AuthenTec's brief also misleads the Court by repeatedly short citing from the specification to exclude numerous acknowledgments that all of its cited support for its proposed limitations come directly from the preferred embodiments in an attempt have this Court commit the "Cardinal Sin" of claim construction—importing limitations from the preferred embodiments into the claims.

AuthenTec's brief also surreptitiously changes its proposed constructions—all of them and substantially—in response to Atmel's Summary Judgment Motion.[2] And, AuthenTec's new claim construction chart fails to identify any support for any of its new constructions. The Court should reject all of AuthenTec's proposed constructions for its failure to follow the Local Patent Rules.[3]

Finally, AuthenTec wastes a great deal of energy attempting to heap scorn on Atmel, its

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[1] Atmel has concurrently filed a *Daubert* Motion to exclude the testimony of the AuthenTec witness who performed these tests. *See* Motion to Strike McWilliams Declaration.

[2] Compare Ex. C. of Atmel's Opening Brief with Ex. A of AuthenTec's Brief. Even worse, AuthenTec's new Ex. C misstates Atmel's constructions for "means for reconstituting…" and "active surface." *See also* **Exhibit 2** attached hereto (showing AuthenTec's substantial changes).

[3] Atmel slightly modified two construction in its Opening Brief based upon the testimony of Dr. Jain as to the understanding of one of ordinary skill in the art. AuthenTec has no basis to change any of its constructions.

management, its sensor business, the relative financial strength of the parties, etc., in a misguided attempt to have this Court decide the merits of infringement on improper grounds.

II. ATMEL INVENTED SEMICONDUCTOR SLIDE SENSORS WHILE AUTHENTEC, IN ECONOMIC PERIL WITH ITS OBSOLETE LARGE AREA SENSORS, KNOWINGLY APPROPRIATED ATMEL'S INVENTION TO GREAT PROFIT

Prior to 2000, AuthenTec built a substantial business selling large "area" sensors like this (shown actual size).[4] Area sensors require a user to place their fingertip directly on the sensor surface and keep their fingertip still so that the sensor can read the fingerprint. Area sensors are fine for large devices but are impractical on small electronics such as cell phones. As electronic devices got smaller and smaller, AuthenTec's large area sensors became less and less desirable.



In 2000, Atmel introduced a patented semiconductor slide sensor. Slide sensors, like this (shown actual size)[5] , collect the fingerprint data in slices as the finger is swiped across the surface of the sensor. (In this orientation the finger is swiped across the sensor in a motion up and down the page. Slide sensors are also referred to as swipe sensors.) Early on, AuthenTec's patents covered area sensors and Atmel's patents covered slide sensors. As AuthenTec's area sensor business deteriorated, it realized that slide sensors, not area sensors, were the future. Indeed, at a internal meeting AuthenTec emphatically described its competition as "Atmel, Atmel, Atmel" and confirmed that price, which is directly related to sensor size, drives sales. AuthenTec recognized that it needed to sell slide sensors to compete in the small electronics market and to become price competitive. And, AuthenTec conceded in 2001 that it needed to sell Atmel's swipe sensors, *now*, stating: "[redacted]"[6]

AuthenTec, which until that time only sold area RF/capacitive sensors, appropriated Atmel's inventive slide sensor in an act of business survival. And, since then, AuthenTec has done quite well using its preexisting fabrication facilities for area sensors to manufacture Atmel's inventive slide sensor to great profit. AuthenTec's success has nothing to do with the technology in its RF/capacitive sensors and everything to do with it taking Atmel's slide sensor technology.

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[4] AuthenTec's AFS2 area sensor, not an accused product, downloaded from http:/www.authentec.com. (*See also* Ex. 1 to Dkt. No. 432, Setlak Decl., physical sensor samples.)

[5] AuthenTec's 2810 slide sensor, one of the accused products, downloaded from http:/www.authentec.com.

[6] **Ex. O** at AUTH-A 017213 & 017223 (emphasis added.) All bolded and underlined exhibits ("**Ex.** ") are attached to the accompanying Declarations Of Denise L. McKenzie in support of Atmel's Opening Brief and this Brief.

III. ATMEL'S PATENT CLAIMS ARE ESPECIALLY STRONG—AN EXPERIENCED AWARD WINNING PTO EXAMINER GRANTED THEM TWICE AND ATMEL PATENTED THIS SAME INVENTION IN MANY COUNTRIES

Atmel's patent claims are incredibly strong. Atmel patented this invention twice in the U.S. (the '114 and '804) and in many other countries.[7] And, there is nothing in the file history of the patents-in-suit to suggest that any of the claims were improperly granted—a rigorous prosecution strengthens not weakens patent claims. And, contrary to AuthenTec's implication, the '114 issued in accordance with the average prosecution duration in effect during the relevant period.[8]

Further, the '114 and '804 Patent Examiner, Yon Couso,[9] is a highly recognized award winning patent examiner[10] with over 12 years of experience before she issued the '114 and '804 Patents.[11] And, Ms. Couso examined almost 500 patents to issuance including 12 patents related to fingerprint sensors before issuing the '114 Patent.[12] All aspects of the prosecution of the '114 and '804 Patents evidence strong claims issued after careful review and approval by a skilled and experienced examiner knowledgeable in the field of fingerprint sensors.

If AuthenTec really believed that Atmel's claims were improvidently granted, and was genuinely concerned about the costs of defending this lawsuit, it could have filed for reexamination and sought a stay.[13] It could also have filed a summary judgment on invalidity. AuthenTec's failure to do either betrays its true opinion of the strength of Atmel's patent claims.[14]

IV. AUTHENTEC'S ANALYTICAL FRAMEWORK IS FUNDAMENTALLY FLAWED

A. AUTHENTEC IGNORES A THRESHOLD QUESTION —THE UNDERSTANDING OF ONE OF ONE OF ORDINARY SKILL IN THE ART.

AuthenTec's brief simply ignores this most basic threshold inquiry and does so in an attempt

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[7] *See* **Ex. P**, Derwent World Patents Report, identifying numerous countries that issued Atmel's patent.

[8] Atmel's patent issued after the same duration as of one of AuthenTec's contemporaneous area sensor patents. *See* **Ex. R**, AuthenTec's U.S. Pat. No. 6,259,804.

[9] The Patent Examiner is identified on the first page of the '114 and '804. (*See* **Exs. A & B**.)

[10] *See* **Ex. S** at p. 29, *USPTO Today*, Vol. 1, No. 11, Nov. 2000, noting Yon Couso's 2000 Award (while she was actively examining the '114 Patent) from the American Intellectual Property Association for her contribution "to the integrity of intellectual property law while in the distinguished service with the United States Patent Office."

[11] *Id*. Examiner Couso's long tenure is in stark contrast to the PTO's "crippling attrition rate caused by more experienced examiners going to higher paying private sector jobs" from "1996 through 2000." *See* April 11, 2002 remarks of the PTO Director to Congress, at http://www.uspto.gov/web/offices/com/speeches/househrg2002.htm.

[12] These statistics are from the PTO's Internet site, at: http://patft.uspto.gov/netahtml/PTO/search-adv.htm.

[13] *See* 35 U.S.C. § 302 ("Any person at any time may file a request for reexamination…").

[14] AuthenTec's footnoted implication (fn. 10 on p. 8) that Atmel's invention is obvious by describing it as a combination of known elements is also without merit. "Inventions usually rely upon building blocks long since uncovered, and claimed discoveries almost necessarily will be combinations of what, in some sense, is already known." *KSR v. Teleflex,* 127 S.Ct. 1727, 1731 (2007). And, "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.

to conceal one of the most damming shortcomings: AuthenTec's proposed constructions are directly at odds with the understanding of a person of ordinary skill in the art at the time of the invention.[15] AuthenTec's proposed constructions—the concealed foundation of its entire noninfringement argument—simply cannot be adopted and its summary judgment of noninfringement cannot be granted without contradicting the testimony of Dr. Jain, the inventor, the actions of the Patent Examiners, and the numerous dictionary definitions advanced by Atmel.[16] AuthenTec invites the Court to commit legal error by construing the claims without considering the level of ordinary skill.

B. AUTHENTEC HAS IT EXACTLY BACKWARDS AND THEN WRONG—THE CLAIMS MUST BE CONSTRUED FIRST AND WITHOUT REFERENCE TO THE ACCUSED DEVICE PRIOR TO DECIDING INFRINGEMENT

AuthenTec's brief has it exactly backwards—the claims need to be construed first, prior to considering infringement, and then wrong—an infringement analysis compares the claims to the accused device, not Atmel's products. The Federal Circuit has explicitly and repeatedly held:[17]

> It is only *after* the claims have been *construed without reference to the accused device* that the claims, as so construed are applied to the accused device to determine infringement.

AuthenTec's attempt to have this Court analyze infringement first, prior to claim construction, and to construe the claims with an eye on the accused device is an invitation to error.

V. AUTHENTEC HAS CONCEDED ALMOST ALL GROUNDS OF INFRINGEMENT

AuthenTec's failure to refute the existence of all but four claim elements is a waiver as to the existence of those elements and any other non-raised grounds of noninfringement. [18]

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[15] *S3 Inc. v. Nvidia Corp*., 259 F.3d 1364, 1370 (Fed. Cir. 2001); *Eastman Kodak Co. v. Goodyear Tire & Rubber Co*., 114 F.3d 1547, 1555 (Fed. Cir. 1997).

[16] *See Phillips v. AWH Corp*., 415 F.3d 1303, 1313 (Fed. Cir. 2005) ("It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed"); *Id.* at 1315 ("judges are free to consult dictionaries and technical treatises at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms."). Also, the prosecution history is less helpful than other extrinsic evidence because it "often lacks the clarity of the specification and thus is less useful for claim construction." *Phillips* at 1317.

[17] *SRI Int'l. v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (*en banc*) (emphasis in original) (reversing district court's grant of summary judgment of noninfringement because of errors in claims construction); *see also SmithKline Beecham Corp. v. Apotex Corp*., 403 F.3d 1331, 1339-40 (Fed. Cir. 2005) ("[T]this court has repeatedly stated that a court must construe claims without considering the implications of covering a particular product or process."); *Scripps Clinic & Research Found. v. Genentech, Inc*., 927 F.2d 1565, 1580 (Fed. Cir. 1991) ("[T]he words of the claims are construed independent of the accused product…."); *NeoMagic Corp. v. Trident Microsystems, Inc*., 287 F.3d 1062, 1074 (Fed. Cir. 2002) (vacating summary judgment, stating "It is well settled that claims may not be construed by reference to the accused device.").

[18] *See Holland v. United States*, 74 Fed.Cl. 225, 234 (Ct. Cl. 2006) ("affirmative defenses are waived or abandoned if a defendant does not assert them in response to a summary judgment motion.") *citing Pandrol USA v. Airboss Railway*, 320 F.3d 1354 (Fed. Cir. 2003) and *Diversey Lever, Inc. v. Ecolab, Inc*., 191 F.3d 1350 (Fed. Cir. 1999).

The four claim elements are: (1) "contact sensitive elements" (Claim 1, '114); "sensing surface" or "sensing surface area" (all other claims); (2) "means for reconstituting a total image…" ('114 Claims); "reconstructing a global image…." ('804 Claims); (3) "sensing surface coupled to a matrix of several lines of sensing elements" (Claim 17, '114); and (4) microprocessor ('114 Claims).

Thus, AuthenTec only disputes two elements of Claim 10 of the '804 ("sensing surface" and "reconstructing a global image….") and three elements of Claim 17 of the '114 ("sensing surface," "sensing surface coupled to a matrix of several lines of sensing elements" and "microprocessor").

VI. CLAIM CONSTRUCTIONS RELATED TO INFRINGEMENT

A. NONE OF THE ASSERTED CLAIMS ARE LIMITED TO PRESSURE AND/OR TEMPERATURE SENSORS

AuthenTec's analysis ignores and misstates the most compelling intrinsic evidence, the understanding of one of ordinary skill in the art, and the extrinsic evidence in an attempt to improperly limit the independent claims to pressure and/or temperature devices.

1. AUTHENTEC IGNORES THE INTRINSIC EVIDENCE OF THE OTHER CLAIMS

Dependant Claim 5 of the '114 is a narrowly drawn dependent claim that specifically limits the sensors of Independent Claim 1 to pressure and temperature sensors. Construing Independent Claim 1 as limited to pressure and temperature sensors would render Dependant Claim 5 superfluous and violate a fundamental patent precept.[19] And, the rule is strongest when, like here, it involves an attempt to read the only meaningful limitation in a dependant claim into an independent claim.[20]

The Federal Circuit has repeatedly applied this rule to reject narrowing constructions,[21] including in *Phillips*,[22] and reaffirmed the rule numerous times last year.[23] The Federal Circuit has also applied this rule to specifically reject importing pressure[24] and temperature[25] limitations from a

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[19] *D.M.I., Inc. v. Deere & Co*., 755 F.2d 1570, 1574 (Fed. Cir. 1984).

[20] *Wenger Mfg., Inc. v. Coating Machinery Systems, Inc.*, 239 F.3d 1225, 1223 (Fed. Cir. 2001).

[21] *See, e.g., Caterpillar Tractor Co. v. Berco, S.P.A.*, 714 F.2d 1110, 1116 (Fed. Cir. 1983) (error for court to read into claim limitation on wall section thinness contained in two other claims); *Robotic Vision Systems, Inc. v. View Eng'g, Inc*., 189 F.3d 1370, 1376 (Fed. Cir. 1999) (describing accused infringer's construction that would read in limitation of separate fabrication contained in dependent claim into independent claim as "absurd" because it would make the dependant claim redundant); *Ecolab, Inc. v. Paraclipse, Inc*., 285 F.3d 1362, 1375-76 (Fed. Cir. 2002) (refusing to read ultraviolet light limitation from dependent claim into independent claim).

[22] *Phillips v. AWH Corp.*, 415 F.3d 1303, 1324-25 (Fed. Cir. 2005) (*en banc*).

[23] *See, e.g., In re Gabapentin Patent Litigation*, 503 F.3d 1254, 1263 (Fed. Cir. 2007); *Saunders Group, Inc. v. Comfortrac, Inc*., 492 F.3d 1326, 1331 (Fed. Cir. 2007); *Honeywell Int'l Inc. v. Universal Avionics Systems Corp*., 488 F.3d 982, 993-94 (Fed. Cir. 2007); *Intamin Ltd. v. Magnetar Tech., Corp*., 483 F.3d 1328, 1335 (Fed. Cir. 2007); *Acumed LLC v. Stryker Cor*p., 483 F.3d 800, 806 (Fed. Cir. 2007).

[24] *See Saunders Group, Inc. v. Comfortrac, Inc*., 492 F.3d 1326, 1331 (Fed. Cir. 2007) (refusing to import a "pressure activated seal" from a dependent claim into an independent claim); *Kalman v. Kimberly-Clark Corp*., 713 F.2d 760, 770-

(Footnote continued)

dependent claim into an independent claim. And, the Federal Circuit recently applied this rule in *L.G. Electronics* to uphold a claim construction from this Court.[26]

2. AUTHENTEC IGNORES THE INTRINSIC EVIDENCE IN THE PROSECUTION HISTORY

The originally submitted dependant Claims in the '114 limited the invention to sensors "sensitive to pressure and/or temperature" (Claim 5) and with a "pyroelectric/piezoelectric layer" sensitive to "pressure and/or temperature" (Claim 6).[27] The assertion of these claims in the original application demonstrates that the inventor never considered his invention or claims limited to only pressure and/or temperature sensors. And, the examiner must have agreed because otherwise she would have rejected Claims 5 and 6 for a failure to add new limitations.[28] The examiner never issued this rejection in any Office Action.[29]

The examiner's prior art rejections also demonstrate that Claim 1 is not limited to pressure and temperature sensors. In the first Office Action, the examiner rejected original Claim 1 as *anticipated* by Giles, an optical sensor.[30] A claim is only anticipated if every limitation is contained in the reference.[31] Since Giles is an optical sensor, the examiner could not have issued this rejection unless she believed that Claim 1 covered more than just pressure and temperature sensors. The examiner also made similar rejections over optical sensors in the second and third Office Actions (Giles and Fujimoto, respectively.)[32] Since there are no amendments restricting any independent claim to only pressure and/or temperature sensors the issued claims reflect broad sensor coverage.

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71 (Fed. Cir. 1983) (independent claim could not be interpreted as requiring hydrostatic pressure claimed in dependent claims), *overruled in part on other grounds, SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107 (Fed. Cir. 1985).

[25] *See Rodime PLC v. Seagate Tech., Inc*., 174 F.3d 1294, 1305 (Fed. Cir. 1999) (error to interpret independent claim to require thermal compensation expressly claimed in dependent claim).

[26] *See L.G. Elec., Inc. v. Bizcom Elec., Inc*., 433 F.3d 1364, 1372 (Fed. Cir. 2006) (upholding Court's construction of claim 35 of the '509 Patent as not limited to multiple displays when dependent claim 38 contained the limitation "image processing system further compris[ing] at least first and second displays…."), *on appeal on other grounds*.

[27] *See* Ex. 9 to Dkt. No. 435, prosecution history at AML000061.

[28] *See* 37 CFR § 1.75 ("One or more claims may be presented in dependent form, referring back to and further *limiting* another claim or claims in the same application.") (emphasis added); *see also* **Ex. FF**, MPEP (Manual of Patent Examining Procedure) § 608.01(i) & (n) (1998).

[29] *See* Ex. 9 to Dkt. No. 435, Office Actions starting at AML000098, 119, 136, 153, and 173.

[30] *Id*. at AML000102 and Defendant's brief at p. 8, ln. 18.

[31] **Ex. FF**, MPEP § 2131 (1998) ("To Anticipate A Claim, The Reference Must Teach Every Element Of The Claim"); *see also Gen. Elec. Co. v. Nintendo Co.*, 179 F.3d 1350, 1356 (Fed. Cir. 1999) ("A judgment of invalidity for anticipation requires that a single prior art reference disclose every limitation in a patent claim.").

[32] In the second Office Action, the examiner rejected prosecution Claim 17 (which became issued Claim 1) as anticipated by Giles, and in the third and fourth Office Actions as anticipated by Fujimoto, another optical sensor. *See* Ex. 9 to Dkt. No. 435, Second Office Action at AML000121, Third Office action at AML000138, and Fourth Office Action at AML000155. Fujimoto is attached as Exhibit 11 to Dkt. No. 435.

A similar analysis holds for the examiner's prior art rejection for dependent Claim 5. In the second Office Action, the examiner rejected Claim 5 as *obvious* over Giles, the optical sensor, in view of Edwards, a pressure and/or temperature sensor, and specifically pointed to the pressure and/or temperature feature of Edwards.[33] By issuing this obvious rejection, the examiner acknowledged that the pressure and/or temperature element of Claim 5 was not in Giles.[34]

3. AUTHENTEC MISSTATES THE IMPORT OF THE INVENTOR'S REMARKS

The inventor never argued that his invention was limited to "pressure and temperature detection" when distinguishing over the combination of Fujimoto and Edwards—an erroneous assertion emphasized in bold italics at p. 10 lines 5 – 7 of AuthenTec's Opposition.[35] Indeed, this very rejection and Atmel's response demonstrates just the opposite—the independent claims are not limited to pressure and temperature sensors.

Fujimoto is an optical sensor. Edwards is a pressure sensor. The examiner rejected dependent Claim 5 as obvious over Fujimoto in view of Edwards. The inventor, when arguing over the combination of Fujimoto and Edwards for ***Claim 5***, stated that "there is no motivation in Fujimoto et al. to replace optical detection by pressure or temperature detection"—the quote emphasized by AuthenTec. The inventor did not make this argument for Claim 1, or Claim 17, or any independent claim, ever. Thus, by making this argument for Claim 5, but not Claim 1 or Claim 17, the inventor demonstrated his belief coincided with the examiner's—the independent claims are not limited to pressure and/or temperature sensors; the exact opposite assertion made by AuthenTec.

4. AUTHENTEC IGNORES THE INTRINSIC EVIDENCE IN THE SPECIFICATION

The specification, after describing the configuration of one possible sensitive layer for pressure and/or temperature, specifically states that other sensitive layers are possible and specifically notes the broad nature of those types of sensitive layers.[36] AuthenTec also ignores the capacitive embodiment that does not mention pressure or temperature sensors.[37]

These portions of the specification, ignored by AuthenTec, demonstrate that the invention is

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[33] *See* Ex. 9 to Dkt. No. 435, Second Office Action at AML000122.
[34] 35 U.S.C. §103.
[35] A disavowal of claim scope must be "both clear and unmistakable to one of ordinary skill in the art." *See Elbex Video, Ltd. v. Sensormatic Electronics Corp.*, 508 F.3d 1366, 1371-72 (Fed. Cir. 2007) (collecting cases).
[36] **Ex. A**, '114 Patent at Col. 7, ln. 14-16; **Ex. B**, '804 Patent at Col. 7, ln. 17-19. Dr. Jain testified that a person of ordinary skill in the art would understand that "a physical parameter" refers to the ridges and valleys of the finger. **Ex. G**, Jain Dep. Tr. at 108:1-9.
[37] **Ex. A**, '114 Patent at Col. 4, ln. 53-61; **Ex. B**, '804 Patent at Col. 4, ln. 56-64.

much broader than simply pressure and/or temperature sensors.

5. AUTHENTEC IGNORES AND CONTRADICTS THE UNDERSTANDING OF ONE OF SKILL IN THE ART

Limiting the claims to only pressure and/or temperature sensors would contradict the understanding of the following five individuals of skill in the art: the inventor, Dr. Jain and every Patent Examiner (Frederick, Wasseem and Couso) that issued the prior art rejections reviewed above.[38] AuthenTec, in contrast, proffers no supporting evidence from anyone skilled in the art.

6. AUTHENTEC IMPORTS LIMITATIONS FROM THE PREFERRED EMBODIMENTS INTO THE CLAIMS—THE "CARDINAL SIN" OF CLAIM CONSTRUCTION

AuthenTec's attempt to import the pressure and/or temperature limitation from *some* of the preferred embodiments should be rejected as the "cardinal sin" [39] of claim construction. AuthenTec's argument is founded on repeatedly short citing the specification to exclude limiting clarifications such as "in one embodiment."[40]

B. ALL OF THE ASSERTED CLAIMS COVER AUTHENTEC'S RF SENSORS INCLUDING DEPENDENT CLAIM 7 OF THE '114

AuthenTec's RF sensors, a type of capacitive sensor, is covered by the asserted claims including dependant Claim 7 of the '114 which specifically recites "capacitive" sensors. The independent claims are much broader than Claim 7 and cover many types of sensors, including AuthenTec's RF sensors.

The inventor, a person of ordinary skill in the art, testified that AuthenTec's RF sensors are capacitive sensors[41] and described AuthenTec's RF sensor as a capacitive sensor in a slide from his presentation entitled "Why Atmel Product is Superior":[42]

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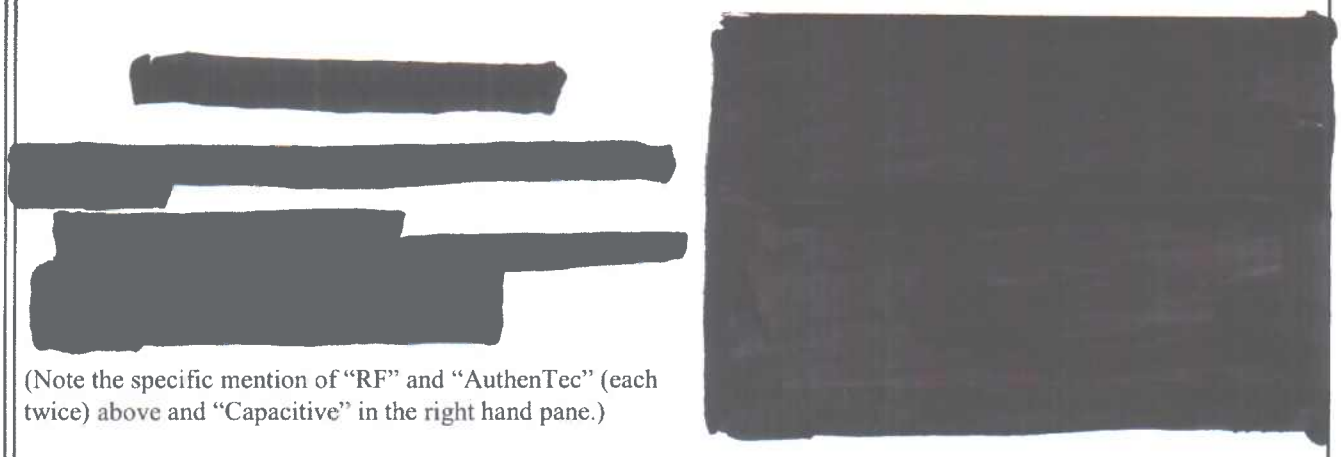
[38] Examiners are presumed be skilled in the art. *See In re Sang Su Lee*, 277 F.3d 1338, 1345 (Fed. Cir. 2002); *In re Berg*, 320 F.3d 1310, 1315 (Fed. Cir. 2003) ("As persons of scientific competence in the fields in which they work, examiners…are responsible for making findings, informed by their scientific knowledge, as to the meaning of prior art references to persons of ordinary skill in the art.").

[39] *Teleflex*, 299 F.3d at 1324-25 (Fed. Cir. 2002).

[40] *See* **Ex. A**, '114 Patent at Col. 4. ln. 4; Col. 3, ln. 61; Col. 4, ln. 53; Col. 6, ln. 29; Col. 7, ln. 27-28; and Col. 9, ln. 11, 42.

[41] *See* **Ex. T**, 10/27/07 Mainguet Dep. Tr. at 15:13-25.

[42] *See* **Ex. U** at AML034245, Mr. Mainguet's Presentation entitled "Why Atmel Product is Superior." The text and diagram is taken directly from page 5 (AML034245) of the presentation.



(Note the specific mention of "RF" and "AuthenTec" (each twice) above and "Capacitive" in the right hand pane.)

AuthenTec's VP of Product Development also admitted that AuthenTec's RF sensor is a capacitive sensor.[43]

C. AUTHENTEC'S SENSORS REQUIRE APPLYING FINGER PRESSURE TO THE WINDOW

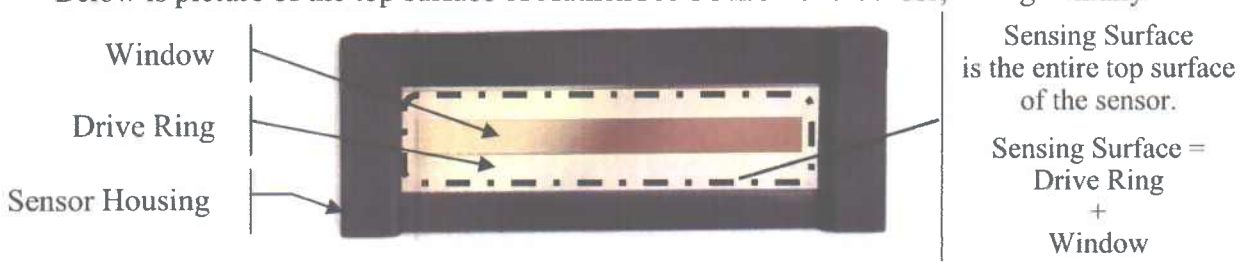
AuthenTec's attempt to limit the claims to pressure and/or temperature sensors is ineffective to avoid infringement even if adopted by the Court. One of AuthenTec's area sensor patents (AuthenTec states its area sensors work the same as its slide sensors) specifically instructs the user to apply "finger pressure" to the sensor window (shown below in the next section) and tells the user "if the applied finger pressure is too great or too little."[44]

D. SENSING SURFACE: AUTHENTEC'S NONINFRINGEMENT ANALYSIS IGNORES THE SURFACE OF THE DRIVE RING—A KEY PART OF THE SENSING SURFACE

Once the role of the Drive Ring is properly understood and included as part of the Sensing Surface, AuthenTec's infringement is clear.

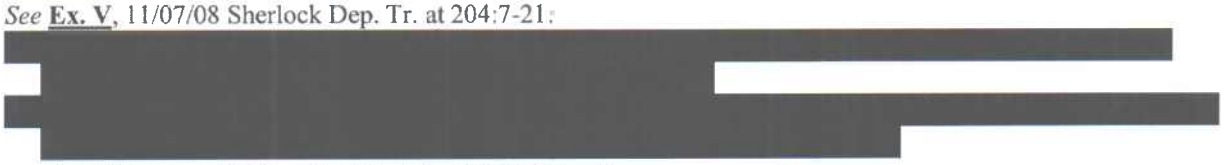
1. THE DRIVE RING SURFACE IS A KEY PART OF THE SENSING SURFACE

Below is picture of the top surface of AuthenTec's AES 1610 Sensor, enlarged many times:



The "sensing surface" consists of the "drive ring" plus the "window," as shown above. The

[43] *See* Ex. V, 11/07/08 Sherlock Dep. Tr. at 204:7-21:



[44] *See* Ex. BB, AuthenTec's U.S. Patent No. 5,963,679 at Col. 14, ln. 23-60.

drive ring is a rectangular shaped frame surrounding the window. The detection matrix (a/k/a pixel array or pixel antennae) lies under the window.

The claims of in both patents-in-suit expressly recite that the sensor includes "a sensing surface," which Atmel's proposed construction defines, in pertinent part, as "a surface of the sensor that detects finger contact."[45] AuthenTec confines the "sensing surface" to the surface area of the window (*i.e.*, in AuthenTec's words (Br. p. 16, ln. 15), "the surface [area] of the sensor that corresponds to the detection matrix"). The entire basis for AuthenTec's contention that its sensors lack a sensing surface is its improper exclusion of the surface of the drive ring. As discussed below, this exclusion is also the basis of AuthenTec's claim that its sensors lack contact sensitive elements.

Indisputably, the drive ring is part of the sensor.[46] And, AuthenTec concedes that the sensor "will not work without the drive ring."[47] Specifically, when the surface of the drive ring and the user's sliding finger are in contact, the drive ring injects a small signal into the finger, which creates the electric field used to image fingerprints.[48] In other words, contacting the surface of the drive ring is necessary in detecting "the presence of a finger placed on the surface of the sensor matrix, and to reliably produce a digital image of the fingerprint."[49] AuthenTec's sensor specifications indicate that the sensor captures images once a "finger has been detected on the sensor."[50] Thus, the "sensing surface" of the accused sensors includes the surface of the drive ring. This is consistent with AuthenTec's literature and the deposition testimony.[51]

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[45] AuthenTec's new construction for sensing surface does not dispute that the surface detects finger contact, but improperly confines such contact to that which generates patterns of pressure or temperature and improperly imports other limitations.

[46] *See, e.g.*, **Ex. W** at AUTH-A 005737 ("[redacted]"); **Ex. Z** at AUTH-A 018407 ("[redacted]").

[47] Dkt. No. 431, Sherlock Decl. at ¶ 7.

[48] *See, e.g.*, Ex. B to Sherlock Decl. (Dkt. No. 431); **Ex. Z** at AUTH-A 017764, AUTH-A 018407, and 018764. AuthenTec's VP, Sherlock, admits that the "drive ring must be contacted physically or electrically." As to electrically, Mr. Sherlock is presumably referring to the "controlled experiments" AuthenTec's expert, Dr. McWilliams, conducted. Such experiments do not, however, constitute normal use of the product by consumers. *See* the concurrently filed *Daubert* Motion on McWilliams.

[49] **Ex. X**, Product Specification for the AES4000 Fingerprint Sensor, Hardware Reference, at p. 8. *See also* n. 47 *supra*.

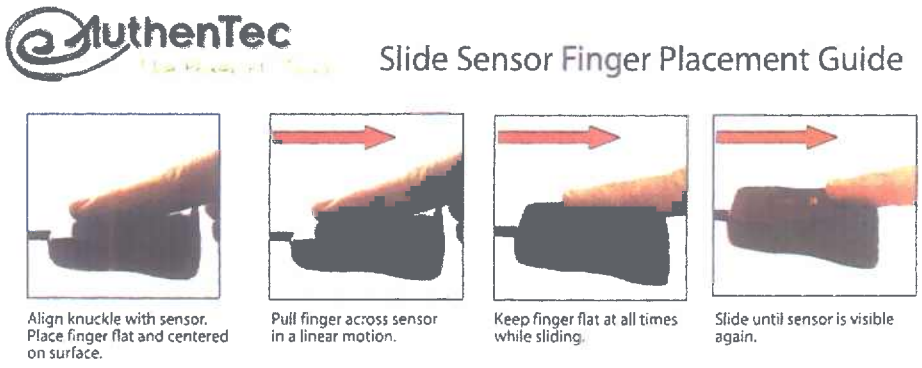
[50] *See* **Ex. W** at AUTH-A050054-55.

[51] In an understatement which belies the necessity of contact between the drive ring's surface and the finger, AuthenTec's CTO, Mr. Setlak, acknowledges (Dkt. No. 432, Setlak Decl. ¶ 4) that in light of the small size of the detection matrix area (*i.e.*, window), it is "it is difficult to place the finger on the detection matrix area of the device without also contacting the drive ring."

Indeed, an AuthenTec Product Specification Sheet states that: "The finger must make simultaneous contact with both the **sensor matrix** and the **drive ring**."[52] It also indicates that the purpose of the sensor matrix and drive ring and accompanying electronics is to "detect the presence of a finger placed on the sensor matrix, and to reliably produce a digital image of the fingerprint."[53] And, an instruction sheet for AES25xx sensors states that "[redacted]"[54]

2. AUTHENTEC DIRECTS USERS TO CONTACT THE SENSOR SURFACE DURING NORMAL USE—THE STANDARD FOR DETERMINING INFRINGEMENT

AuthenTec strains to concoct a noninfringement argument based upon the user's finger not contacting any portion of the sensor or sensing surface (the drive ring or window) including devising contrived tests[55] contrary to how the sensor is normally used[56] and its strongly recommended teaching and policy on use. Below is an AuthenTec instructional diagram on using the accused AuthenTec EntrePad 1610 sensor where it strongly encourages users to place their finger "flat" on the sensor "surface" and to "Keep finger flat at all times when sliding."[57]



AuthenTec Vice Presidents Art Stewart and Peter Sherlock also testified that proper method of using the slide sensor is to place the finger flat on the sensor before pulling the finger across the

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[52] **Ex. X** at p. 8 (emphasis added). *See also* **Ex. W** at AUTH-A 021631 (AuthenTec Sensor User Guide instructing the user to "[redacted]") (emphasis added). Although these documents are for area sensors, Mr. Setlak acknowledges that AuthenTec's area sensors use the same RF technology, drive ring and sensor matrix (a/k/a detection matrix). *See* Dkt. No. 432, Setlak Decl. at ¶ 2.

[53] *See* **Ex. X** at p. 8.

[54] **Ex. W** at AUTH-A 005737.

[55] *See* Dkt. No. 434, McWilliams Decl. *See* concurrently filed Daubert Motion on McWilliams.

[56] *Hilgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001) ("We agree that tests of an accused device under unusual conditions are not necessarily relevant to an infringement analysis. For example, in determining whether a product claim is infringed, we have held that an accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of non-infringing modes of operation.").

[57] Peter Sherlock, AuthenTec's V.P. of Product Development, testified to the accuracy and importance of the information in this document. **Ex. V**, 11/07/08 Sherlock Dep. Tr. at 216-219.

sensor.[58] And, numerous AuthenTec documents discuss the importance of user's finger contacting the sensor and sensing surface with statements such as: "[redacted]" etc.[59]


Do not lift finger off of the sensor while sliding.

AuthenTec's instruction sheet for the EntrePad 1610 sensor includes this cautionary diagram stating "Do not lift finger off of the sensor while sliding." AuthenTec also warns its customers that unless the user's finger properly contacts the sensor "false rejects," an access denial to an authorized user, occur.[60] Directly contacting the sensor is so important to correct operation that AuthenTec registered the "THE POWER OF TOUCH" as a trademark for fingerprint sensors.[61]

3. THE SENSING SURFACE IS "COUPLED TO" THE "SENSITIVE ELEMENTS"

The '114, but not the '804, patent claims recite that the sensing surface is "coupled to" the "sensitive elements." (The '804 patent claims simply recite that the sensor has sensing elements.) AuthenTec claims (Br. at p. 13 and Sherlock Decl. ¶¶ 15-16) that the sensing surface is not "coupled." Here again, AuthenTec excludes that surface of the drive ring from the sensing surface, thereby improperly confining coupling to the surface area of the window and the detection matrix (*i.e.*, sensitive elements). Moreover, it is evident that the surface area of the drive ring is coupled to the detection matrix,[62] since the ring actuates the detection matrix.[63]

E. CONTACT SENSITIVE ELEMENTS (A/K/A "SENSING ELEMENTS")

Atmel's proposed construction, which AuthenTec adopts, recites, in pertinent part, that contact sensitive elements "are responsive to contact between a finger and the **sensing surface** of the sensor." (Emphasis added.) AuthenTec contends (Br. at p. 16) that its accused sensors lack contact

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[58] *See* Ex. Y, 11/28/07 Stewart Dep. Tr. at 33:22-36:7; Ex. V, 11/07/08 Sherlock Dep. Tr. at 215:7-11.

[59] All of these statements and more are summarized in a sheet attached directly to this paper as **Exhibit 1**. Relevant portions of documents containing these statements are attached as Ex. Z.

[60] *See* Ex. Y, 11/28/07 Stewart Dep. Tr. at 36:21-37:8; Ex. Z at 052649, E-mail from Jens Paetau at AuthenTec to Microsoft (12/13/06); and Ex. Z at AUTH-A 052651, E-mail from Jim Neil to Peter Sherlock et al. (10/03/06).

[61] *See* Ex. AA, U.S. Trademark Registration No. 3,105,183.

[62] In a sleight of hand, AuthenTec asserts that the drive ring "is not coupled to the detection matrix." This assertion is based on AuthenTec's erroneous exclusion of the drive ring surface from the "sensing surface."

[63] In addition to physical coupling, the Figures on page 13 of AuthenTec's brief show that the drive ring is electrically coupled to the sensitive elements.

sensitive elements "because the pixel antenna plates of the accused detection matrix do not respond to contact with the sensing surface." The fatal flaw in this contention is that it presumes that the surface of the ring is excluded from the sensing surface. (*See* Sherlock Decl. ¶¶ 15-16 and Setlak Decl. ¶¶ 2-4). Tellingly, in performing his tests, Setlak only used AuthenTec's non-accused, non-slide sensors (which are much larger than the accused slide sensors) and only pressed his finger on the sensor window, the surface area corresponding to the detection matrix (and not the ring's surface area as well) in concluding that the "detection matrix does not respond to finger contact." Setlak then admits that with the accused sensors it "is difficult to place the finger on the detection matrix of the device without also making contact with the drive ring."[64] In the accused sensors, the "antenna plates" that make up the detection matrix are contact sensitive elements because they are responsive to contact between the finger and the surface of ring.[65] That is, when a user slides his finger along the surface of the sensor, the matrix receives RF signals reflected from the finger and generates partial images (a/k/a "slices") of a fingerprint.[66]

Alternatively adopting its own newly proposed claim construction (Br. p. 2 and 16 n. 18), AuthenTec asserts that its sensors lack "temperature or pressure sensitive elements" or a sensing surface that "transmits patterns of pressure and temperature" and do not otherwise "respond to pressure or temperature." However, as discussed above, the properly construed independent claims do not require these features and in fact the patent discloses capacitive elements as well. In this regard, the detection matrix has capacitive elements (a/k/a pixel array) that collect the RF signal through a capacitive link or coupling between the finger and the detection matrix.[67] In sum, as noted above, the accused sensors are "RF capacitive" sensors.[68]

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[64] Indeed, it is questionable whether this is possible with a large area sensor for the "fingerprint" portion of a fingertip.

[65] Ex. Z at AUTH-A 018407 (Figure 301 Sensor Imaging Principle, "[redacted]"); *see also id.* at AUTH-A 018764; Ex. V, 11/07/08 Sherlock Dep. Tr. at 49:15-50:10.

[66] *Id.*; *see also* Declaration of Dr. Dirk Colbry filed concurrently.

[67] Ex. V, 11/07/08 Sherlock Dep. Tr. at 204:7-205:2; Ex. T, 10/25/07 Mainguet Dep. Tr. at 16:13-24.

[68] AuthenTec's citation to the inventor's 2002 White Paper is inapposite. First, it is not evidence of whether AuthenTec's RF sensors are "contact sensitive"—the point asserted by AuthenTec. (Br. p. 15, ln. 10.) Second, a person from Atmel's communication department authored the section of the paper cited by AuthenTec—not the inventor or any other person of skill in the art. *See* Ex. T, 10/27/07 Mainguet Dep. Tr. at 383:13 – 386:19. Third, the inventor explicitly testified that AuthenTec's RF sensors are capacitive sensors. *See id.* at 15:13-25.

F. AUTHENTEC'S SENSORS RECONSTITUTE A GLOBAL AND A TOTAL IMAGE

Although AuthenTec's brief agrees to adopt Atmel's construction for "means for reconstituting a total image…" ('114 claims) and "reconstructing a global image…" ('804 claims) (at p. 22, ln. 26+), it misstates Atmel's constructions as defective support for its flawed noninfringement argument.[69] AuthenTec does infringe. And, the proper analytical starting point is correctly stating Atmel's constructions from Atmel's Opening Brief.

The meaning of Atmel's claim construction is clear and plainly stated in its Opening Brief: "the reconstituted 'total image' need only correspond to a complete image of a part of the fingerprint obtained from the partial images that the sensor generated."[70] Atmel's claim constructions for "global" and "total" image also clearly state Atmel's position that the global and total image need only correspond to a "fingerprint part."[71] The total image is not limited to (1) "all fingerprint information" as in AuthenTec's original claim construction; (2) "A complete image of the fingerprint…" as in AuthenTec's new construction; or (3) created only by combining all partial images as AuthenTec's Brief incorrectly asserts is Atmel's construction.

AuthenTec's constructions are wrong for all of the reasons outlined in Atmel's Opening Brief. Additionally, they conflict with the intrinsic evidence and the testimony of Dr. Jain.[72] First, dependent claim 19 of the '114 only requires reconstituting three images to create a total image. Second, Dr. Jain testified that combining two images was sufficient to create a total or global image.[73] And, Dr. Jain testified that reconstructing the slices up to the slice that you have considered so far constitutes a total image—reconstituting all images is not required to create a total image.[74]

Atmel's constructions are correct. And, when Atmel's constructions are properly considered,

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[69] AuthenTec's brief commits other analytical errors as well. First, it merges all of the claims containing global or total (whether or not they are means plus function claims or method claims, or are from the contain other limitations such as "overlapping" or "correlating") into one large element that it then applies to all of the claims. (In the '114 the "total image" is contained within a means plus function element while in the '804 the "global image" is not; Claim 1 of the '114 does not contain "overlapping" while Claim 17 of the '114 does; and the '804 Claims contain "correlating" while the '114 Claims do not.) The claims must be analyzed individually because they contain different elements and, certainly, the means plus function claims require a separate and different analysis.

[70] Emphasis added. Atmel's Opening Brief at p. 13, ln. 6-8. As noted in Atmel's Opening Brief, this construction is supported by numerous portions of the specification, the dependent claims, and the testimony of Dr. Jain.

[71] *See* claim charts in **Ex. C** (at p. 3 and 6) and **Ex. D** (at p. D-20 and D-32).

[72] AuthenTec mischaracterizes Dr. Jain's testimony in its brief (p. 23, ln. 6-9). *See* **Ex. G**, Jain Dep. Tr. at 74:3-6.

[73] *See* Ex. G to Dkt. No. 399, Jain transcript at p. 66-68 and especially at p. 68, ln. 1-6.

[74] *Id*.

AuthenTec's sensors construct a total (and global) image. Indeed, Dr. Colby, a software expert, after analyzing the software in AuthenTec's sensors, concluded that AuthenTec's sensors reconstitute (and reconstruct) a total (and global) image under Atmel's and AuthenTec's constructions.[75]

Dr. Colby established[76] that AuthenTec's software[77] reconstitutes a total image using a two-step process. The first step uses a correlation technique to determine the overlap between slices and aligns the slices using an optimization routine. The second step involves reconstructing (or stitching) overlapping slices together. The second step can reconstruct all (AuthenTec's construction) or only part (Atmel's construction) of the partial images received from a finger swipe into a total (and global) image. Thus, AuthenTec infringes under either its or Atmel's construction.

A finding of infringement is proper here and especially so considering AuthenTec's deliberate decision to withhold evidence of its software in its Opposition.[78]

AuthenTec's doctrine of equivalents argument is also without merit.[79] First, AuthenTec is wrong on the facts. The inventor did not introduce "total" in Claim 17 to overcome Giles. The examiner specifically acknowledged that the limitation of "relative sliding contact between the sensor and the finger, with the sensor having a surface area smaller than a surface area of the fingerprint to be read '*overcomes the teaching of Giles*'"[80]—not "total." Second, adding "total" is at best only "tangentially" related to overcoming Giles such that the doctrine of equivalents is not barred.[81] And, using less than all partial images to create a total image does not vitiate the claim limitation under the all elements rule.[82]

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[75] *See* Declaration of Dr. Dirk Colby filed concurrently.

[76] *Id.* All of the assertions in this paragraph come directly from Dr. Colby's Report.

[77] The three specific algorithms cited by Dr. Colby (and related algorithms in parentheses) are [redacted]). Image F 2-10 in AuthenTec's Brief is merely a partial product of the reconstruction process.

[78] AuthenTec cannot defeat or support summary judgment by declining to put in evidence of their software.

[79] It must be noted that the Court specifically allowed Atmel to amended its infringement contentions in response to new testimony by AuthenTec's employees. (Dkt. No. 414.) Atmel's amendments incorporated that recent testimony.

[80] *See* Ex. 9 to Dkt. No. 435, Prosecution History at AML000135, emphasis added.

[81] *See Festo Corp. v. Shoketus,* 535 U.S. 722, 740 (2002) ("A patentee may also rebut the presumption of surrender by showing that "the rationale underlying the narrowing amendment [bore] no more than a tangential relation to the equivalent in question."); *Primos, Inc. v Hunter's Specialties, Inc.* 451 F.3d 841, 849 (Fed. Cir. 2006).

[82] *See, e.g., Primos* (ruling that assertion of a "dome-shaped structure as being equivalent to a "plate" did not vitiate the plate requirement.) AuthenTec's all elements argument is also circular. It can only be entertained if the Court adopts AuthenTec's incorrect claim construction requiring that all partial images be reconstituted as the total image.

Thus, the doctrine of equivalents ("DOE") is available to Atmel to prove infringement for total (and global) image. And, although Atmel did not move for infringement under DOE, it is appropriate, if the Court determines that AuthenTec does not literally infringe this element, to consider infringement under DOE to defeat AuthenTec's summary judgment motion.[83]

VII. AUTHENTEC'S NONINFRINGEMENT ARGUMENTS UNRELATED TO CLAIM CONSTRUCTION

A. AUTHENTEC DIRECTLY INFRINGES BY MAKING, USING, SELLING AND OFFERING FOR SALE THE ACCUSED PROCESSORS WITH A MICROPROCESSOR IN THE U.S.

AuthenTec uses microprocessors in connection with marketing, testing, evaluation and surveying the accused slide sensors. First, AuthenTec uses computers, cell phones, and other devices containing microprocessors to market, promote, and make offers for sale of AuthenTec's accused products.[84] Exemplary still images taken from a couple of AuthenTec's many television appearances demonstrating its products are provided below for the Court's reference.[85]





Second, AuthenTec's President testified that AuthenTec demonstrated AuthenTec's slide sensors at Lenovo's Carolina facilities using a program that would enroll, verify, and acquire an image, and permit Lenovo to look at it on the screen.[86] Third, AuthenTec routinely tests and evaluates the accused slide sensors at its Florida facility using computers and other devices containing microprocessors to generate full fingerprint images for evaluation.[87] Fourth, AuthenTec conducted surveys in the U.S. (for instance at the Melbourne, Florida shopping mall) where it used devices containing microprocessors, such as PCs, to test the performance of AuthenTec's slide

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[83] If AuthenTec puts forth an argument that it does not literally infringe this element, Atmel reserves the right to argue infringement under DOE at the hearing or in response to any new AuthenTec argument on literal infringement.
[84] *See* **Ex. CC**, CD containing various video clips depicting such use.
[85] These still images are taken from AUTH-A 053505 at 1:03 minutes and AUTH-A 053547 at 2:58. *See* **Ex. CC**.
[86] *See* **Ex. DD**, 11/09/07 Ciaccia Dep. Tr. at 158:18-163:6.
[87] *See* **Ex. CC** at AUTH-A 053504 at 1:54; and **Ex. V**, 11/07/08 Sherlock Dep. Tr. at 329:22-330:6.

sensors on survey participants.[88] Fifth, AuthenTec's applications engineers provide application support in the U.S. facilities of customers such as Lenovo, Hewlett-Packard, and Dell/Broadcom including using computers or other devices with microprocessors to test, evaluate, and/or integrate AuthenTec's slide sensors into products of AuthenTec's customers.[89] AuthenTec receives substantial benefit from this activity including securing design wins by demonstrating, offering to sell, promoting, testing, evaluating, and integrating AuthenTec's slide sensors.

With regard to the '804 patent, AuthenTec's assertion that it does not infringe the '804 patent because "[m]aking, selling, or offering for sale any of the sensors above does not practice the method" (Br. at p. 27) is conclusory and contradicted by the evidence. AuthenTec has practiced and continues to practice the method. For instance, AuthenTec admits it performs reconstruction of full images in connection with its own testing and evaluation. Indeed, Sherlock, AuthenTec's 30(b)(6) designee and V.P. of Product Development, testified that the ability to reconstruct and display full images is a "[redacted]" and is "*[a]bsolutely*" helpful to AuthenTec's development team.[90] The media clips above also demonstrate AuthenTec's practice of the patented method to demonstrate, offer to sell, market, promote, test, evaluate, and integrate AuthenTec's slide sensors.[91]

Accordingly, Atmel's motion for summary judgment of direct infringement should be granted, and AuthenTec's motion for summary judgment of non-infringement should be denied.

B. AUTHENTEC FAILS TO SET FORTH ANY EVIDENCE THAT ANY SALE IS "FOREIGN"

AuthenTec's request for partial summary judgment concerning "foreign sales" should be rejected. AuthenTec's assertion is conclusory and without any evidentiary support. Indeed, the following exemplary facts demonstrate that AuthenTec's sensors do not remain outside the U.S. and

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[88] *See* **Ex. EE** at AUTH-A 001526 (PowerPoint presentation of survey with embedded media clip, "[redacted]"); **Ex. CC** at AUTH-A 050807 (media clip depicting AuthenTec survey); **Ex. Y**, 11/28/07 Stewart Dep. Tr. at 33:19-37:8 & 93:9-93:19 (describing product testing at Melbourne, Florida shopping mall using USB devices connected to PCs using a Windows platform).

[89] *See* **Ex. Y**, Stewart Dep. at 113:24-119:25 (describing AuthenTec's direct role in on-site support, functional testing, and integration of AuthenTec's slide sensors into its customers' products at Lenovo's facilities in the Carolinas, HP's facilities in Houston, Texas, and Broadcom's facilities in California in connection with the Dell/Broadcom product integration). Based upon Mr. Stewart's definition of functional testing as "[redacted]", AuthenTec may be deemed to directly infringe the '114 patent based upon AuthenTec's role in "making" the accused instrumentalities, in addition to "using" the accused instrumentalities.

[90] **Ex. V**, Sherlock Dep. Tr. at 329:22-330:6.

[91] *See* **Ex. CC** (various video clips depicting use); **Ex. DD**, 11/09/07 Ciaccia Dep. Tr. at 158:18-163:6; **Ex. V**, 11/07/07 Sherlock Dep. Tr. at 329:22-330:6; **Ex. Y**, 11/28/07 Stewart Dep. Tr at 33:19-37:8, 93:9-93:19, 113:24-119:25.

that AuthenTec is both liable directly and /or indirectly for the sale, offer for sale, manufacture or use of infringing products:

- AuthenTec's U.S. customers, such as Dell, Lenovo, HP, Motorola, Privaris, Motion Computing, American Power Conversion (APC), Intel and Lexar Media, buy AuthenTec's sensors and software *and* make and sell end-products (*e.g.*, notebooks) containing AuthenTec's products in the U.S.[92]
- Many of the end-products sold to consumers (*e.g.*, notebooks) containing AuthenTec's sensors and software are sold in the U.S.[93]
- The end-products containing AuthenTec's sensors and software are used by AuthenTec and others in the U.S.[94]
- AuthenTec sells and offers to sell AuthenTec's sensors and software in the U.S. to customers in foreign countries.[95]

C. AUTHENTEC INDIRECTLY INFRINGES

Atmel subpoenaed numerous AuthenTec customers during discovery seeking evidence from third parties supporting indirect infringement.[96] AuthenTec actively opposed the discovery and Magistrate Laporte ordered the parties to meet and confer.[97] The meet and confer process is ongoing with AuthenTec as the intransigent party. Accordingly, AuthenTec should not be able to complain about the lack of evidence it created.[98] Summary judgment is inappropriate in such instances.

But, even without additional third party discovery, direct infringement by AuthenTec's customers and others can be inferred from circumstantial evidence.[99] Such evidence includes, for example, sales to third party direct infringers and instructional manuals teaching the infringing method.[100] Here, AuthenTec's sales to customers, such as Dell, Lenovo, HP, Motion Computing,

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[92] *See, e.g.*, **Ex. FF**, AUTH-A 001491 (customer examples); **Ex. GG**, Dollar Sheet at AUTH-A 028162-163; **Ex. Y**, 11/28/07 Stewart Dep. Tr. at 44:23-47:20 & 54:19-88:24; **Ex. HH**, AUTH-A 006282-288 (HP agreement); **Ex. DD**, 11/09/07 Ciaccia Dep. Tr. at 132:13-134:9; **Ex. II**, Recob Dep. Tr. at 40:7-43:9.

[93] *See, e.g.*, **Ex. JJ**, AuthenTec Press Releases re HP and Lenovo notebooks and documents showing notebook sales.

[94] *See, e.g.*, **Ex. CC**, video clips depicting use.

[95] *See, e.g.*, **Ex. KK**, AUTH-A 005313-333 (Fujitsu agreement); **Ex. LL**, AUTH-A 001946-967 (Nokia Visit); **Ex. DD**, 11/09/07 Ciaccia Dep. Tr. at 246:22-248:3; **Ex. II**, 11/06/07 Recob Dep. Tr. at 24:6-29:15.

[96] AuthenTec Br. at 29.

[97] Dkt. No. 415 at 5.

[98] AuthenTec's attempt to argue the merits of the discovery dispute that is still pending before Magistrate Judge Laporte is inappropriate and should be disregarded by this Court.

[99] *Moleculon Research Corp. v. CBS Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986) ("It is hornbook law that direct evidence of a fact is not necessary. 'Circumstantial evidence is not only sufficient, but may also be more certain, satisfying and persuasive than direct evidence.'") (internal citations omitted); *Metabolite Labs., Inc. v. Lab. Corp. of America Holdings*, 370 F.3d 1354, 1364-65 (Fed. Cir. 2004) (citing *Moleculon*).

[100] *See, e.g.*, *Moleculon*, 793 F.2d at 1272 (finding direct infringement by the category comprising purchasers of the accused toys on the basis of "extensive puzzle sales, dissemination of an instruction sheet teaching the method of

(Footnote continued)

Motorola, Privaris, APC, Intel and Lexar Media, who in turn offer to sell and do sell products in the United States incorporating AuthenTec's sensors, is circumstantial evidence for a jury to infer direct infringement by these customers and the consuming public.[101] Likewise, AuthenTec's instructions to its customers, for example to design products incorporating its sensors so that there is "good contact between the finger and the sensor surface," is additional circumstantial evidence supporting a jury's inference of direct infringement.[102] AuthenTec's allegation that "Atmel has no evidence of indirect infringement" is unfounded.[103]

Atmel is also not legally required to show direct infringement on a customer-by-customer basis to prove AuthenTec's indirect infringement.[104] Instead, Atmel's proof of direct infringement of a *category* of AuthenTec's customers is sufficient to prove AuthenTec's indirect infringement.[105] And, direct infringement by a category of entities can be inferred from circumstantial evidence.[106] Thus, the exemplary circumstantial evidence of direct infringement set forth above also provides a sufficient basis for a jury to find that AuthenTec's customers as a class infringe the patents-in-suit. AuthenTec accordingly is also not entitled to summary judgment of no indirect infringement for its sales to customers other than Motion Computing, Prevaris, and Lexar.

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restoring the preselected pattern with each puzzle, and the availability of a solution booklet on how to solve the puzzle"); *Metabolite Labs.*, 370 F.3d at 1365-65 (finding direct infringement by the category comprising purchasers of the accused lab kits on the basis of circumstantial evidence); *Sharper Image Corp. v. Target Corp.*, 425 F. Supp. 2d 1056, 1065-66 (N.D. Cal. 2006) (denying summary judgment where jury could infer from owner's guide that at least some customers performed the infringing method).

[101] *See, e.g.*, **Ex. FF**, AUTH-A 001491 (customer examples); **Ex. GG**, Dollar Sheet at AUTH-A 028162-163; **Ex. Y**, 11/28/07 Stewart Dep. Tr. at 44:23-47:20 & 54:19-88:24; **Ex. HH**, AUTH-A 006282-288 (HP agreement); Ex. DD, 11/09/07 Ciaccia Dep. Tr. at 132:13-134:9; **Ex. II**, Recob Dep. Tr. at 40:7-43:9.

[102] **Ex. Z** at AUTH-A 005897 (Application Note for AES16xx Sensor). *See also* **Exhibit 1** attached hereto.

[103] AuthenTec Br. at 29.

[104] *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1274 (Fed. Cir. 2004) ("Plaintiffs who identify *individual* acts of direct infringement must restrict their theories of vicarious liability--and tie their claims for damages or injunctive relief--to *the identified act*. Plaintiffs who identify an entire category of infringers (*e.g.*, the defendant's customers) may cast their theories of vicarious liability more broadly, and may consequently seek damages or injunctions across the entire category.") (emphasis in original, citations omitted).

[105] *Id.*

[106] *See, e.g., Moleculon*, 793 F.2d at 1272 (finding direct infringement by the category comprising purchasers of the accused toys on the basis of "extensive puzzle sales, dissemination of an instruction sheet teaching the method of restoring the preselected pattern with each puzzle, and the availability of a solution booklet on how to solve the puzzle"); *Metabolite Labs.*, 370 F.3d at 1365-65 (finding direct infringement by the category comprising purchasers of the accused lab kits on the basis of circumstantial evidence).

VIII. AUTHENTEC INFRINGES CLAIM 10 OF THE '804 AND CLAIM 17 OF THE '114

A. AUTHENTEC'S SENSORS INFRINGE CLAIM 10 OF THE '804 PATENT

Although AuthenTec argues that its sensors do not contain four claim elements, only two of those elements are in Claim 10 of the '804: "sensing surface" and "reconstructing a global image…." AuthenTec's does not raise any other grounds of noninfringement. As analyzed above, AuthenTec's accused sensors contain both of these elements and Summary Judgment is appropriate.

B. AUTHENTEC'S SENSORS INFRINGE CLAIM 17 OF THE '114 PATENT

AuthenTec only argues that its sensors do not contain four claim elements in Claim 17 of the '114: "sensing surface," "sensing surface coupled to a matrix of several lines of sensing elements," "microprocessor" and "reconstructing a global image…." As analyzed above, AuthenTec's accused sensors contain all four of these elements and Summary Judgment is appropriate.

IX. THERE IS NO BASIS TO FIND THAT THIS CASE IS EXCEPTIONAL

A. THIS CASE WAS BROUGHT IN GOOD FAITH

In a highly unlikely event that the Court grants AuthenTec's summary judgment motion, AuthenTec's request for finding of exceptional case should be denied because there is no evidence, much less clear and convincing evidence, that the litigation is objectively baseless or that the litigation is brought in subjective bad faith.[107] As discussed above, there is overwhelming evidence, including AuthenTec's own admissions in its documents, that AuthenTec's sensors contain "contact sensitive elements" because there is direct contact between a finger and the sensor surface (which includes the surface of the drive ring).[108] Atmel's partial summary judgment motion of infringement also contains strong evidence that AuthenTec's sensors infringe the asserted claims.

Similarly, AuthenTec has no basis to argue that "Atmel knew this case was frivolous well before it filed suit."[109] First, AuthenTec's argument is fatal because AuthenTec again relies on its meritless assertion that AuthenTec's products do not infringe because there is no "contact." Second, AuthenTec unsuccessfully tries to show that Jean-Francois Mainguet, the inventor of the patents-in-suit, knew that AuthenTec's sensors do not infringe by relying primarily on Mr. Mainguet's e-mail dated July 2, 2002.[110] However, the e-mail contains Mr. Mainguet's conjecture on what some of

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[107] *See Brooks Furniture Mfg., Inc. v. Dutailier Int'l, Inc.*, 393 F.3d 1378, 1381 (Fed. Cir. 2005).
[108] *See* **Exhibit 1** attached hereto; *see also* **Ex. Z**.
[109] AuthenTec Br. at 19.
[110] Ex. 2 to Dkt. No. 435.

Atmel's competitors' strategies may be in trying to avoid the patent-in-suit. More importantly, that discussion did not include AuthenTec because at that time, AuthenTec was not making any slide sensors.[111] Accordingly, there is no evidence that the litigation was brought in subject bad faith.[112]

B. THERE IS NO EVIDENCE OF LITIGATION MISCONDUCT BY ATMEL

AuthenTec's litigation misconduct accusations are without merit:[113]

- Atmel did not make any false representation to the Court. In response to AuthenTec's motion to dismiss for lack of standing, Atmel stated that "Atmel Corporation was (and still is) *effectively* an exclusive licensee" because Atmel Corporation, as the ultimate corporate parent, directed key activities within its corporate structure, such as directing enforcement and licensing efforts, directing research and development efforts, directing marketing efforts, and being responsible for manufacturing and sales efforts in the United States.[114] Such representation was not false.[115]

- Atmel did not violate the September 28, 2007 Order nor did Atmel knowingly file a false certification because it later produced license agreements. The subsequent production of license agreements was a result of a separate and subsequent motion practice wherein AuthenTec demanded production of *all* semiconductor patent licenses over Atmel's objection that patent licenses resulting from settlement agreements and that are unrelated to the patents-in-suit are irrelevant.[116] Magistrate Judge Laporte disagreed with Atmel's objection[117] and Atmel produced the licenses.[118]

- Atmel did not violate the January 31, 2008 Order. As evidenced by Atmel's responses, Atmel substantively responded to the court-ordered Requests for Admission. Specifically, as both the Court and AuthenTec are well aware,[119] Atmel explained in its responses that although there is a 2000 assignment agreement which appears to license the patents-in-suit, a 2006 assignment agreement clearly states that no licenses or other rights to the patents-in-suit have been granted.[120]

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[111] *Id.*

[112] Indeed, Atmel conducted a reasonable investigation concerning AuthenTec's infringement, including using outside counsel for the investigation, prior to bringing this lawsuit. *See* **Ex. PP**, 12/20/07 Mar-Spinola Dep. Tr. at 28:7-40:1.

[113] On March 4, 2008, AuthenTec filed a motion for terminating sanctions pending in front of Magistrate Judge Laporte raising similar issues. (Dkt. No. 440.) This is AuthenTec's third desperate attempt to dismiss the case in connection with the standing issue (AuthenTec failed twice previously in front of this Court). (*See* Dkt. Nos. 78 & 84.)

[114] Dkt. No. 67 at 1-2 (emphasis added).

[115] Indeed, the Court held that Atmel Corporation had constitutional standing at the inception of the case because Atmel Corporation, as the parent company, "has always had the implicit right to make, use and sell the patented invention and to control the enforcement of the patent rights." (Dkt. No. 78 at 7.)

[116] Dkt. No. 273 at 4 and Dkt. No. 326.

[117] Dkt. No. 415 at 3.

[118] AuthenTec argues that the production included several cross licenses that license the patents-in-suit. However, AuthenTec does not set forth any evidence or basis for such assertion. This is because it cannot do so. The cross patent licenses that were produced include settlement and license agreements that do not cover patents-in-suit; agreements that have been terminated prior to inception of this case; and agreements that have been entered into after the inception of this case. Not only are the cross license agreements irrelevant and inadmissible to the case, these agreements do not go to the question of standing as AuthenTec baselessly urges. In fact, if AuthenTec is correct that the cross license agreements do cover the patents-in-suit, it supports Atmel's representation that Atmel Corporation directs enforcement and licensing efforts within the corporate structure because Atmel Corporation (not Atmel Switzerland (the patent owner) or any of the subsidiaries) is the named party to the cross license agreements.

[119] *See* Dkt. No. 84 at 2-3

[120] **Ex. Q**, Atmel's Supplemental Responses to the Court-Ordered Requests for Admission.

- There was no improper conduct by Atmel at depositions. Ms. Bright, Atmel's in-house counsel, was properly instructed not to reveal any attorney-client privileged or attorney-work product information.[121] AuthenTec fails to explain why those instructions were improper. Ms. Mar-Spinola, Atmel's former in-house counsel and Atmel's Rule 30(b)(6) designee, truthfully answered that she does not know of anybody outside Atmel that has a license.[122] As discussed above, the 2006 assignment agreement[123] clearly indicates that no licenses or other rights have been granted.

Accordingly, because there is no evidence of litigation misconduct, and certainly not the required "clear and convincing evidence" of "underlying improper conduct" and an "exceptional" case, AuthenTec's request should be denied.[124]

X. CONSTRUCTION OF SPECIFIC CLAIM TERMS

A. CONTACT SENSITIVE ELEMENTS

AuthenTec's new and old constructions should be rejected. As noted above, the claims are not limited to sensors "individually sensitive to patterns of pressure or temperature…"

Atmel is willing to yield on the initial phrase of its construction, "two or more component parts," in favor of AuthenTec's proposed "elements." The important concept in this initial phrase is that "contact sensitive elements" can consist of multiple physical parts or elements. AuthenTec's initial phrase "elements" conveys this concept as well as Atmel's.

B. MEANS FOR READING A FINGERPRINT

AuthenTec completely sidesteps the threshold question of whether this term invokes § 112 ¶ 6 (it does not) with bare bones, attorney only conclusionary argument. As outline in Atmel's Opening Brief, because there is sufficient structure recited directly in the claim, § 112 ¶ 6 is not invoked.

AuthenTec's other arguments are also wide of the mark. AuthenTec's attempt to limit the claim to the specific analog to digital converter (51) disclosed in one preferred embodiment is belied by the admission in its argument that the analog to digital converter "is…separate from the sensor." (Br. at p. 32.) And, AuthenTec's argument regarding the limitation to a "matrix of contact sensitive elements" is nonsensical since that term is already in the claim.

C. A TOTAL IMAGE OF THE FINGERPRINT FROM SAID PARTIAL IMAGES

All of AuthenTec's proposed constructions (it proposes at least three: (1) in the Joint Claim

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[121] Ex. 37 to Dkt. No. 435.
[122] Ex. 38 to Dkt. No. 435.
[123] *See* Dkt. No. 84 at 2-3
[124] "There is a presumption that the assertion of infringement of a duly granted patent is made in good faith….Thus, the underlying improper conduct and the characterization of the case as exceptional must be established by clear and convincing evidence." *Brooks Furniture Mfg. v. Dutalier Int'l, Inc.*, 393 F.3d 1378, 1382 (Fed. Cir. 2005).

Construction Chart attached to Atmel's moving papers as Exhibit E at p. E-4; (2) attached to its motion as Exhibit A at p. 3; and (3) in the body of its Brief at p. 32) are at odds with the specification (*see, e.g.*, Fig. 5 which demonstrates with complete clarity that the entire fingerprint does not have to be imaged) [125] and the understanding of one of ordinary skill in the art.

AuthenTec's second proposed construction (contained only in Exhibit A to its Brief) is also wrong because adding "superimposing" creates ambiguity. AuthenTec's constructions (all of them) are also wrong because they attempt to import limitations contained only in the '804 claims into the '114 claims and they attempt to redefine the function in "means for reconstituting" in the '114.

D. RECONSTRUCTING A GLOBAL IMAGE OF SAID FINGERPRINT

AuthenTec's Brief contains no argument supporting either of its constructions—the one it submitted in the Joint Claim Construction Chart or the one it recently developed in response to Atmel's Summary Judgment Motion. AuthenTec's most recent proposed construction "…complete image of a fingerprint…" and its argument "anything less than a total image of a fingerprint was disclaimed during prosecution" is flat wrong. The specification clearly shows an embodiment with less than the entire fingerprint. (*See* Fig. 5.)

E. MEANS FOR RECONSTITUTING A TOTAL IMAGE OF THE FINGERPRINT…

AuthenTec completely ignores the Federal Circuit precedent to improperly narrow the construction of "means for reconstituting." First, even though AuthenTec acknowledges that the structure should be the algorithm *disclosed* in the specification,[126] it limits the structure to only two exemplary algorithms. However, the specification not only discloses the two algorithms,[127] but also discloses that variations of the algorithm(s) can be made depending on the implementation.[128] Thus, the structure includes such allowable variations.[129]

Second, although AuthenTec initially agreed that the structure should be a "microprocessor" programmed to carry out the disclosed algorithm, it now attempts to include the read-only memory and the random-access memory.[130] However, neither the read-only memory nor the random-access

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[125] It is noteworthy that AuthenTec's Brief at p. 5 couples Figures 4 and 12 when it should have couples Figures 4 and 5. Figure 5 makes it clear that the entire fingerprint does not have to be imaged.

[126] *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) and *Harris Corp. v. Ericsson, Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005).

[127] **Ex. A**, '114 Patent at (1) Col. 8, ln. 10-24; and (2) Col. 9, ln. 24-42.

[128] **Ex. F**, Jain Rpt. at 9; **Ex. A**, '114 Patent, Col. 8, ln. 24-26 and Col. 9, ln. 11-13.

[129] *See Harris*, 417 F.3d at 1254; *Connectel, LLC v. Cisco Systems, Inc.*, 428 F. Supp. 2d 564, 576 (E.D. Tex. 2006).

[130] *See* **Exhibit 2** attached hereto at p. 4, comparing AuthenTec's old construction to new construction.

memory *perform* the function of reconstituting;[131] rather, they only *store* information.[132] It is the programmed microprocessor that performs the claimed function.[133] Thus, the read-only memory and the random-access memory do not constitute corresponding structure.[134]

Lastly, AuthenTec inappropriately tries to limit Claim 1 and its dependent claims by arguing that the inclusion of the phrase "if any" as it relates to "overlap" in the necessary steps of the disclosed algorithm is improper.[135] However, as AuthenTec admits, Claim 1 and its dependent claims do not include the term "overlap." Claims that include "overlap," are limited in accordance with the plain language of the claims. Thus, inclusion of the phrase "if any" is proper.

F. CORRELATION OF OVERLAPPING PARTIAL IMAGES

AuthenTec again attaches a completely new construction.[136] This new construction should be rejected as an attempt to limit the claim to one preferred embodiment,[137] as adding unnecessary limitations that go well beyond the words of the phrase,[138] is overly restrictive, contrary to the understanding of one of skill in the art as to how the images are used, and because it interjects ambiguity with the use of the word "optimal."[139]

G. ACTIVE LAYER & ACTIVE SURFACE

AuthenTec's "active layer" argument underscores many of the analytical flaws pervasive throughout its brief. First, AuthenTec's brief attaches a new construction. It not only fails to inform the Court of this (presumed) change, it makes absolutely no argument whatsoever directed at supporting either construction, old or new. Indeed, AuthenTec 's brief fails to note that its initial construction conceded that its capacitive sensor contained an active layer. (*See* Exhibit C to Atmel's Brief at p. 6.) Second, it short cites the specification in an attempt to import one of the preferred

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[131] *WMS Gaming* and its progeny hold that the structure is a "special purpose computer [or microprocessor] ***programmed to perform the disclosed algorithm***." *WMS Gaming* at 1349 (emphasis added); *see also Harris*, 417 F.3d at 1253-54.
[132] Ex. A to Dkt. No. 399, '114 at Col. 8, ln. 12-14.
[133] *Id.* at Col. 8, ln. 10-24; *see also* **Ex. MM**, definition of "microprocessor" and "CPU."
[134] *Asyst Tech., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1370 (Fed. Cir. 2001) ("Structural features that do not actually perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations.").
[135] Without any basis, AuthenTec claims that "the only means disclosed for multi-line sensors are means that require overlap, which Dr. Jain does not dispute." This is wrong. *See* Ex. G, Jain Dep. Tr. at 79:19-82:13.
[136] *See* **Exhibit 2** attached hereto.
[137] AuthenTec again short cites the specification by excluding the introduction of the section as a description of an "exemplary embodiment." '114 at Col. 7, ln. 27-35.
[138] There is no basis for including the phrase "and combining the images according to the determined optimal overlap" in the construction of this short phrase.
[139] "Optimal" introduces uncertainty into the claim scope. Additionally, finding an optimal relationship is generally not patentable. S*ee Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 258 F.2d 124, 132 (2d Cir. 1958).

embodiments into all of the claims. (*See, e.g.*, AuthenTec's citation to "pyroelectric/piezoelectric material…" at '114, Col. 4, ln. 5-7. One only need back up to the proceeding line to see that the short cited sentence quoted by AuthenTec begins with the phrase "In one embodiment….") Third, AuthenTec actually reaches to citing dependent Claims 5 and 6 in an attempt to add those two distinct limitations into all claims making Claim 5 and 6 superfluous. (*See* AuthenTec's cite to '114, Col. 10, ln. 9-10, 12-15.) Fourth, AuthenTec makes another last ditch attempt to limit all of the claims to pressure and/or temperature.

H. CAPACITIVE ELEMENTS

AuthenTec should be prohibited from proposing a construction for this term because it chose not to submit any in the Joint Claim Construction Chart. If considered, AuthenTec's new construction should be rejected as a blatant attempt to import limitations from the preferred embodiment into the claims. And, use of a dictionary and reference to the understanding of one of ordinary skill in the art is proper in support of the construction of this term. *See Phillips* at 1322-23. A person of ordinary skill in the art reading this patent would understand the term "capacitive elements" in accordance with Atmel's proposed construction. AuthenTec's proposal is a last ditch attempt to overly limit the claims by submitting a construction for a term it previously chose to ignore and with an outrageously limited construction.

XI. CONCLUSION

For the reasons stated above, Summary Judgment of Infringement should be granted on Claim 17 of the '114 and Claim 10 of the '804, AuthenTec's Motion for Partial Summary Judgment should be denied on all grounds, and Atmel's claim constructions should be adopted.[140]

Respectfully Submitted,

DATED: March 21, 2008 By: *s/ Olivia M. Kim*

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[140] AuthenTec filed its brief in both 06-CV-2138 and 07-CV3331 actions. When the second action was transferred from the Middle District of Florida, the Court issued an Order relating the cases. (Dkt. No. 87.) To best serve the interests of judicial economy, these two actions should be consolidated because they involve the same parties, the same patents, and the same claims. *See Paxonet Communications, Inc. v. Transwitch Corp.*, 303 F. Supp. 2d 1027, 1028 (N.D. Cal. 2003).

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