UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW HAMPSHIRE

Star Technology Group, Inc.
d/b/a Circuitest Services

v. C-97-65-B

Testerion, Inc. d/b/a
Mania Testerion

MEMORANDUM AND ORDER

Testerion, Inc. manufactures and sells products used to test printed circuit boards. It is the exclusive licensee of U.S. Patent No. 4,721,908 (the "'908 patent"). Testerion contends in this action that certain products made and sold by one of its competitors, Star Technology Group, Inc. d/b/a Circuitest Services ("Circuitest"), infringe the '908 patent either literally or under the doctrine of equivalents. The parties have filed cross-motions for summary judgment on the literal infringement claim. The central issue presented by these motions is whether Circuitest's products employ an elastic plate that is identical to that claimed by the '908 patent.

For the reasons discussed below, I find that no reasonable trier of fact could find that Circuitest's products literally infringe the '908 patent. Accordingly, I deny Testerion's motion and grant Circuitest's motion for summary judgment on the issue of literal infringement.

I. BACKGROUND

A. Printed Circuit Board Testing

A printed circuit board is a thin, non-conductive board with electrical circuits printed on it and additional electronic components soldered to it. Printed circuit boards are used in nearly every electronic product sold, including, for example, telephones, televisions, video cassette recorders, and computers. Companies such as Testerion provide printed circuit board testing services to circuit board manufacturers. Such services are provided either in-house or by selling test equipment directly to circuit board manufacturers.

Printed circuit boards are tested by sending electric currents through a number of test probes that are placed in contact with the circuit boards at predetermined points. The test probes are linked to a computer that maps and identifies any circuit board contact points with faulty connections. Rather than customizing the expensive test probe equipment to a particular circuit board's pattern, industry practice is to use an adaptor to match the specific circuit board to the test probe equipment.

Such an adaptor generally has numerous test pins that conduct electric current from the test probes through the circuit board being tested. The test pins lie substantially parallel to one another in the adaptor, resembling a bed of nails, and are capable of being arranged in a pattern matching, at one end, the contact points on the circuit board being tested and, at the

other end, the test probes, arranged on an array plate. The adaptor must be able to retain the pins in the adaptor and keep them in proper alignment so that they will remain in position while testing a succession of circuit boards. Additionally, the pin-to-circuit-board contact must be resilient enough to maintain a test-worthy connection even if the heights of the circuit board contact points are not uniform. If the pins are not resilient, but rather are rigidly fixed in the apparatus, they may exert excessive pressure on circuit board's contact points, causing them damage. The need to retain the pins within the adaptor while allowing for resilient movement has presented the circuit board testing industry with a perennial challenge.

The industry initially addressed this problem by using either fixed test pins with spring-mounted heads that allowed for resilience, or contoured or notched test pins that allowed for movement while preventing the pins from falling out of the adaptor. These sorts of specialized pins, however, are expensive to manufacture. Additionally, such pins tend to be thick in diameter and, therefore, are difficult to pack tightly together. This failing increasingly became problematic as technology enabled circuit board manufacturers to pack more and more contact points onto circuit boards.

B. <u>The '908 Patent</u>

The '908 patent represents Testerion's attempt to address

and overcome the problems that specialized test pins create.[1] The inventors realized that using an elastic plate in an adaptor could provide both resilience and pin retention while permitting the use of springless, rigid, uncontoured test pins. By eliminating the need for expensive and complicated test pins, the '908 patent reduces the cost of test pins by approximately 70-95% and allows thinner pins to be packed more closely together so as to be able to engage more compactly arranged contact points.

1. The Patent Claims

The '908 patent contains one independent claim, claim 1, followed by eighteen dependent claims. Claim 1 asserts the following improvements over prior art:

> 1. In an apparatus for electronically testing printed circuit boards, said apparatus including a plurality of substantially parallel test pins for making electrical contacts between areas of a printed circuit board being tested and respective of a plurality of resilient contact elements disposed in an array plate in accordance with a grid thereof, and a mask plate extending transversely to said test pins and having through-bores through which extend said test pins, such that when the circuit board being tested is urged toward said array plate the contact areas of the circuit board being tested engage first tip ends of respective said test pins and urge said test pins axially thereof such that second tip ends of said test pins engage respective said resilient contact elements, the improvement comprising:
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> said test pins being longitudinally rigid, and each said test pin being uncontoured with a substantially uniform configuration longitudinally between said first and second tip ends thereof, and

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[1] The '908 patent was issued on July 26, 1988. The named inventors, Herbert Driller, Edmund Krause, and Paul Mang, assigned the patent to their employer, Mania GmbH, a German company. Mania GmbH in turn granted defendant Testerion, its American subsidiary, an exclusive license to the patented technology. For simplicity, I refer to Testerion as the patent-holder throughout this order.

> means for retaining said test pins in parallel alignment in said apparatus with said test pins extending through respective said through-bores in said mask plate, said means comprising an elastic plate formed of elastic material and mounted at a position spaced from said mask plate and extending parallel thereto, said test pins extending through said elastic plates in a manner such that said elastic material elastically contacts and grasps said test pins, whereby said test pins are maintained in said alignment due to the elasticity of said material

'908 patent, Col. 6:67 - 7:13. Thus, the elements of the claimed improvement are: (1) rigid, uncontoured, substantially uniform test pins; and (2) an elastic plate mounted parallel to and separate from the mask plate that retains the test pins in the apparatus and keeps them in parallel alignment.

2. The Patent Specification

The '908 patent's specification compares the form of circuit board testers described by the prior art to the form of the inventions claimed within the patent. Specifically, it describes how in the prior art, adaptors employed test pins with axially resilient (spring-loaded) contact tips or test pins that are axially rigid but contoured so as to ensure that the pins do not fall from the adaptor. The specification declares that the '908 patent's objective is to provide an adaptor similar to those disclosed by the prior art but that is also "capable of employing springless and uncontoured test pins." Additionally, the specification states that the invention employs a novel means of maintaining the test pins in position within the apparatus.

The specification discloses three preferred embodiments. The first embodiment, depicted in Figure 1, discloses an adaptor

comprised of two plates, a rigid mask plate and an elastic plate, spaced from and held parallel to each other by rigid spacing adaptors. In this embodiment, the elastic plate is sufficiently stable so as to enable it to be mounted in the adaptor in the manner of a rigid plate. The specification states that the elastic plate consists of a "relatively stiff elastomeric material, particularly of a suitably reinforced foam material." The elastic plate grasps the test pins, which extend through it, in a manner that prevents their falling from the apparatus. The pins also extend through the through-bores drilled in the mask plate.

The second embodiment, depicted in Figure 2, builds on the structure disclosed in the first, adding only a top guide plate mounted in the adaptor next to the side of the elastic plate facing the mask plate. This top guide plate may have through-bores corresponding to the arrangement of test probes on the array plate. When the adaptor is not in use, it may be stored in an inverted position with the elastic plate on top. So stored, the specification states, the test pins will not fall from the adaptor even if the elastic plate is not firmly affixed to it, as provided in the first embodiment.

The third embodiment, depicted in Figure 3, adds to the invention another guide plate, placed on the side of the elastic plate facing away from the mask and top guide plates. The top and bottom guide plates "sandwich" the elastic plate. In this embodiment, "the elastic insert 4 may be in the form of a plate

or sheet loosely placed in the space between the top and bottom guide plates 5, 6." Patent Col. 4:36-8. This arrangement allows that the elastic insert, when placed loosely between the top and bottom guide plates, will accommodate irregularities in the surface of the circuit board being tested by permitting axial displacement among the test pins.

3. The Prosecution History

The U.S. Patent and Trade Office rejected the '908 patent as originally submitted in large part due to the failings of original claim 1, the application's sole independent claim. The limitations in original claim 1 describe the claimed improvement as comprising:

> said test pins being longitudinally rigid;
> an elastic plate spaced from and
> parallel to said mask plate; and
> said test pins extending through said elastic
> plate in a manner such that they are
> retained therein due to the intrinsic
> elasticity of the material of said elastic.

(Def.'s App. Supp. Summ. J., Ex. B(1) at 12). Thus, in its original form, claim 1 did not contain language limiting the claim to devices in which an elastic is used to maintain the test pins in parallel alignment. The examiner rejected the application upon finding certain terms indefinite and finding the invention obvious in light of prior art.

The examiner relied primarily on three examples of prior art in finding claim 1 obvious and, therefore, unpatentable. The examiner first looked to German Patent 29 15 742 ("Heilmann"), which shows a circuit board tester employing resilient (spring-

loaded) test pins, held in corresponding through-bores in mask, support, and bottom guide plates, with the plates separated from one another by spacing adaptors. The examiner next looked to a one-page IBM Technical Disclosure Bulletin ("Eddy"), which he found discloses a circuit board tester "wherein a mask plate and an elastic support plate hold uncontoured, longitudinally rigid test pins in corresponding through-bores, the pins being held in the elastic plate due to the elastic nature of the elastic plate material." (Def's App. Supp. Summ. J. Ex. B(2) at 3-4). The examiner found that it would have been obvious to modify the apparatus disclosed in Heilmann, as taught by Eddy, so as to provide for an elastic support plate, spaced from the mask plate by means of spacing adaptors, able to hold longitudinally rigid uncontoured test pins.

Additionally, the examiner looked to U.S. Patent No. 4,544,886 ("Murray"), finding it to disclose a circuit board test apparatus comprising an elastic support plate that resiliently retains parallel test pins, top and bottom guide plates, and a mask plate spaced apart from the elastic support plate. The examiner concluded that it would have been obvious to modify Murray, as taught by Heilmann and Eddy, to arrive at the invention disclosed in the '908 patent application.

In response, the drafter of the '908 patent amended claim 1 so as to overcome the examiner's objections. The amended claim 1, according to the drafter, discloses two novel features not present in the prior art references cited by the examiner.

First, the invention uses uncontoured longitudinally rigid test pins. The "second novel feature . . . resides in means for retaining the test pins 2 in parallel alignment in the apparatus with the test pins extending through the through-bores in mask plate 3." (Def.'s App. Supp. Summ. J., Ex. B(3) at 6).

The drafter argued in his remarks that neither novel feature was obvious in light of the prior art. First, the drafter disputed the examiner's finding that Eddy teaches the use of longitudinally rigid, uncontoured test pins. Rather, referring to the diagram of the Eddy circuit board tester, the drafter argued that the features the examiner mistook for rigid test pins are in truth flexible wire test probes. Thus, none of the prior art references cited by the examiner disclose rigid uncontoured test pins.

Second, the drafter distinguished the elastic plate feature of the invention from the resilient material taught by the Eddy and Murray circuit board testers. The drafter noted that the resilient material disclosed in Eddy is actually attached to the mask plate. Consequently, the drafter argued that the resilient material in Eddy serves only two purposes: binding the wire test probes to the mask plate, and allowing the test probes to move axially. In such an arrangement, the mask plate, not the resilient material, actually retains the test probes in proper alignment. In a contradistinction, the drafter emphasized that in claim 1 the elastic plate is responsible for retaining the pins in parallel alignment.

With respect to Murray, the drafter similarly distinguished claim 1's elastic material on the basis of the material's function. Murray discloses a circuit board testing apparatus that employs a vacuum seal to urge the individual circuit boards against the apparatus. In Murray, the drafter argued, the elastic diaphragm simply operates such that when test pins are removed from the apparatus, the rubber of the diaphragm closes the holes through which the pins extend so as to maintain the requisite vacuum seal. Nowhere in Murray, the drafter maintained, is there reference to the diaphragm having the capability of retaining the test pins in parallel alignment. Rather, in Murray, two rigid plates placed on either side of the diaphragm maintain the pins in proper alignment. The drafter then distinguished the elastic plate in claim 1, stressing its capacity for retaining the test pins in parallel alignment.

The Patent Office approved the amended application without explanation and issued the '908 patent on January 26, 1988.

C. The Accused Devices

Circuitest makes two adaptors that Testerion alleges infringe the '908 patent. The first adaptor, depicted in Figure 4, is made in accordance with U.S. Patent No. 5,493,230 (the "'203 patent"). This adaptor comprises top and bottom rigid plates and any number of intermediate rigid plates spaced apart by rigid spacers. The adaptor also contains a thin, free-floating, highly flexible elastomeric membrane of latex rubber, located between an intermediate plate and the bottom base plate.

Longitudinally rigid, uncontoured test pins extend through holes drilled in the plates as well as the elastomeric membrane, which grasps the pins and retains the pins in the adaptor. The second Circuitest fixture is similar to the first and differs only in that it replaces the latex rubber membrane with a flexible plastic mesh sheet having interstitial openings smaller than the diameter of the test pins. This pressure exerted by plastic mesh stitches on the test pins retains them in the adaptor.

II. DISCUSSION

A. Literal Infringement

A device accused of infringing a patent claim can do so either literally or under the "doctrine of equivalents." Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 (Fed. Cir.), cert. denied, 516 U.S. 987 (1995). Literal infringement occurs where the accused device exactly reproduces every limitation set forth in the claim at issue. Id. If an accused device lacks one or more of the claim's limitations, a literal infringement action based on the claim cannot succeed. Regents of the Univ. of Cal. v. Eli Lilly & Co., 119 F.3d 1559, 1572 (Fed. Cir. 1997), cert. denied, ---- S. Ct. ----, 1998 WL 37959 (Apr. 20, 1998). Further, where the accused device is alleged to infringe both an independent claim and several dependent claims, all of the infringement claims fail if the independent claim is not infringed. Wolverine World Wide, Inc. v. Nike, Inc., 38 F.3d 1192, 1199 (Fed. Cir. 1994).

Infringement analysis entails a two-step inquiry. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). First, the court must determine the scope and meaning of the purportedly infringed claim as a matter of law. Southwall Techs., Inc., 54 F.3d at 1575. Second, the finder of fact must compare the accused device to the properly construed claim to determine whether an infringement has occurred. Id. At the second step, the patent-holder bears the burden of proving by a preponderance of the evidence that each of the claim's limitations are found literally in the accused product. Wolverine World Wide, Inc., 38 F.3d at 1196. Though the resolution of an infringement claim requires an inquiry into the supporting facts, a court may summarily dispose of the claim if no genuine factual dispute exists as to whether the accused device infringes the claim as construed. Phonometrics, Inc. v. Northern Telecom, Inc., 133 F.3d 1459, 1463-64 (Fed. Cir. 1998); Sage Prods., Inc., 126 F.3d 1420, 1423.

B. Claim Construction

The process of patent claim construction, like the process of statutory interpretation, is far from an exact science. Nevertheless, in an effort to guide the district courts and provide a measure of predictability to the process, the Federal Circuit has developed a set of claim construction rules. The most important of these rules is that a court must first look to any intrinsic sources of meaning before resorting to extrinsic sources such as expert testimony or dictionary definitions.

Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996). If the meaning of a claim can be ascertained through reference to intrinsic evidence, it is improper to rely on extrinsic evidence to reach a contrary conclusion. Id. The policy reason underlying this rule is that third parties whose rights may be restricted by a patent should be entitled to rely on the public record in determining the scope of a claimed invention. Id.

Three sources of intrinsic evidence may prove relevant to the process of claim construction. The first is the language of the claim itself. Claim language should be given its ordinary meaning unless the rest of the intrinsic evidence suggests that a different meaning was intended. Id. at 1582. Ordinarily, patent terms should be given a consistent meaning throughout all claims in the patent. Southwall Techs., Inc., 54 F.3d at 1579.

A second source of intrinsic evidence is the patent's specification, a technical description of how an invention functions and what it produces. Although the specification cannot be used to change a claim's meaning, see Markman, 52 F.3d at 980, the Federal Circuit has stated that "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." Vitronics Corp., 90 F.3d at 1582.

Finally, a court also must consider a patent's prosecution history. Id. As the "undisputed public record of proceedings" in the Patent Office, it is of "primary significance in

understanding the claims." Markman, 52 F.3d at 980 (internal quotations omitted). "The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during the prosecution. Claims may not be construed one way during the prosecution in order to obtain their allowance and in a different way against accused infringers." Southwall Techs., Inc., 54 F.3d at 1576 (internal citations omitted).

C. Application

1. Claim Construction

The parties agree that the sole issue of claim construction in this case is the proper interpretation of the claim 1 "retaining means" limitation.[2] Testerion appears to argue that

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[2] Circuitest contends that the claimed "retaining means" limitation in the '908 patent is framed in "means-plus-function" language and, therefore, its interpretation should be governed by 35 U.S.C.A. § 112, ¶ 6 (West 1984).

Use of the word "means" in the claim language may indicate that the inventor intended to trigger the statutory mandates governing means-plus-function claim elements as set forth in section 112, ¶ 6. Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1427 (Fed. Cir. 1997); York Prods., Inc. v. Central Tractor Farm & Family Ctr., 99 F.3d 1568, 1574 (Fed. Cir. 1996). Neither the presence nor the absence of the word, however, is determinative. Sage Prods., Inc., 126 F.3d at 1427; Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed. Cir. 1996), cert. denied, 118 S. Ct. 56 (1997). Rather, in order to properly invoke section 112, ¶ 6, "the alleged means-plus-function claim element must not recite a definite structure which performs the described function." Cole, 102 F.3d at 531; Sage Prods., Inc., 126 F.3d at 1427-28; Fonar Corp. v. General Elec. Co., 107 F.3d 1543, 1551 (Fed. Cir.), cert. denied, 118 S. Ct. 266 (1997); see also 35 U.S.C.A. § 112, ¶ 6 (a claim element "may be expressed as a means . . . for performing a specified function without the recital of structure" (emphasis added)).

The drafter of claim 1 did use the word "means" to describe a specific function, namely, retaining the test pins in parallel alignment in the apparatus. The drafter followed that language,

this limitation encompasses any type of elastic plate otherwise meeting the terms of the limitation even if it does not serve in conjunction with a through-bored mask plate as the means for maintaining the test pins in parallel alignment. I reject this argument because it is inconsistent with both the claim language and the patent's prosecution history.

Claim 1 expressly limits the scope of the types of elastic plates it claims. The language of claim 1 plainly contemplates that the elastic plate be capable of maintaining the test pins in parallel alignment when used in conjunction with a through-bored mask plate. Indeed, the claim describes the elastic plate as the "means for retaining said test pins in parallel alignment." Further, the claim states that the structure by which this means is to be fulfilled provides for the use of an elastic plate "whereby said test pins are maintained in said [parallel] alignment due to the elasticity of said material." Taken literally, the claim language thus covers only those types of elastic plates having the capability, when positioned parallel to and spaced from the mask plate, of maintaining the pins in proper

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however, with a detailed description of the structure (an elastic plate) that performs this function. The claim also discloses this structure's location in the apparatus (mounted in a position spaced from and parallel to the mask plate), its relation to the test pins (the test pins extending through and grasped by the elastic material), and the physical properties of the plate that allow it to serve its function (the elasticity of the material). Such a detailed recital of the structure is inconsistent with a proper invocation of section 112, ¶ 6. See Cole, 102 F.3d at 531 (upholding district court finding that claim language did not support application of § 112, ¶ 6 where claim recited a definite structure); York Prods., Inc., 99 F.3d at 1574. Consequently, I construe claim 1 without reference to that statutory provision.

parallel alignment. The literal terms of claim 1, therefore, do not cover elastic plates that are incapable of maintaining, in conjunction with a through-bored mask plate, the pins in proper alignment within the apparatus.

The prosecution history of the '908 patent reinforces this construction. As originally filed, claim 1 referred to "an elastic plate spaced from and parallel to said mask plate; and said test pins extending through said elastic plate and retained therein due to the intrinsic elasticity of the material of said elastic." Thus, original claim 1 required only that the elastic material be capable of preventing the pins from falling from the adaptor and made no reference to maintaining the pins in parallel alignment. Upon rejection, the drafter amended claim 1 by endowing the elastic material with not only the ability to retain the pins in the adaptor, but also specified that it has the added capability of maintaining the pins in parallel alignment.

In his remarks accompanying the amended claim, the drafter repeatedly stressed the elastic material's ability to retain the parallel alignment of the test pins. For instance, the drafter argued that the elastic plate contemplated in the application was not comparable to the resilient material disclosed in Eddy because that material -- although serving to bind the test probes to the carrier plate, thereby retaining them in the apparatus, and to allow for axial movement of the probes -- played no role in maintaining the probes in parallel alignment. Rather, the drafter noted that, in Eddy, the rigid carrier plate to which the

resilient material is attached performs that function. Because amended claim 1's elastic plate plays an integral role in maintaining the test pins in parallel alignment, the drafter argued, it is distinguishable from the resilient material disclosed in Eddy.[3]

The drafter again emphasized the elastic plate's capability of maintaining the pins in parallel alignment in distinguishing the invention from the Murray patent. The drafter argued that the elastic diaphragm disclosed in Murray serves only to create a vacuum seal when test pins are removed from the apparatus and does not play any role in maintaining the test pins' alignment. Rather, two rigid plates positioned on either side of the elastic material maintained the test pins in proper alignment. The

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[3] Circuitest argues that in distinguishing claim 1's elastic plate from Eddy's resilient material, the drafter of the '908 patent specifically disclaimed any ability of the elastic plate to allow axial movement among the test pins. Circuitest apparently contends that because the drafter did not explicitly state in this portion of his remarks that a purpose of the elastic plate is to allow the pins to move axially while noting that Eddy's resilient material does so allow, claim 1 should be construed so as to require that the elastic plate actually prevent axial movement. This argument is without merit.

The drafter's primary basis for distinguishing claim 1's elastic plate from Eddy's resilient material was that whereas the former retains the pins in parallel alignment, the latter does not. That the drafter did not expressly state the allowance of axial movement as a function of the elastic plate in this remark is of no import. A fundamental aspect of circuit board testing adaptors is that they must contain a resilient means for transferring force from the contact points on the circuit board being tested to the test probes so that an electric current may pass from one to the other. The only way longitudinally rigid test pins can accomplish this result is to move axially when urged against a circuit board. Indeed, barring axial movement would render the invention useless. Consequently, I decline to follow Circuitest's interpretation of the prosecution history.

invention disclosed in amended claim 1, the drafter urged, differs from the elastic diaphragm disclosed in Murray precisely because it serves to maintain the pins in parallel alignment.

As a practical matter, to have the capability of maintaining test pins in proper alignment, when positioned parallel to and spaced from a mask plate, an elastic plate must possess either one of two characteristics. First, any elastic plate, regardless of its thickness or degree of flexibility, that is firmly affixed to the structure of the adaptor would be capable of working in conjunction with the mask plate to maintain the pins in parallel alignment. Second, an elastic plate that is not firmly affixed to the apparatus, but that is sufficiently rigid so that it can stand vertically without collapsing, would be equally capable of serving this function. A thin, highly flexible elastic plate that is not firmly affixed to the apparatus, however, would be incapable of maintaining the pins in parallel alignment because, absent the aid of some other structural component, such as an adjoining rigid plate, it would collapse. Consequently, in order to come within the purview of claim 1's language, an elastic plate must either be firmly affixed to the apparatus or must be of sufficient rigidity to stand vertically without collapsing.[4]

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[4] In support of its asserted construction of claim 1, Testerion points to dependant claim 17, which provides for an elastic plate made of hard foam or rubber. Under the doctrine of claim differentiation, Testerion argues, claim 1 should be construed as covering thin, highly supple elastic plates. "Although the doctrine of claim differentiation may at times be controlling, construction of claims is not based solely on the language of other claims; the doctrine cannot alter a definition that is otherwise clear from the claim language, description, and

2. Claim application

Testerion claims that each of claim 1's limitations is found in Circuitest's allegedly infringing products. Specifically, Testerion argues that Circuitest's devices contain an elastomeric sheet, in the form of either a rubber membrane or plastic mesh, mounted parallel to and spaced from the mask plate, which through the elasticity of its material, retains the test pins and maintains them in parallel alignment in conjunction with the mask plate. Other than its bald assertion that the Circuitest device's elastomeric sheets maintain the pins in parallel alignment, however, Testerion offers no evidence that the sheets in Circuitest's products actually have this capability.

Indeed, Testerion does little more than compare the diagram of the third embodiment of the invention contained in the '908 patent with a representative diagram of one of Circuitest's products and state in a conclusory fashion that because the diagrams are identical, Circuitest's products infringe the '908 patent. Literal infringement, however, "is determined by comparing the accused device with the claims in suit, not with a preferred or commercial embodiment of the patentee's claimed invention." Martin v. Barber, 755 F.2d 1564, 1567 (Fed. Cir.

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prosecution history." O.I. Corp. v. Tekmar Co., 115 F.3d 1576, 1532 (Fed. Cir. 1997). In this case, the language of claim 1 and the prosecution history leave no doubt that the elastic plate claimed must be capable of maintaining the test pins in parallel alignment. Additionally, claim 17 speaks only to the rigidity of the elastic plate therein and makes no reference to the plate's capability of maintaining the test pins in parallel alignment. Consequently, dependent claim 17 does not support a contrary construction of claim 1.

1985); see also Zenith Lab., Inc. v. Bristol-Meyers Squibb Co., 19 F.3d 1418, 1423 (Fed. Cir.) ("[I]t is error for a court to compare in its infringement analysis the accused product with a patentee's commercial embodiment or other version of the patent or product; the only proper comparison is with the claims of the patent."), cert. denied, 513 U.S. 995 (1994).[5] Consequently, Testerion's comparison is of little impact to an infringement analysis. Rather, Testerion must show that the accused devices contain every limitation of claim 1 of the '908 patent, including the express limitation that the elastic plate be capable of maintaining the pins in parallel alignment.

The elastomeric sheets found in Circuitest's devices, however, play no role in maintaining the test pins in parallel alignment. They are thin and highly supple. Additionally, the sheets sit loosely within the apparatus, lying between the bottom rigid plate and an intermediate rigid plate. The sheets are not firmly affixed to any part of the apparatus; instead, they are in continual contact only with the test pins. Such sheets, so

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[5] Moreover, embodiments discussed in the patent specification cannot be used to expand or change the scope of a patent claim. Markman, 52 F.3d at 930. The embodiment shown in Figure 3 arises from various claims dependent upon independent claim 1 that, as such, necessarily contain every limitation provided in claim 1. See 35 U.S.C.A. § 112 ("A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers."); Smithkline Diagnostics, Inc. v. Helena Lab. Corp., 859 F.2d 878, 882 (Fed. Cir. 1988). Consequently, the Figure 3 embodiment cannot be interpreted as providing for an elastic plate that is not capable of maintaining, in conjunction with the mask plate, the pins in parallel alignment because such an interpretation would not include a key limitation provided by claim 1 and incorporated into each dependent claim.

constructed and so placed, do not serve to maintain the alignment of the test pins. Rather, the elastomeric sheets serve only two purposes in Circuitest's devices: (1) retaining the test pins in the apparatus; and (2) allowing the pins to move axially relative to each other.

In each accused device, the bottom rigid plate, and not the elastomeric sheet, works in conjunction with the mask plate to keep the test pins in parallel alignment. Indeed, were the elastomeric sheet removed from either device, the pins would remain in proper alignment, although they would easily slide from the device. Conversely, were the bottom and intermediate plates removed from the device, leaving only the mask plate, the elastomeric sheet, and the test pins, it is difficult to see how the pins would be maintained in parallel alignment, as the elastomeric sheet would collapse. As it did so, the sheet would pull the test pins out of alignment. Circuitest's devices, thus, depend on a rigid bottom plate, spaced from and parallel to the mask plate, to maintain the pins in parallel alignment. To contend that claim 1 covers such devices would be contrary to the claim language and would render meaningless the distinction the drafter carefully drew between the claimed invention and the prior art.

After reviewing the record in the light most favorable to Testerion, I conclude that no reasonable trier of fact could find that the elastomeric sheets in Circuitest's devices are capable of maintaining the test pins in parallel alignment, a key

limitation of the '908 patent's claim 1. Consequently, I grant Circuitest's motion for summary judgement that its products do not literally infringe the '908 patent and deny Testerion's corresponding motion. See Phonometrics, Inc., 133 F.3d at 1463-64; Sage Prods., Inc., 126 F.3d at 1423.

III. CONCLUSION

For the foregoing reasons, Testerion's motion for summary judgment (doc. no. 14) on the issue of literal infringement is denied and Circuitest's cross-motion for summary judgment (doc. no. 15) is granted in part as to the issue of literal infringement. In all other respects, the motion is denied without prejudice.[6]

SO ORDERED.

Paul Barbadoro
Chief Judge

June 5, 1998

cc: Martin Labod, Esq.
James Bassett, Esq.
Steven Grossman, Esq.

[6] Circuitest also moves for summary judgment on its claims that its products do not infringe the '908 patent under the doctrine of equivalents and, alternatively, that the '908 patent is invalid and unenforceable. Because these motions were filed at a time not contemplated by the July 29, 1997 discovery order, and because it is unclear whether Testerion has had an opportunity to properly respond, Circuitest's motion is denied without prejudice with respect to these issues.