United States District Court,
N.D. California.

Frank T. SHUM,
Plaintiff.
v.
INTEL CORP., et al,
Defendant.

No. C-02-3262-DLJ

Aug. 29, 2008.

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Stephen E. Taylor, Jayesh Sanatkumar Hines-Shah, Jessica L. Grant, Jonathan Alan Patchen, Stephen McGeorge Bundy, Taylor & Company Law Offices, LLP, Quyen Le Ta, Ragesh K. Tangri, Steven Keeley Taylor, Keker & Van Nest, LLP, San Francisco , CA, for Defendants.

ORDER

D. LOWELL JENSEN**, District Judge.**

On August 15, 2008, the Court heard argument on the construction of disputed terms in Patents 6,207,950 ('950), 6,227,724 ('724), 6,585,427 ('427), and 6,586,726 ('6726), all held by defendant Intel Corporation (Intel), and having defendant Jean-Marc Verdiell (Verdiell) as a named inventor. Robert MacFarlane appeared on behalf of plaintiff Frank Shum (Shum); Ragesh Tangri appeared for defendants. Having considered the arguments of counsel, the papers submitted, the applicable law, and the record in this case, the Court hereby construes the disputed term.

I. BACKGROUND

A. *Procedural History and Factual Background.*

Plaintiff Frank Shum (Shum) has brought suit alleging several state law claims as well as for Correction of Patent Inventorship, pursuant to 35 U.S.C s. 256, for seven patents whose named inventor is Defendant Jean-Marc Verdiell. These seven patents cover three separate areas of optoelectronic technology. The technology area at issue in this hearing is called "Flexure" technology. Four patents, the '950, '724, '427, and '6726 patents, are involved. Each patent addresses the problem of precisely aligning a laser diode and an optical fiber during an automated fiber-optic assembly process, and of keeping the two components aligned during use.

Shum asserts that he was in fact the inventor or co-inventor of each of the seven patents. These patents are currently owned by Defendant Intel, Inc., who bought the patents and the previous owner, Defendant LightLogic, Inc., from Verdiell for over $400 million in Intel common stock. Shum filed the second amended complaint, which included the s. 256 cause of action, on December 19, 2002.

In response to pretrial motions filed by the defendants, the Court filed an order on April 27, 2004, denying summary judgment and bifurcating the s. 256 cause of action from the other claims. A bench trial on the inventorship claims began on January 10, 2005, and concluded on January 24, 2005.

In the course of the trial, contrary to the initial belief of the parties that no claim construction would be needed, it became apparent that the flexure patents required the construction of a single term: "leg." Accordingly, the Court construed "leg," as used in each of these four patents, to mean: "an appendage to the body of the flexure which extends downward, supporting the structure above it."

On June 21, 2005, the Court issued an order setting forth its findings of fact and conclusions of law finding that Shum had not proven that he was an inventor of any of the patents in contention. Thereafter, in January of 2006, the Court granted the defendants' summary judgment motion, based in large part upon the Court's finding that Shum was not an inventor of any of the seven patents.

In 2007, the Federal Circuit reversed the summary judgment order and vacated the bench trial, holding in part that, because the claims under s. 256 shared issues in common with the accompanying state law claims for fraud and breach of contract, that the Court should have allowed a jury to decide the question of inventorship. Because the verdict of the bench trial was vacated, the claim construction which had been included in the July 2005 order was also vacated. On remand, in preparation for jury trial currently scheduled for November of this year, the Court must again construe the claims of the patents.

The parties have stipulated that, as before, only the term "leg" need be construed by the Court.

B. *Legal Standard*

The over-riding principle of claim construction is that terms should be construed from the vantage point of one of skill in the art. *See* Vanderlande Indus. Nederland BV v. International Trade Comm'n, 366 F.3d 1311, 1321 (Fed.Cir.2004). Moreover, the patent terms should be construed with regard to how one of skill in the field would have understood those terms at the time of the patent. The Federal Circuit, in *Markman,* instructed that in order to ascertain the meaning of a claim term the court should consider the intrinsic evidence found in three sources: the claims, the specifications and the prosecution history. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed.Cir.1995).

When a court construes a patent's claims, it should consider that intrinsic evidence first, starting with the claim language itself and thereafter considering the specification and finally the prosecution history. *See* Phillips v. AWH Corp., 415 F.3d 1303, 1312-17 (Fed.Cir.2005). While a court may rely on extrinsic evidence in claim construction, such as expert and inventor testimony, dictionaries, and learned treatises, extrinsic evidence is "less significant than the intrinsic record in determining the legally operative meaning of claim language." Id at 1317.

Claim terms are generally given their ordinary and customary meaning. Ventana Med. Sys. v. Biogenex

Labs., Inc., 473 F.3d 1173, 1180 (Fed.Cir.2006). The "ordinary meaning" of a claim term is its meaning to one of ordinary skill in the art "after reading the entire patent." Phillips, 415 F.3d at 1321. The specification serves as a window into "a full understanding of what the inventors actually invented and intended to envelop with the claim." Id at 1316. The prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, thereby excluding an interpretation to which the claim is otherwise susceptible. Id at 1317.

II. DISCUSSION

A. *The Relevant Patent Language.*

The language that provides the context for interpretation at the Markman hearing is substantially the same in each of the four flexure patents. In each patent, the claims describe an optoelectronic package which is said to consist of a substrate, upon which an optical element such as a laser diode is attached, sometimes raised above the floor of the substrate by a platform. A second optical element, such as an optical fiber, is attached to a flexure. The flexure is said to consist of a bridge, spring regions, and at least two legs. The flexure is used to bring the second element into alignment with the first, as the flexure can slide on the substrate in both horizontal axes and can be adjusted vertically by pressing down on it. The patents describe the flexure as standing directly on the substrate, although each patent also includes claims that describe the flexure instead standing on a frame that is attached to the substrate. Each patent also includes at least one diagram depicting the package with a frame attached to the substrate and the flexure atop the frame, its legs resting on the frame.

1. The '950 Patent

Claim 1 is the only independent claim in the '950 patent. There are 28 additional dependent claims. The patent also includes 7 drawing sheets and related specifications. Claim 1 of the '950 patent reads as follows:

An optoelectronic package comprising:

a substrate having a floor;

a first optical element coupled to the substrate;

a second optical element;

a flexure coupled to the second optical element and the substrate to maintain the second optical element in optical alignment with the first optical element wherein the flexure comprises:

at least two legs;

a bridge;

a pair of spring regions coupling the bridge to the at least two legs.

2. The '6276 Patent

Claim 1 of the patent is as follows:

An optoelectronic package comprising:

a substrate having a first electrically conductive pattern on a first side and a second electrically conductive pattern on a second side, wherein the first and second electrically conductive patterns are coupled together by one or more hermetic vias;

a first optical element mounted on a raised platform on the substrate;

a second optical element coupled to the substrate and in optical alignment with the first optical element; and

a flexure coupled to the second optical element and the substrate to maintain the optical alignment, wherein the flexure comprises:

at least two legs;

a bridge; and

a pair of spring regions coupling the bridge to the at least two legs.

This claim is the only independent claim of the '6726 patent, and there are 9 dependent claims. This patent also includes 7 Drawing sheets and related specifications. It is of note that the drawings and related specifications are identical to the drawings and specifications of the '950 patent. The patents differ only as to the language describing the different features of the claims.

3. The '724 Patent

Claim 1 of the '724 patent is as follows:

A process for manufacturing an optoelectronic package comprising:

providing a substrate having a first optical element attached thereto;

applying pressure to a flexure causing legs on the flexure to spread further apart so that an optical axis of an optical fiber is in optical alignment with the first optical element; and then

coupling the flexure and the optical fiber to the substrate by attaching legs of the flexure to the substrate.

Once again this patent has the same 7 drawing sheets and the same related specifications as the '950 patent. As opposed to the summary of the invention in the '950 and '6276 patents which starts as, "An optoelectronic package is described," the summary for the '724 patent starts as, "A method for producing an optoelectronic package is described."

In addition to Independent Claim 1, the '724 patent has 5 additional independent claims and 16 dependent claims. Each independent claim describes a flexure with legs that are to be attached to a substrate as part of the optoelectronic package.

4. The '427 patent

This patent was filed 2 years after the '950 and '724 patents, near the time that the '6276 patent was filed. It is a continuation of the '950 patent. It covers the same type of flexures within an optoelectronic package but focuses on variations of a flexure with a pair of front legs and a pair of back legs. It has 31 Drawing sheets, all different than those in the '950 patent, a different set of related specifications, and 3 independent and 26 dependent claims. Once again, each of the independent claims describes a flexure with legs that are to be attached to a substrate as part of the optoelectronic package.

B. The Meaning of "Leg"

The meaning of the term "leg" is the only disputed term between the parties in the construction of these patents. Shum proposes this definition:

An appendage of the flexure that supports the flexure. The defendants propose a different definition:

An appendage to the body of the flexure which extends downward, supporting the flexure above it.

The issue before the court, then, is whether "leg," as used in these four patents, should be construed to be a non-planar downward, weight-bearing appendage to the body of the flexure, or whether it should be construed more broadly, allowing for a supporting appendage that extends in the same plane as the flexure.

Patent law allows inventors to be their own lexicographers, treating words as terms of art and providing specific unique definitions for them. Phillips, 415 F.3d at 1316. That has not been done in any of these patents. "Leg" is a common enough word, generally understood as a supportive appendage that keeps a body or an object above the ground or some other surface. The task of the Court, however, is to interpret the meaning of the term as it is actually used in the claims, the specifications, and the prosecution history of the patents. Id. at 1312-17.

All the intrinsic evidence in the flexure patents establish that the term is used in its ordinary and customary sense. All the drawings show legs for the flexures which extend downward and support the body of the flexure. As an example, here is Figure 3A of the '950, the '724, and the '6726 patents.

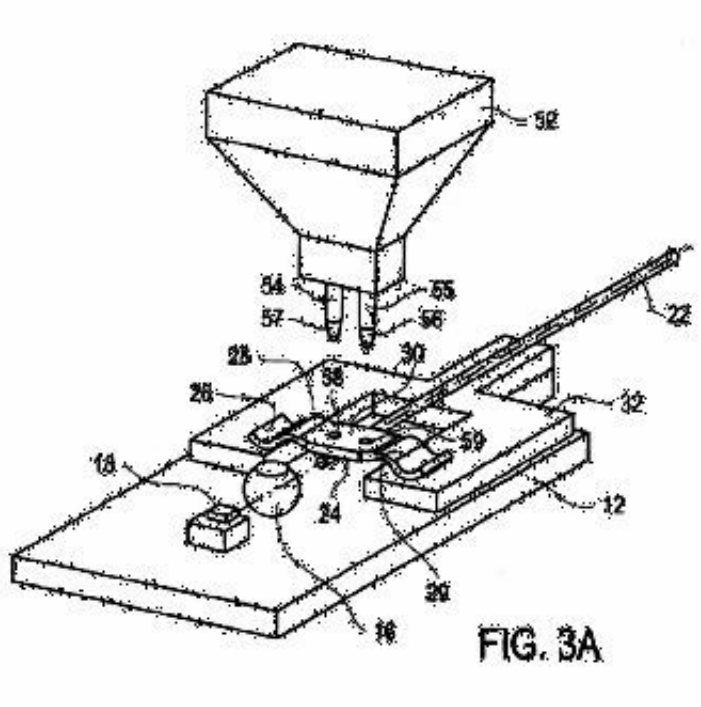


FIG. 3A

The flexure component is shown as 24. The flexure body or bridge is shown as 30. The spring regions at 29 attach the body to the legs, shown as 26. Aligning tool 52 connects to holes 58 and 59 in the bridge. Horizontal and longitudinal alignment are accomplished by moving flexure 24 on its mounting floor. Vertical alignment is accomplished by downward pressure of tool 52 on bridge 30 causing the legs to spread apart and lower optical element 22 (the fiberoptic filament) into precise alignment with optical element 16 (the lens) and the legs are then permanently attached to frame 32. The specification explains that: "Final adjustment of the height is obtained by applying pressure to the flexure, therefore lowering the bridge height."

There are no other embodiments of the invention shown in the drawings or described in the written specifications.

Shum makes several arguments that the intrinsic evidence shows that the proposed definition of the defendants is improper. One argument is based on the following paragraph from the specifications:

Note that although embodiments of optoelectronic packages are described herein having one or more optical elements on platforms, it is well within the teaching of the present invention to position such elements on the package floor while having other elements of the package mounted below the top surface of the package floor.

Shum argues that this language supports a design of a flexure whose legs extend upward to connect to the substrate. There is nothing in the teaching of the patent that supports this. There are no drawings, there is no text in the claims or the specification that describe such an embodiment, and it is very difficult to conceive how such a device could be used in a manufacturing process designed to align optical elements. It also seems to proceed on a false premise. Turning something upside down does not change its character. Doing a hand stand does not mean that one's legs are appendages that extend upwards from the torso.

Shum also argues that Claim 5 of the '724 patent and its prosecution history argue against adoption of the defendant's proposed construction of "leg." Claim 5 is one of the 6 independent claims in '724 and reads as follows:

A process for manufacturing an optoelectronic package comprising:

providing a substrate having a first optical element attached thereto;

applying pressure to a flexure so that an optical axis of an optical fiber is in optical alignment with the first optical element; and

coupling the flexure and the optical fiber to the substrate by attaching legs of the flexure to the substrate wherein coupling the flexure comprises

coupling a first pair of legs of the flexure to the substrate;

obtaining the optical alignment; and

coupling a second pair of legs of the flexure to the substrate.

In the course of the prosecution of the '724 patent, the Examiner rejected all the independent claims, except Claim 5, in light of prior art. The applicant responded by adding the language, "causing legs on the flexure to spread farther apart" to one of the paragraphs in Claim 1, and similar language to the other independent claims-7, 10, 11, and 12. Thereafter, the Examiner approved all the claims as they had been amended, and also approved Claim 5 without any amendment. As a result, Claim 1 and the other amended claims have the added legs-spread-apart language and Claim 5 does not. Shum points to the rule that each claim defines a separate invention, and to the rule of claim differentiation which presumes that each claim has a different scope and meaning. Shum argues that it would be error to impose a requirement that the legs extend downward from the flexure body which would in turn mean that they necessarily spread apart when pressure is applied, when the spread-apart language was added to some, but not all, of the claims.

Shum also argues that if the claim construction of "leg" has the effect of requiring that the legs spread apart when pressure is applied, it makes the language which was added to the other claims superfluous, and that would be inconsistent with the file history and with the rule of claim differentiation. There is some force to this argument as it is difficult to understand why the difference in language was approved. Claim 5, as accepted, contemplates that there is a flexure with legs that are attached to a substrate after an optical alignment has been achieved by applying pressure to the flexure. Given the legs-apart file history, Shum, in essence, argues that this can be done without spreading the legs apart. There is nothing in the teaching of the patent that tells us how this could be done. To the contrary, the specifications of the ' 724 patent at Col. 4:8 tells us that "Final adjustment of the height is obtained by applying pressure to the flexure, therefore lowering the bridge height." It appears to the Court that defendant's proposed construction accurately reflects the intrinsic evidence and Shum's proposal does not. The Court further believes that there cannot be different constructions applied to the same term in the same patent and that the Court should adopt a correct construction even though it may leave some issues of claim differentiation unresolved.

Shum also argues that Figure 5B of the '950 patent is inconsistent with the defendants' proposed construction as it discloses the possibility of the bridge of the flexure being pressed down to a position

which is below the legs. This would be contrary to the requirement that the appendage to the flexure must extend downward. Figure 5B is actually the same as Figure 3A we have already seen except that it has 2 pairs of legs and Figure 3A has only one. Shum argues that bridge 30 could be pressed down below the top surface of frame 32 which would result in the bottom of leg 26 being above the top surface of bridge 30. With enough assumptions it seems possible that this could be done but there is nothing in the intrinsic evidence which suggests how it could be done, whether it should be done, or that it makes any sense. It should be remembered that the optoelectronic elements can be assembled by commercially available machines so that their optical relationship in lateral and vertical dimensions is within a few microns of precision. *See* Column 3 of '950 patent. This means that the vertical adjustment necessary for precise alignment is measured in microns and that a much greater vertical movement would be required to move the top surface of bridge 30 below the top surface of frame 32. In addition, optoelectronic element 22, the fiberoptic filament, is attached to the bottom of bridge 30 and rests on top of frame 32 which means that element 22 would have to be bent or tilted to reach the position contemplated by Shum-a result that defeats the purpose of the patent.

Accordingly, for the reasons stated the Court construes the term "leg" as used in the flexure patents to mean:

An appendage to the body of the flexure which extends downward, supporting the flexure above it.

IT IS SO ORDERED

N.D.Cal.,2008.
Shum v. Intel Corp.

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